



# Reliability Report – 54HC86

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High Speed CMOS Logic - Quadruple 2-Input Exclusive OR Gate

## MIL-PRF-38534 CLASS K QUALIFICATION DATAPACK

Performed by Tandex Test Labs



# TANDEX

15849 Business Center Drive, Irwindale, CA 91706, U.S.A.

Phone (626) 962-7166, Fax (626) 960-6896

[www.tandexlabs.com](http://www.tandexlabs.com)

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- Scanning Electron Microscopy (SEM) analysis.





# MIL-PRF-38534 CLASS K DATAPACK

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## Certificate of Conformance



# TANDEX TEST LABS, INC.

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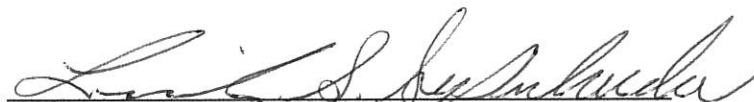
e-mail: via web site

## Certificate of Conformance

|   |   |  |
|---|---|--|
| <b>CUSTOMER:</b>                                | <b>SILICON SUPPLIES LIMITED</b>   | <b>DATE:</b> AUGUST 10, 2018                                   |
|   | 47 WHERRY ROAD<br>NORWICH, NR1, 1WS<br>UNITED KINGDOM VAT<br>GB#114 3513 56 |  |
| <b>TEST REPORT:</b>                             | <b>DDS-101-08-A</b>   | <b>QUANTITY RECEIVED:</b> 30 DIE                               |
| <b>P.O. NUMBER:</b>                             | <b>SS139</b>  | <b>QUANTITY REQUIRED:</b> 10/5/8                               |
| <b>DESCRIPTION:</b>                             | <b>CMOS LOGIC MICROCIRCUIT</b>  | <b>QUANTITY PROCESSED:</b> 17                                  |
| <b>PART NUMBER(S):</b>                          | <b>54HC86</b>   | <b>QUANTITY PASSED:</b> 17                                     |
| <b>P/N: AS RECEIVED /<br/>MFG. PART NUMBER:</b> | <b>54HC86</b>   | <b>QUANTITY FAILED:</b> 0                                      |
| <b>LOT / DATE CODE:</b>                         | <b>1810 LOT# 1555 WF42</b>  |  |
| <b>MANUFACTURE:<br/>CAGE CODE:</b>              | <b>SILICON SUPPLIES</b>   | <b>QUANTITY SHIPPING:</b> 17*                                  |
|   |   | INCLUDES: 10 PROCESS ACCEPT<br>5 BOND PULL DEVICES<br>2 SPARES |
| <b>TANDEX CAGE CODE:</b>                        | <b>1FE65</b>  | *8 DIE TRANSFERRED TO DDS-101-08-W<br>FOR SEM.                 |

**METHOD OF TESTING: MIL-PRF-38534 CL. K, MIL-STD-883**

I hereby certify that the subject components have been processed and inspected in accordance with instructions with specifications referenced in your purchase order. Physical records and/or data pertinent to applicable military, proprietary, and/or commercial specifications are on file and available upon request for inspection at this facility.



Linda S. Sepulyeda  
QUALITY ASSURANCE

QMF 30



# MIL-PRF-38534 CLASS K DATAPACK

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Process Flow Chart + Mechanical Test Results



# TANDEX TEST LABS INC.

QMF22B

15849 BUSINESS CENTER DRIVE, IRWINDALE, CA. 91706 PH: (626)962-7166 FAX: (626) 960-6896

## PROCESS FLOW CHART

FLOW NUMBER: DDS-101-08-A REV. 0

|                  |                                  |                    |                                 |
|------------------|----------------------------------|--------------------|---------------------------------|
| CUSTOMER:        | DIE DEVICES                      | P.O. NUMBER:       | SS139                           |
| PART NUMBER:     | 54HC86                           | P/N AS RECEIVED:   | 54HC86                          |
| PART TYPE:       | CMOS LOGIC MICROCIRCUIT          | DRAWING:           | MIL-PRF-38534 CL K, MIL-STD-883 |
| DUE DATE:        | 7/12/18                          | JOB NUMBER:        | DDS-101-08-A                    |
| LDC AS RECEIVED: | 1810 LOT# 1555 WF42              | QUANTITY RECEIVED: | 30 (DIE)                        |
| QUOTE NUMBER:    | DDS14267-1 MFG: SILICON SUPPLIES | QUANTITY REQUIRED: | 10/5/8                          |

**\*CAUTION: ESD REFER TO TTL DRAWING #P1025\***

| 01                       | FLO                                 | P-1015<br>P-1223                    | FLOW PREPARED BY: <u>LSS</u> . ON: <u>3/29/18</u><br>CONTRACTUAL AGREEMENT REVIEW<br><table border="0" style="width: 100%; text-align: center;"> <tr> <td>Y</td> <td>N</td> <td>NOT SPECIFIED</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td>Q-CLAUSES</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td>DPAS</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td>DFAR</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td>ITAR</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td>OTHER SPECIFIED</td> </tr> </table> | Y    | N            | NOT SPECIFIED |         | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Q-CLAUSES | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | DPAS | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | DFAR | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ITAR | <input type="checkbox"/> | <input type="checkbox"/> |  | OTHER SPECIFIED |  |  |  |  | QA<br>TANDEX<br>5 |
|--------------------------|-------------------------------------|-------------------------------------|---|------|--------------|---------------|---------|--------------------------|-------------------------------------|-------------------------------------|-----------|--------------------------|-------------------------------------|--------------------------|------|--------------------------|-------------------------------------|--------------------------|------|--------------------------|-------------------------------------|--------------------------|------|--------------------------|--------------------------|--|-----------------|--|--|--|--|-------------------|
| Y                        | N                                   | NOT SPECIFIED                       |   |      |              |               |         |                          |                                     |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Q-CLAUSES   |      |              |               |         |                          |                                     |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | DPAS  |      |              |               |         |                          |                                     |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | DFAR  |      |              |               |         |                          |                                     |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ITAR  |      |              |               |         |                          |                                     |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |
| <input type="checkbox"/> | <input type="checkbox"/>            |                                     | OTHER SPECIFIED   |      |              |               |         |                          |                                     |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |
| 02                       | QCI                                 |                                     | TANDEX QUALITY CONTROL INSPECTION.<br>FLOW APPROVED BY: <u>JMI</u> . ON: <u>3/29/18</u>   |      |              |               |         |                          | QA<br>TANDEX<br>5                   |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |
| 03                       | RCV                                 | P-1070                              | VERIFY PART NUMBER. ENTER INTO INCOMING LOG.<br><u>X</u> CUSTOMER COUNT   | 30   |              |               | 3/29/18 |                          | QA<br>TANDEX<br>5                   |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |
| SEQ                      | PROC                                | REF #                               | DESCRIPTION   | QTY  | REJ          | ACCEPT        | DATE    | INSP.                    |                                     |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |
| 04                       | VIS                                 | P-1041                              | PERFORM 100% DIE VISUAL PER MIL-STD-883 METHOD 2010 AND MIL-PRF-38534 PARA C.3.3.2.<br><br>EQUIPMENT USED: <u>Olympus</u> . ASSET #: <u>20091</u>   | 30   | <del>0</del> | 30            | 4/5/18  | TTL<br>30<br>A           |                                     |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |
| 05                       | ASSY                                | P-1029                              | PACKAGE SUFFICIENT DEVICES FOR CLASS K ELEMENT EVALUATION / ELECTRICAL AND BOND PULL PER MIL-PRF-38534 REFERENCE DIE GEOMETRY FOR ORIENTATION AND PIN - OUTS.<br><br>DIE ATTACH: SCREENING<br>EUTETIC BOND PULL<br>Lot#: <u>149555</u> Exp. Date: <u>N/A</u><br><br>SEM<br>TRANSFER TO DDS-101-08-W<br>MIL-STD-883 METHOD 2018<br><br><b>* Package Type: 14 PIN DIP</b>   | 10+2 | <del>0</del> | 10+2          | 4/17/18 | TTL<br>30                |                                     |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |
|                          |                                     | P-4010                              | WIRE BOND:<br>Utilize 1 Mil Au Wire (.001)<br>1 Mil Au bonder <u>MECH-EL</u> Asset #: <u>20060</u><br><br>Gold Wire:<br>Lot#: <u>9001882915</u> Exp. Date: <u>3/21/2019</u>   | 8    | <del>0</del> | 8             | 4/5/18  | TTL<br>30<br>A           |                                     |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |
|                          |                                     |                                     |   | 17   | <del>0</del> | 17            | 4/19/18 | TTL<br>30                |                                     |                                     |           |                          |                                     |                          |      |                          |                                     |                          |      |                          |                                     |                          |      |                          |                          |  |                 |  |  |  |  |                   |

# TANDEX TEST LABS INC.

QMF22B

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## PROCESS FLOW CHART

FLOW NUMBER: DDS-101-08-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139  
 PART NUMBER: 54HC86 P/N AS RECEIVED: 54HC86  
 PART TYPE: CMOS LOGIC MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883  
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-08-A  
 LDC AS RECEIVED: 1810 LOT# 1555 WF42 QUANTITY RECEIVED: 30 (DIE)  
 QUOTE NUMBER: DDS14267-1 MFG: SILICON SUPPLIES QUANTITY REQUIRED: 10/5/8

**\*CAUTION: ESD REFER TO TTL DRAWING #P1025\***

| SEQ | PROC | REF # | DESCRIPTION  | QTY  | REJ | ACCEPT | DATE                 | INSP.  |
|-----|------|-------|--|------|-----|--------|----------------------|--------|
| 06  | VIS  |       | PERFORM 100% INTERNAL VISUAL PER MIL-STD-883 METHOD 2010 & MIL-PRF-38534 C.3.3.3, C.3.3.4.2.<br><br>EQUIPMENT USED: <u>Nikon SN2645</u> ASSET #: <u>30663</u>  | 17   | 2   | 17     | 4/19/18              | TTL 30 |
|     |      |       | ESD MAT DUE DATE: <u>4/27/18</u>   |      |     |        |                      |        |
| 07  | SEAL |       | SEAL DEVICES<br><br>VACUUM BAKE:<br>Pre Seal Bake Time: Temp: <u>125°C</u> Time: <u>24 hrs</u><br>Actual time in: <u>8:05 am - 4/19/18</u><br>Actual time out: <u>9:16 am - 4/20/18</u> FURNACE LDC STAMP<br>Actual temp: <u>125°C</u>                                     | 10+2 | 2   | 10+2   | 4/20/18              | TTL 30 |
|     |      |       | ESD MAT DUE DATE: <u>4/27/18</u>   |      |     |        |                      |        |
| 08  | ELEC |       | PERFORM 100% ELECTRICAL VERIFICATION TEST PER MFG DATA SHEET AND MIL-PRF-38534 @ AMBIENT OPERATING TEMPERATURE GO / NO GO<br><br>EQUIPMENT USED: <u>Sentary</u> ASSET #: <u>30340</u> +25°C<br>TEST FIXTURE: <u>1327/1201</u><br>SOFTWARE ID: <u>54HC86</u> REV <u>N/A</u> | 10+2 | 0   | 10+2   | 4/24/18              | TTL 30 |
|     |      |       | ESD MAT DUE DATE: <u>1/1/</u>  |      |     |        |                      |        |
| 09  | TEMP |       | PERFORM TEMPERATURE CYCLING PER MIL-STD-883 METHOD 1010 CONDITION C & MIL-PRF-38534 C.3.3.3.<br><br>TEN (10) CYCLES<br>TA = -65°C +0 -10 to +150°C +15 -0<br>10 MINUTES AT EXTREMES  | 10+2 | 0   | 10+2   | 4/26/18<br>5:07 A.M. | TTL 48 |
|     |      |       | DATE IN TIME IN  |      |     |        |                      |        |
|     |      |       | DATE OUT TIME OUT  |      |     |        |                      |        |
|     |      |       | EQUIPMENT USED: <u>TENNY</u> ASSET #: <u>30369</u>   |      |     |        |                      |        |
|     |      |       | EQUIPMENT USED: <u>OMEGA HH309A</u> ASSET #: <u>31662</u>  |      |     |        |                      |        |
| 10  | ACCE |       | PERFORM CONSTANT ACCELERATION PER MIL-PRF-38534 MIL-STD-883 METHOD 2001.<br><br>Y1 DIRECTION ONLY @ 3000 G's (min)   | 10+2 | 0   | 10+2   | 5/15/18              | TTL 52 |
|     |      |       | EQUIPMENT USED: <u>Trio Tah</u> ASSET #: <u>30260</u>  |      |     |        |                      |        |
|     |      |       | ESD MAT DUE DATE: <u>5/7/18</u>  |      |     |        |                      |        |
| 11  | SER  |       | SERIALIZE<br><br>S/N: 01-10<br>S/N: 01-12  | 10+2 | 0   | 10+2   | 5/17/18              | TTL 49 |
|     |      |       | ESD MAT DUE DATE: <u>5/27/18</u>   |      |     |        |                      |        |

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QMF22B

## PROCESS FLOW CHART

FLOW NUMBER: DDS-101-08-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139  
 PART NUMBER: 54HC86 P/N AS RECEIVED: 54HC86  
 PART TYPE: CMOS LOGIC MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883  
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-08-A  
 LDC AS RECEIVED: 1810 LOT# 1555 WF42 QUANTITY RECEIVED: 30 (DIE)  
 QUOTE NUMBER: DDS14267-1 MFG: SILICON SUPPLIES QUANTITY REQUIRED: 10/5/8

**\*CAUTION: ESD REFER TO TTL DRAWING #P1025\***

| SEQ | PROC | REF # | DESCRIPTION  | QTY | REJ | ACCEP | DATE                          | INSP.                      |
|-----|------|-------|--|-----|-----|-------|-------------------------------|----------------------------|
| 12  | ELEC |       | PERFORM 100% ELECTRICAL VERIFICATION PER MFG DATA SHEET3 AND MIL-PRF-38534 C.3.3.4.3 @ AMBIENT , HIGH AND LOW OPERATING TEMPERATURES. READ AND RECORD.<br><br>STATIC AND FUNCTIONAL TESTS<br>+25°C 10+2<br>-55°C 10+2<br>+125°C 10+2<br><br>EQUIPMENT USED: <u>Sentry</u> ASSET#: <u>1093</u><br>TEST FIXTURE: <u>13771202</u><br>SOFTWARE ID: <u>54HC86</u> REV <u>AAA</u><br>TEMPERATURE SOAK <u>10</u> SEC. |     |     |       | 5/29/18<br>5/29/18<br>5/29/18 | TTL 10<br>TTL 10<br>TTL 10 |
| 13  | BI   |       | PERFORM BURN IN PER BURN IN CIRCUIT PER FIGURE 1 OF DWG# 1026-16668, AND MIL-STD 883 METHOD 1015.<br><br>TA = 125°C (min)<br>T = 240 HRS (min)<br><br>BURN-IN BOARD # / DESC: <u>31269</u><br>BURN-IN OVEN #: <u>21</u>  | 12  | 0   | 12    | 5/31/18<br>8:20 AM            | TTL 13                     |
| 14  | ELEC |       | PERFORM POST BURN IN ELECTRICAL VERIFICATION PER MFG DATA SHEET AND MIL-PRF-38534 C.3.3.4.3 @ AMBIENT, HIGH AND LOW OPERATING TEMPERATURES. READ AND RECORD.<br><br>STATIC AND FUNCTIONAL TESTS<br>+25°C 12<br>-55°C 12<br>+125°C 12<br><br><u>TEST +25°C WITHIN 96 HOURS</u><br><br>EQUIPMENT USED: _____ ASSET#: _____<br>TEST FIXTURE: _____<br>SOFTWARE ID: _____ REV _____<br>TEMPERATURE SOAK _____ SEC. |     |     |       | 6/11/18<br>6/11/18<br>6/11/18 | TTL 25<br>TTL 25<br>TTL 25 |
| 15  | ER   |       | PER PO REQUIREMENTS: REVIEW AT POST 240 HR. BURN-IN<br><br>EMAIL: <u>ben.white@diodevices.com</u><br>POST 240 HR BURN-IN ELECTRICAL TEST DATA.<br>HOLD FOR APPROVAL TO PROCEED<br><br>DATE SENT: <u>6/21/18</u>  |     |     |       | 6/21/18                       | GA<br>TANDEX<br>5          |

ESD MAT DUE DATE:  
6/29/18

ESD MAT DUE DATE:  
6/27/18

ESD MAT DUE DATE:  
 / /

TANDEX TEST LABS  
 BURN - IN MONITOR SHEET

PAGE 1 OF 1

JOB NUMBER DDS-101-08-A

TEMPERATURE TA = +125°C Min

PART NUMBER 54 AC 86

TEMP. METER # 31368

DATE CODE 1810 LOT# 1555 WF42

VOLTAGE VCC = +5VDC

BURN-IN TIME 240hrs Min

VOLT METER# 31223

ΘJC = N/A

POWER SUPPLY# 31594

BOARD# 31269

OVEN# 21

| DATE    | TIME    | VOLTAGE     | CURRENT   | TEMP.   | INITIAL | COMMENTS |
|---------|---------|-------------|-----------|---------|---------|----------|
| 5/31/18 | 8:20AM  | VCC = +5VDC | ICC = 5mA | 125.5°C | CM      |          |
| 6/1/18  | 10:00AM | VCC = +5VDC | ICC = 5mA | 126.9°C | CM      |          |
|         |         |             |           |         |         |          |
|         |         |             |           |         |         |          |
| 6/4/18  | NO      | DATA        | TAKEN     |         |         |          |
| 6/5/18  | 5:45AM  | VCC = +5VDC | ICC = 5mA | 127.0°C | CM      |          |
| 6/6/18  | 6:05AM  | VCC = +5VDC | ICC = 5mA | 126.7°C | CM      |          |
| 6/7/18  | 1:30PM  | VCC = +5VDC | ICC = 5mA | 126.4°C | CM      |          |
| 6/8/18  | 6:20AM  | VCC = +5VDC | ICC = 5mA | 126.1°C | CM      |          |
|         |         |             |           |         |         |          |
|         |         |             |           |         |         |          |
| 6/11/18 | 5:35AM  | VCC = +5VDC | ICC = 5mA | 126.8°C | CM      |          |
|         |         |             |           |         |         |          |



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## PROCESS FLOW CHART

FLOW NUMBER: DDS-101-08-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139  
 PART NUMBER: 54HC86 P/N AS RECEIVED: 54HC86  
 PART TYPE: CMOS LOGIC MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883  
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-08-A  
 LDC AS RECEIVED: 1810 LOT# 1555 WF42 QUANTITY RECEIVED: 30 (DIE)  
 QUOTE NUMBER: DDS14267-1 MFG: SILICON SUPPLIES QUANTITY REQUIRED: 10/5/8

**\*CAUTION: ESD REFER TO TTL DRAWING #P1025\***

| SEQ | PROC | REF # | DESCRIPTION  | QTY | REJ | ACCEPT | DATE  | INSP.                                |
|-----|------|-------|--|-----|-----|--------|---|--------------------------------------|
| 7   | SSL  |       | PERFORM STEADY STATE LIFE TEST PER MIL-PRF-38534 AND MIL-STD 883 METHOD 1005.<br><br>TA = 125°C (min)<br>T = 1000 HRS (min)<br><br>DATE IN: 12 0 12<br>TIME IN:<br><br>DATE OUT: 12 0 12<br>TIME OUT:<br><br>BURN-IN BOARD # / DESC: <u>31251</u><br>BURN-IN OVEN #: <u>21</u>   |     |     |        | 6/25/18<br>6:00 AM<br><br>8/6/18<br>6:00 AM | TTL 13<br><br>TTL 13                 |
| 16  | ELEC |       | PERFORM POST STEADY STATE LIFE ELECTRICAL VERIFICATION PER MFG DATA SHEET AND MIL-PRF-38534 C.3.3.4.3. @ AMBIENT, HIGH AND LOW OPERATING TEMPERATURE. READ AND RECORD.<br><br>STATIC AND FUNCTIONAL TESTS<br>+25°C 12 0 12<br>-55°C 12 0 12<br>+125°C 12 0 12<br>TEST +25°C WITHIN 96 HOURS<br><br>EQUIPMENT USED: <u>Sentry</u> ASSET#: <u>1093</u><br>TEST FIXTURE: <u>1377/1261</u><br>SOFTWARE ID: <u>54HC86</u> REV _____ |     |     |        | 8/6/18<br>8/8/18<br>8/8/18                  | TTL 33<br>UP TANDEX 7<br>UP TANDEX 7 |
| 18  | DBP  |       | PERFORM WIRE BOND PULL PER MIL-STD-883 METHOD 2011, & MIL-PRF-38534 C.3.3.3, C3.3.5.<br><br>TEN ( 10 ) WIRES,<br><br>*DO NOT USE ELECTRICAL TEST SAMPLES*<br><br>EQUIPMENT USED: <u>DAGE</u> ASSET #: <u>30785</u>   | 5   | 0   | 5      | 7/8/18                                      | #4<br>UP TANDEX 7                    |
| 19  | SEM  |       | PULLED 8 DEVICES AT SEQ. 05 AND TRANSFERRED TO:<br><br>DDS-101-08-W  | 8   | 0   | 8      | 4/15/18                                     | UP TANDEX 7                          |

ESD MAT DUE DATE:  
8/27/18

ESD MAT DUE DATE:  
8/27/18

**BOND PULL**

**BOND STRENGTH TESTING**

|  |                       |   |   |
|--|-----------------------|---|---|
| TTL Job No.<br>DDS-101-08-A              | Part Number<br>54HC86 | Part Type<br>CMOS LOGIC<br>MICROCIRCUIT | Date<br>July 18, 2018                             |
| Lot Date Code<br>LOT# 1555 W# 42<br>1810 | Sample Qty.<br>5      | Serial Numbers<br>11-15                 | Test Specifications<br>Mil-Std-883<br>Method 2011 |
| Misc.                                    | Qty Accept<br>5       | Qty Reject<br>0                         | Suspect<br>0                                      |

|                        |                    |                                |
|------------------------|--------------------|--------------------------------|
| WIRE TYPE<br>Au        | PACKAGE/POST<br>Au | BOND TYPE<br>BALL BOND         |
| DIE METALIZATION<br>Al | WIRE SIZE<br>0.001 | MINIMUM PULL STRENGTH<br>2.5gm |

| S/N 11  |       |      | S/N 12  |       |      | S/N 13  |       |      | S/N 14  |       |      | S/N 15  |       |      | S/N     |       |      |
|---------|-------|------|---------|-------|------|---------|-------|------|---------|-------|------|---------|-------|------|---------|-------|------|
| WIRE NO | FORCE | CODE | WIRE NO | FORCE | CODE | WIRE NO | FORCE | CODE | WIRE NO | FORCE | CODE | WIRE NO | FORCE | CODE | WIRE NO | FORCE | CODE |
| 1       | 3.5   | G    | 1       | 5.5   | G    | 1       | 3.5   | G    | 1       | 5.0   | G    | 1       | 4.0   | G    | 1       |       |      |
| 2       | 5.0   | G    | 2       | 5.0   | G    | 2       | 3.0   | G    | 2       | 5.0   | G    | 2       | 5.0   | G    | 2       |       |      |
| 3       |       |      | 3       |       |      | 3       |       |      | 3       |       |      | 3       |       |      | 3       |       |      |
| 4       |       |      | 4       |       |      | 4       |       |      | 4       |       |      | 4       |       |      | 4       |       |      |
| 5       |       |      | 5       |       |      | 5       |       |      | 5       |       |      | 5       |       |      | 5       |       |      |

CODE INDEX

- A. NO BREAKS UP TO \_\_\_\_\_gms.
- B. BOND LIFTS FROM DIE.
- C. BOND LIFTS FROM POST.
- D. WIRE BREAKS AT SUBSTRATE/HEAL.
- E. BOND REMOVES UNDERLYING METALLIZATION.
- F. NO CONNECTION.
- G. WIRE BREAKS AT DIE/HEAL.
- H. WIRE BREAKS AT POST/HEAL.
- J. WIRE BREAKS AT SPAN.
- X. BOND DAMAGE PRIOR TO TESTING.



TECHNICIAN STAMP: \_\_\_\_\_

TANDEX TEST LABS  
 BURN - IN MONITOR SHEET

JOB NUMBER DDS-101-08-A

TEMPERATURE TA = +125°C Min

PART NUMBER 54HLC86

TEMP. METER # 31368

DATE CODE 1810 LOT#1555 WF42

VOLTAGE VCC = +5VDC

BURN-IN TIME 1000hrs Min

VOLT METER# 31223

ΘJC = N/A

POWER SUPPLY# 31110

BOARD# 31251

OVEN# 21

| DATE    | TIME          | VOLTAGE     | CURRENT   | TEMP.   | INITIAL | COMMENTS |
|---------|---------------|-------------|-----------|---------|---------|----------|
| 6/25/18 | 6:00AM        | VCC = +5VDC | ICC = 5mA | 126.5°C | CM      |          |
| 6/26/18 | 7:30AM        | VCC = +5VDC | ICC = 5mA | 126.9°C | CM      |          |
| 6/27/18 | 7:15AM        | VCC = +5VDC | ICC = 5mA | 126.1°C | CM      |          |
| 6/28/18 | 8:55AM        | VCC = +5VDC | ICC = 5mA | 126.6°C | CM      |          |
| 6/29/18 | 6:00AM        | VCC = +5VDC | ICC = 5mA | 127.7°C | CM      |          |
|         |               |             |           |         |         |          |
|         |               |             |           |         |         |          |
| 7/2/18  | 5:30AM        | VCC = +5VDC | ICC = 5mA | 127.7°C | CM      |          |
| 7/3/18  | 5:50AM        | VCC = +5VDC | ICC = 5mA | 127.2°C | CM      |          |
| 7/4/18  | NO DATA TAKEN |             |           |         |         |          |
| 7/5/18  | 6:30AM        | VCC = +5VDC | ICC = 5mA | 127.5°C | CM      |          |
| 7/6/18  | 9:35AM        | VCC = +5VDC | ICC = 5mA | 128.0°C | CM      |          |
|         |               |             |           |         |         |          |

TANDEX TEST LABS  
 BURN - IN MONITOR SHEET

JOB NUMBER DDS-101-08-A

TEMPERATURE TA = +125°C Min

PART NUMBER 54HC86

TEMP. METER # 31368

DATE CODE 1810 LOT#1555 WF42

VOLTAGE VCC = +5VDC

BURN-IN TIME 1000hrs Min

VOLT METER# 31223

ΘJC = N/A

POWER SUPPLY# 31110

BOARD# 31251

OVEN# 21

| DATE    | TIME    | VOLTAGE     | CURRENT   | TEMP.   | INITIAL | COMMENTS |
|---------|---------|-------------|-----------|---------|---------|----------|
| 7/9/18  | 8:10AM  | VCC = +5VDC | ICC = 5mA | 128.4°C | CM      |          |
| 7/10/18 | 1:10PM  | VCC = +5VDC | ICC = 5mA | 128.5°C | CM      |          |
| 7/11/18 | 10:00AM | VCC = +5VDC | ICC = 5mA | 127.7°C | CM      |          |
| 7/12/18 | 7:20AM  | VCC = +5VDC | ICC = 5mA | 127.5°C | CM      |          |
| 7/13/18 | 6:05AM  | VCC = +5VDC | ICC = 5mA | 127.9°C | CM      |          |
| 7/16/18 | 6:00AM  | VCC = +5VDC | ICC = 5mA | 127.6°C | CM      |          |
| 7/17/18 | 6:15AM  | VCC = +5VDC | ICC = 5mA | 128.0°C | CM      |          |
| 7/18/18 | 6:00AM  | VCC = +5VDC | ICC = 5mA | 128.2°C | CM      |          |
| 7/19/18 | NO      | DATA        | TAKEN     |         |         |          |
| 7/20/18 | NO      | DATA        | TAKEN     |         |         |          |

TANDEX TEST LABS  
 BURN - IN MONITOR SHEET

JOB NUMBER DDS-101-08-A

TEMPERATURE TA = +125°C Min

PART NUMBER 54HC86

TEMP. METER # 31368

DATE CODE 1810 LOT#1555 WF42

VOLTAGE VCC = +5VDC

BURN-IN TIME 1000hrs Min

VOLT METER # 31223

ΘJC = N/A

POWER SUPPLY# 31110

BOARD# 31251

OVEN# 21

| DATE    | TIME    | VOLTAGE     | CURRENT   | TEMP.   | INITIAL | COMMENTS |
|---------|---------|-------------|-----------|---------|---------|----------|
|         |         |             |           |         |         |          |
|         |         |             |           |         |         |          |
| 7/23/18 | NO      | DATA        | TAKEN     |         |         |          |
| 7/24/18 | NO      | DATA        | TAKEN     |         |         |          |
| 7/25/18 | 7:25AM  | VCC = +5VDC | ICC = 5mA | 126.1°C | CM      |          |
| 7/26/18 | 6:00AM  | VCC = +5VDC | ICC = 5mA | 126.4°C | CM      |          |
| 7/27/18 | 7:25AM  | VCC = +5VDC | ICC = 5mA | 126.6°C | CM      |          |
|         |         |             |           |         |         |          |
|         |         |             |           |         |         |          |
| 7/30/18 | 10:58AM | VCC = +5VDC | ICC = 5mA | 127.8°C | CM      |          |
| 7/31/18 | 6:55AM  | VCC = +5VDC | ICC = 5mA | 127.6°C | CM      |          |
| 8/1/18  | 6:20AM  | VCC = +5VDC | ICC = 5mA | 128.8°C | CM      |          |
| 8/2/18  | 11:10AM | VCC = +5VDC | ICC = 5mA | 127.3°C | CM      |          |

TANDEX TEST LABS  
 BURN - IN MONITOR SHEET

PAGE 4 OF 4

JOB NUMBER DDS-101-08-A

TEMPERATURE TA = +125°C Min

PART NUMBER 54HC86

TEMP. METER# 31368

DATE CODE 1810 LOT#1555 WF42

VOLTAGE VCC = +5VDC

BURN-IN TIME 1000hrs Min

VOLT METER# 31223

ΘJC = N/A

POWER SUPPLY# 31110

BOARD# 31251

OVEN# 21

| DATE   | TIME          | VOLTAGE     | CURRENT   | TEMP.   | INITIAL | COMMENTS |
|--------|---------------|-------------|-----------|---------|---------|----------|
| 8/3/18 | 6:45am<br>JEC | VCC = +5mA  | ICC = 5mA | 127.3°C | cm      |          |
|        |               |             |           |         |         |          |
|        |               |             |           |         |         |          |
| 8/6/18 | 0:00am        | VCC = +5VDC | ICC = 5mA | 126.1°C | cm      |          |
|        |               |             |           |         |         |          |
|        |               |             |           |         |         |          |
|        |               |             |           |         |         |          |
|        |               |             |           |         |         |          |
|        |               |             |           |         |         |          |
|        |               |             |           |         |         |          |
|        |               |             |           |         |         |          |
|        |               |             |           |         |         |          |
|        |               |             |           |         |         |          |
|        |               |             |           |         |         |          |
|        |               |             |           |         |         |          |

# TANDEX TEST LABS INC.

QMF22B

15849 BUSINESS CENTER DRIVE, IRWINDALE, CA. 91706 PH: (626)962-7166 FAX: (626) 960-6896

## PROCESS FLOW CHART

FLOW NUMBER: DDS-101-08-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139  
 PART NUMBER: 54HC86 P/N AS RECEIVED: 54HC86  
 PART TYPE: CMOS LOGIC MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883  
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-08-A  
 LDC AS RECEIVED: 1810 LOT# 1555 WF42 QUANTITY RECEIVED: 30 (DIE)  
 QUOTE NUMBER: DDS14267-1 MFG: SILICON SUPPLIES QUANTITY REQUIRED: 10/5/8

**\*CAUTION: ESD REFER TO TTL DRAWING #P1025\***

| SEQ | PROC | REF #  | DESCRIPTION   | QTY | REJ | ACCEPT | DATE    | INSP.             |
|-----|------|--------|---|-----|-----|--------|---------|-------------------|
| 20  | QCI  | P-1073 | TANDEX QUALITY CONTROL INSPECTION.<br><br>QCI TO VERIFY CAR IN SEQ. 01 IS COMPLIANT   | 17  | 0   | 17     | 8/10/18 | QA<br>TANDEX<br>7 |
| 21  | PKG  |        | USE ORIGINAL OR TANDEX PACKAGING.   | 17  | 0   | 17     | 8/10/18 | QA<br>TANDEX<br>7 |
| 22  | QAR  | P-1213 | TANDEX QUALITY ASSURANCE REVIEW.<br><br>SHIP VIA: * Includes:<br>5 Bond Pull Samples<br>10 process Accepts<br>2 spares<br><br>SHIP / BILL TO: DIE DEVICES<br>47 WHERRY ROAD<br>NORWICH, NRI, IWS<br>UNITED KINGDOM VAT ** 8 parts transferred<br>GB#114 3513 56<br>to DDS-101-08-U for SEM. | 17  |     |        | 8/10/18 | QA<br>TANDEX<br>7 |



# MIL-PRF-38534 CLASS K DATAPACK

---

Pre Burn-In Test Results at -55°C





STAT1 05/29/11 07:07  
 TEST PROGRAM 4HC86 S/N 1  
 DDS-101-08-1 PN 54HC86 ELECTRICAL TEST SEQ 12 -55C

-----  
 CONTINUITY TEST  
 -----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -720.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -580.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 620.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 620.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 570.0MV  | 100.0MV  | 1.500 V  |

-----  
 FUNCTIONAL TEST  
 VCC= 2  
 VIH= 1.500 VIL= 500.0E-03  
 -----

-----  
 VOH1 TEST  
 VCC= 2  
 VOH LIMIT 1.900  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
 VOL1 TEST  
 VCC= 2  
 VOL LIMIT 100.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
 FUNCTIONAL TEST  
 VCC= 3  
 VIH= 2.100 VIL= 900.0E-03  
 -----

-----  
 VOH1 TEST  
 VCC= 3  
 VOH LIMIT 2.900  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
 VOH2 TEST  
 -----

VCC= 3  
VOH2 LIMIT 2.480

-----  
INST # PIN MEASURED LT GT  
229 3 2.850 V 2.480 V  
235 6 2.840 V 2.480 V  
241 8 2.830 V 2.480 V  
247 11 2.850 V 2.480 V

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03

-----  
INST # PIN MEASURED LT GT  
268 3 32.00MV 100.0MV  
274 6 34.00MV 100.0MV  
280 8 32.00MV 100.0MV  
286 11 32.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03

-----  
INST # PIN MEASURED LT GT  
309 3 122.0MV 260.0MV  
315 6 118.0MV 260.0MV  
321 8 130.0MV 260.0MV  
327 11 126.0MV 260.0MV

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400

-----  
INST # PIN MEASURED LT GT  
188 3 4.450 V 4.400 V  
194 6 4.450 V 4.400 V  
200 8 4.450 V 4.400 V  
206 11 4.450 V 4.400 V

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980

-----  
INST # PIN MEASURED LT GT  
229 3 4.300 V 3.980 V  
235 6 4.290 V 3.980 V  
241 8 4.270 V 3.980 V  
247 11 4.290 V 3.980 V

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03

-----  
INST # PIN MEASURED LT GT  
268 3 38.00MV 100.0MV  
274 6 36.00MV 100.0MV  
280 8 36.00MV 100.0MV  
286 11 36.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 138.0MV  |    | 260.0MV |
| 315    | 6   | 136.0MV  |    | 260.0MV |
| 321    | 8   | 156.0MV  |    | 260.0MV |
| 327    | 11  | 148.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.810 V  | 5.480 V |    |
| 235    | 6   | 5.790 V  | 5.480 V |    |
| 241    | 8   | 5.760 V  | 5.480 V |    |
| 247    | 11  | 5.790 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 48.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 46.00MV  |    | 100.0MV |
| 286    | 11  | 48.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 158.0MV  |    | 260.0MV |
| 315    | 6   | 150.0MV  |    | 260.0MV |
| 321    | 8   | 176.0MV  |    | 260.0MV |
| 327    | 11  | 170.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |

|     |    |          |          |         |
|-----|----|----------|----------|---------|
| 366 | 2  | -10.00NA | -100.0NA | 100.0NA |
| 369 | 2  | 12.00NA  | -100.0NA | 100.0NA |
| 374 | 4  | -10.00NA | -100.0NA | 100.0NA |
| 377 | 4  | 12.00NA  | -100.0NA | 100.0NA |
| 382 | 5  | -10.00NA | -100.0NA | 100.0NA |
| 385 | 5  | 12.00NA  | -100.0NA | 100.0NA |
| 390 | 9  | -10.00NA | -100.0NA | 100.0NA |
| 393 | 9  | 12.00NA  | -100.0NA | 100.0NA |
| 398 | 10 | -10.00NA | -100.0NA | 100.0NA |
| 401 | 10 | 12.00NA  | -100.0NA | 100.0NA |
| 406 | 12 | -10.00NA | -100.0NA | 100.0NA |
| 409 | 12 | 11.00NA  | -100.0NA | 100.0NA |
| 414 | 13 | -10.00NA | -100.0NA | 100.0NA |
| 417 | 13 | 12.00NA  | -100.0NA | 100.0NA |

```

-----
                ICC TEST
                VCC= 6
                ICC LIMIT MAX. 1.0UA @25C/-55C
                ICC LIMIT MAX. 40UA @+125C
-----

```

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

```

EIR 1.....10    FCT    DCT
      0000000000    PASS    PASS    EOT

```

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 2

DDS-101-08-1 PN 54HC86 ELECTRICAL TEST SEQ 12 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -580.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 620.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 620.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 580.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.980 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 126.0MV  |    | 260.0MV |
| 315    | 6   | 118.0MV  |    | 260.0MV |
| 321    | 8   | 130.0MV  |    | 260.0MV |
| 327    | 11  | 126.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.280 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 36.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 150.0MV  |    | 260.0MV |
| 315    | 6   | 134.0MV  |    | 260.0MV |
| 321    | 8   | 152.0MV  |    | 260.0MV |
| 327    | 11  | 148.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.790 V  | 5.480 V |    |
| 235    | 6   | 5.790 V  | 5.480 V |    |
| 241    | 8   | 5.770 V  | 5.480 V |    |
| 247    | 11  | 5.790 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 48.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 46.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 172.0MV  |    | 260.0MV |
| 315    | 6   | 150.0MV  |    | 260.0MV |
| 321    | 8   | 174.0MV  |    | 260.0MV |
| 327    | 11  | 170.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -10.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 11.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 3

DDS-101-08-1 PN 54HC86 ELECTRICAL TEST SEQ 12 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -590.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 630.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 630.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 580.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 126.0MV  |    | 260.0MV |
| 315    | 6   | 122.0MV  |    | 260.0MV |
| 321    | 8   | 134.0MV  |    | 260.0MV |
| 327    | 11  | 128.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 142.0MV  |    | 260.0MV |
| 315    | 6   | 136.0MV  |    | 260.0MV |
| 321    | 8   | 154.0MV  |    | 260.0MV |
| 327    | 11  | 150.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.800 V  | 5.480 V |    |
| 235    | 6   | 5.780 V  | 5.480 V |    |
| 241    | 8   | 5.770 V  | 5.480 V |    |
| 247    | 11  | 5.790 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 48.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 46.00MV  |    | 100.0MV |
| 286    | 11  | 48.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 160.0MV  |    | 260.0MV |
| 315    | 6   | 152.0MV  |    | 260.0MV |
| 321    | 8   | 176.0MV  |    | 260.0MV |
| 327    | 11  | 170.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 11.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -10.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 11.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 10.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 4

DDS-101-08-1 PN 54HC86 ELECTRICAL TEST SEQ 12 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -580.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 630.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 630.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 580.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.860 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.820 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 122.0MV  |    | 260.0MV |
| 315    | 6   | 118.0MV  |    | 260.0MV |
| 321    | 8   | 146.0MV  |    | 260.0MV |
| 327    | 11  | 128.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.240 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 140.0MV  |    | 260.0MV |
| 315    | 6   | 134.0MV  |    | 260.0MV |
| 321    | 8   | 196.0MV  |    | 260.0MV |
| 327    | 11  | 150.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.810 V  | 5.480 V |    |
| 235    | 6   | 5.790 V  | 5.480 V |    |
| 241    | 8   | 5.740 V  | 5.480 V |    |
| 247    | 11  | 5.790 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 160.0MV  |    | 260.0MV |
| 315    | 6   | 152.0MV  |    | 260.0MV |
| 321    | 8   | 202.0MV  |    | 260.0MV |
| 327    | 11  | 172.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -10.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 11.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 40.00NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 5

DDS-101-08-1 PN 54HC86 ELECTRICAL TEST SEQ 12 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -590.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 640.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 640.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 590.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.980 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.850 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 120.0MV  |    | 260.0MV |
| 315    | 6   | 118.0MV  |    | 260.0MV |
| 321    | 8   | 130.0MV  |    | 260.0MV |
| 327    | 11  | 126.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 36.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 138.0MV  |    | 260.0MV |
| 315    | 6   | 132.0MV  |    | 260.0MV |
| 321    | 8   | 156.0MV  |    | 260.0MV |
| 327    | 11  | 148.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.810 V  | 5.480 V |    |
| 235    | 6   | 5.790 V  | 5.480 V |    |
| 241    | 8   | 5.770 V  | 5.480 V |    |
| 247    | 11  | 5.790 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 48.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 48.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 156.0MV  |    | 260.0MV |
| 315    | 6   | 150.0MV  |    | 260.0MV |
| 321    | 8   | 176.0MV  |    | 260.0MV |
| 327    | 11  | 170.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -11.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 12.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 104.0NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 6

DDS-101-08-1 PN 54HC86 ELECTRICAL TEST SEQ 12 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -590.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 630.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 630.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 580.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.860 V  | 2.480 V |    |
| 235    | 6   | 2.850 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 118.0MV  |    | 260.0MV |
| 315    | 6   | 118.0MV  |    | 260.0MV |
| 321    | 8   | 138.0MV  |    | 260.0MV |
| 327    | 11  | 126.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.260 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 138.0MV  |    | 260.0MV |
| 315    | 6   | 134.0MV  |    | 260.0MV |
| 321    | 8   | 166.0MV  |    | 260.0MV |
| 327    | 11  | 146.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.810 V  | 5.480 V |    |
| 235    | 6   | 5.790 V  | 5.480 V |    |
| 241    | 8   | 5.750 V  | 5.480 V |    |
| 247    | 11  | 5.790 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 156.0MV  |    | 260.0MV |
| 315    | 6   | 150.0MV  |    | 260.0MV |
| 321    | 8   | 190.0MV  |    | 260.0MV |
| 327    | 11  | 170.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 11.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -11.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 12.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 314.0NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 7

DDS-101-08-1 PN 54HC86 ELECTRICAL TEST SEQ 12 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -760.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -750.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -760.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -750.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -750.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -750.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -750.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -760.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -610.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 650.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 650.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 590.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.980 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.860 V  | 2.480 V |    |
| 235    | 6   | 2.860 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 114.0MV  |    | 260.0MV |
| 315    | 6   | 110.0MV  |    | 260.0MV |
| 321    | 8   | 136.0MV  |    | 260.0MV |
| 327    | 11  | 120.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.310 V  | 3.980 V |    |
| 235    | 6   | 4.310 V  | 3.980 V |    |
| 241    | 8   | 4.260 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 36.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 134.0MV  |    | 260.0MV |
| 315    | 6   | 126.0MV  |    | 260.0MV |
| 321    | 8   | 166.0MV  |    | 260.0MV |
| 327    | 11  | 142.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.810 V  | 5.480 V |    |
| 235    | 6   | 5.800 V  | 5.480 V |    |
| 241    | 8   | 5.760 V  | 5.480 V |    |
| 247    | 11  | 5.800 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 46.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 156.0MV  |    | 260.0MV |
| 315    | 6   | 142.0MV  |    | 260.0MV |
| 321    | 8   | 186.0MV  |    | 260.0MV |
| 327    | 11  | 164.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 13.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 13.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -11.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 12.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 13.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 609.0NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 8

DDS-101-08-1 PN 54HC86 ELECTRICAL TEST SEQ 12 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -720.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -570.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 610.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 610.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 560.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 130.0MV  |    | 260.0MV |
| 315    | 6   | 122.0MV  |    | 260.0MV |
| 321    | 8   | 134.0MV  |    | 260.0MV |
| 327    | 11  | 130.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 150.0MV  |    | 260.0MV |
| 315    | 6   | 140.0MV  |    | 260.0MV |
| 321    | 8   | 156.0MV  |    | 260.0MV |
| 327    | 11  | 152.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.790 V  | 5.480 V |    |
| 235    | 6   | 5.780 V  | 5.480 V |    |
| 241    | 8   | 5.760 V  | 5.480 V |    |
| 247    | 11  | 5.780 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 46.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 172.0MV  |    | 260.0MV |
| 315    | 6   | 156.0MV  |    | 260.0MV |
| 321    | 8   | 180.0MV  |    | 260.0MV |
| 327    | 11  | 176.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -10.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 11.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 11.00NA  | -100.0NA | 100.0NA |

```

-----
      ICC TEST
      VCC= 6
      ICC LIMIT MAX. 1.0UA @25C/-55C
      ICC LIMIT MAX. 40UA @+125C
-----

```

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 122.0NA  |    | 1.000UA |

```

EIR 1.....10   FCT   DCT
      0000000000   PASS  PASS   EOT

```



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 9

DDS-101-08-1 PN 54HC86 ELECTRICAL TEST SEQ 12 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -580.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 620.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 620.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 580.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 130.0MV  |    | 260.0MV |
| 315    | 6   | 124.0MV  |    | 260.0MV |
| 321    | 8   | 132.0MV  |    | 260.0MV |
| 327    | 11  | 130.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 148.0MV  |    | 260.0MV |
| 315    | 6   | 138.0MV  |    | 260.0MV |
| 321    | 8   | 154.0MV  |    | 260.0MV |
| 327    | 11  | 152.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.790 V  | 5.480 V |    |
| 235    | 6   | 5.780 V  | 5.480 V |    |
| 241    | 8   | 5.770 V  | 5.480 V |    |
| 247    | 11  | 5.790 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 48.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 170.0MV  |    | 260.0MV |
| 315    | 6   | 154.0MV  |    | 260.0MV |
| 321    | 8   | 176.0MV  |    | 260.0MV |
| 327    | 11  | 172.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 13.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -10.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 11.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 104.0NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 10

DDS-101-08-1 PN 54HC86 ELECTRICAL TEST SEQ 12 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -750.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -750.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -750.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -750.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -750.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -750.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -600.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 640.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 640.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 590.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.980 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.850 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 122.0MV  |    | 260.0MV |
| 315    | 6   | 114.0MV  |    | 260.0MV |
| 321    | 8   | 124.0MV  |    | 260.0MV |
| 327    | 11  | 124.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.310 V  | 3.980 V |    |
| 235    | 6   | 4.300 V  | 3.980 V |    |
| 241    | 8   | 4.280 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 36.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 140.0MV  |    | 260.0MV |
| 315    | 6   | 130.0MV  |    | 260.0MV |
| 321    | 8   | 148.0MV  |    | 260.0MV |
| 327    | 11  | 142.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.800 V  | 5.480 V |    |
| 235    | 6   | 5.790 V  | 5.480 V |    |
| 241    | 8   | 5.770 V  | 5.480 V |    |
| 247    | 11  | 5.790 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 158.0MV  |    | 260.0MV |
| 315    | 6   | 146.0MV  |    | 260.0MV |
| 321    | 8   | 168.0MV  |    | 260.0MV |
| 327    | 11  | 166.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 13.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 13.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -10.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 12.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 142.0NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 11

DDS-101-08-1 PN 54HC86 ELECTRICAL TEST SEQ 12 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -750.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -750.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -750.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -600.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 640.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 640.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 590.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.850 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 128.0MV  |    | 260.0MV |
| 315    | 6   | 114.0MV  |    | 260.0MV |
| 321    | 8   | 124.0MV  |    | 260.0MV |
| 327    | 11  | 118.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.300 V  | 3.980 V |    |
| 241    | 8   | 4.280 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 38.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 152.0MV  |    | 260.0MV |
| 315    | 6   | 128.0MV  |    | 260.0MV |
| 321    | 8   | 146.0MV  |    | 260.0MV |
| 327    | 11  | 142.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.790 V  | 5.480 V |    |
| 235    | 6   | 5.800 V  | 5.480 V |    |
| 241    | 8   | 5.780 V  | 5.480 V |    |
| 247    | 11  | 5.790 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 52.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 172.0MV  |    | 260.0MV |
| 315    | 6   | 146.0MV  |    | 260.0MV |
| 321    | 8   | 168.0MV  |    | 260.0MV |
| 327    | 11  | 164.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -10.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 12.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 124.0NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 12

DDS-101-08-1 PN 54HC86 ELECTRICAL TEST SEQ 12 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -580.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 620.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 620.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 570.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 124.0MV  |    | 260.0MV |
| 315    | 6   | 116.0MV  |    | 260.0MV |
| 321    | 8   | 128.0MV  |    | 260.0MV |
| 327    | 11  | 124.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.280 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 38.00MV |  | 100.0MV |
| 286 | 11 | 36.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 146.0MV  |    | 260.0MV |
| 315    | 6   | 134.0MV  |    | 260.0MV |
| 321    | 8   | 152.0MV  |    | 260.0MV |
| 327    | 11  | 146.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.790 V  | 5.480 V |    |
| 235    | 6   | 5.790 V  | 5.480 V |    |
| 241    | 8   | 5.770 V  | 5.480 V |    |
| 247    | 11  | 5.790 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 170.0MV  |    | 260.0MV |
| 315    | 6   | 150.0MV  |    | 260.0MV |
| 321    | 8   | 176.0MV  |    | 260.0MV |
| 327    | 11  | 170.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -11.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 32.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -9.000NA | -100.0NA | 100.0NA |
| 385    | 5   | 33.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -10.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 12.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 13.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 146.0NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT





# MIL-PRF-38534 CLASS K DATAPACK

---

Pre Burn-In Test Results at 25°C



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 1  
DDS-08-01-A PN 54HC86 ELECTRICAL TEST SEQ 12 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -530.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 540.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
-----

VCC= 3  
VOH2 LIMIT 2.480

-----  
INST # PIN MEASURED LT GT  
229 3 2.830 V 2.480 V  
235 6 2.830 V 2.480 V  
241 8 2.820 V 2.480 V  
247 11 2.840 V 2.480 V

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03

-----  
INST # PIN MEASURED LT GT  
268 3 34.00MV 100.0MV  
274 6 32.00MV 100.0MV  
280 8 32.00MV 100.0MV  
286 11 32.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03

-----  
INST # PIN MEASURED LT GT  
309 3 136.0MV 260.0MV  
315 6 128.0MV 260.0MV  
321 8 140.0MV 260.0MV  
327 11 136.0MV 260.0MV

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400

-----  
INST # PIN MEASURED LT GT  
188 3 4.450 V 4.400 V  
194 6 4.450 V 4.400 V  
200 8 4.450 V 4.400 V  
206 11 4.450 V 4.400 V

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980

-----  
INST # PIN MEASURED LT GT  
229 3 4.280 V 3.980 V  
235 6 4.280 V 3.980 V  
241 8 4.260 V 3.980 V  
247 11 4.280 V 3.980 V

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03

-----  
INST # PIN MEASURED LT GT  
268 3 38.00MV 100.0MV  
274 6 36.00MV 100.0MV  
280 8 38.00MV 100.0MV  
286 11 38.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 164.0MV  |    | 260.0MV |
| 315    | 6   | 148.0MV  |    | 260.0MV |
| 321    | 8   | 166.0MV  |    | 260.0MV |
| 327    | 11  | 164.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.780 V  | 5.480 V |    |
| 235    | 6   | 5.770 V  | 5.480 V |    |
| 241    | 8   | 5.750 V  | 5.480 V |    |
| 247    | 11  | 5.770 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 46.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 184.0MV  |    | 260.0MV |
| 315    | 6   | 166.0MV  |    | 260.0MV |
| 321    | 8   | 190.0MV  |    | 260.0MV |
| 327    | 11  | 186.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |

|     |    |          |          |         |
|-----|----|----------|----------|---------|
| 366 | 2  | -10.00NA | -100.0NA | 100.0NA |
| 369 | 2  | 12.00NA  | -100.0NA | 100.0NA |
| 374 | 4  | -10.00NA | -100.0NA | 100.0NA |
| 377 | 4  | 12.00NA  | -100.0NA | 100.0NA |
| 382 | 5  | -10.00NA | -100.0NA | 100.0NA |
| 385 | 5  | 12.00NA  | -100.0NA | 100.0NA |
| 390 | 9  | -10.00NA | -100.0NA | 100.0NA |
| 393 | 9  | 12.00NA  | -100.0NA | 100.0NA |
| 398 | 10 | -11.00NA | -100.0NA | 100.0NA |
| 401 | 10 | 12.00NA  | -100.0NA | 100.0NA |
| 406 | 12 | -10.00NA | -100.0NA | 100.0NA |
| 409 | 12 | 11.00NA  | -100.0NA | 100.0NA |
| 414 | 13 | -10.00NA | -100.0NA | 100.0NA |
| 417 | 13 | 12.00NA  | -100.0NA | 100.0NA |

```

-----
                ICC TEST
                VCC= 6
                ICC LIMIT MAX. 1.0UA @25C/-55C
                ICC LIMIT MAX. 40UA @+125C
-----

```

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

```

EIR 1.....10    FCT    DCT
      0000000000    PASS    PASS    EOT

```

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 2

DDS-08-01-A PN 54HC86 ELECTRICAL TEST SEQ 12 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 140.0MV  |    | 260.0MV |
| 315    | 6   | 128.0MV  |    | 260.0MV |
| 321    | 8   | 138.0MV  |    | 260.0MV |
| 327    | 11  | 134.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.260 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 170.0MV  |    | 260.0MV |
| 315    | 6   | 148.0MV  |    | 260.0MV |
| 321    | 8   | 164.0MV  |    | 260.0MV |
| 327    | 11  | 160.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.770 V  | 5.480 V |    |
| 235    | 6   | 5.770 V  | 5.480 V |    |
| 241    | 8   | 5.750 V  | 5.480 V |    |
| 247    | 11  | 5.780 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 194.0MV  |    | 260.0MV |
| 315    | 6   | 166.0MV  |    | 260.0MV |
| 321    | 8   | 188.0MV  |    | 260.0MV |
| 327    | 11  | 184.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----



| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -11.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 12.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 3

DDS-08-01-A PN 54HC86 ELECTRICAL TEST SEQ 12 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.980 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.820 V  | 2.480 V |    |
| 247    | 11  | 2.830 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 142.0MV  |    | 260.0MV |
| 315    | 6   | 132.0MV  |    | 260.0MV |
| 321    | 8   | 142.0MV  |    | 260.0MV |
| 327    | 11  | 138.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.980 V |    |
| 235    | 6   | 4.270 V  | 3.980 V |    |
| 241    | 8   | 4.260 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 36.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 166.0MV  |    | 260.0MV |
| 315    | 6   | 152.0MV  |    | 260.0MV |
| 321    | 8   | 168.0MV  |    | 260.0MV |
| 327    | 11  | 162.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.780 V  | 5.480 V |    |
| 235    | 6   | 5.770 V  | 5.480 V |    |
| 241    | 8   | 5.750 V  | 5.480 V |    |
| 247    | 11  | 5.770 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 46.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 186.0MV  |    | 260.0MV |
| 315    | 6   | 170.0MV  |    | 260.0MV |
| 321    | 8   | 192.0MV  |    | 260.0MV |
| 327    | 11  | 186.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -11.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 12.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 4

DDS-08-01-A PN 54HC86 ELECTRICAL TEST SEQ 12 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.820 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 136.0MV  |    | 260.0MV |
| 315    | 6   | 128.0MV  |    | 260.0MV |
| 321    | 8   | 138.0MV  |    | 260.0MV |
| 327    | 11  | 136.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.260 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 166.0MV  |    | 260.0MV |
| 315    | 6   | 146.0MV  |    | 260.0MV |
| 321    | 8   | 166.0MV  |    | 260.0MV |
| 327    | 11  | 162.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.780 V  | 5.480 V |    |
| 235    | 6   | 5.770 V  | 5.480 V |    |
| 241    | 8   | 5.750 V  | 5.480 V |    |
| 247    | 11  | 5.780 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 188.0MV  |    | 260.0MV |
| 315    | 6   | 166.0MV  |    | 260.0MV |
| 321    | 8   | 190.0MV  |    | 260.0MV |
| 327    | 11  | 186.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----



| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -11.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 12.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 5

DDS-08-01-A PN 54HC86 ELECTRICAL TEST SEQ 12 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.820 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 138.0MV  |    | 260.0MV |
| 315    | 6   | 130.0MV  |    | 260.0MV |
| 321    | 8   | 138.0MV  |    | 260.0MV |
| 327    | 11  | 134.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.260 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

280 8 38.00MV 100.0MV  
286 11 36.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 164.0MV  |    | 260.0MV |
| 315    | 6   | 148.0MV  |    | 260.0MV |
| 321    | 8   | 166.0MV  |    | 260.0MV |
| 327    | 11  | 160.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.780 V  | 5.480 V |    |
| 235    | 6   | 5.770 V  | 5.480 V |    |
| 241    | 8   | 5.750 V  | 5.480 V |    |
| 247    | 11  | 5.770 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 186.0MV  |    | 260.0MV |
| 315    | 6   | 168.0MV  |    | 260.0MV |
| 321    | 8   | 188.0MV  |    | 260.0MV |
| 327    | 11  | 184.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -11.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -11.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 11.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 6

DDS-08-01-A PN 54HC86 ELECTRICAL TEST SEQ 12 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.820 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 134.0MV  |    | 260.0MV |
| 315    | 6   | 128.0MV  |    | 260.0MV |
| 321    | 8   | 140.0MV  |    | 260.0MV |
| 327    | 11  | 134.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.250 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |

|     |    |         |         |
|-----|----|---------|---------|
| 280 | 8  | 36.00MV | 100.0MV |
| 286 | 11 | 38.00MV | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 158.0MV  |    | 260.0MV |
| 315    | 6   | 148.0MV  |    | 260.0MV |
| 321    | 8   | 170.0MV  |    | 260.0MV |
| 327    | 11  | 160.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.780 V  | 5.480 V |    |
| 235    | 6   | 5.770 V  | 5.480 V |    |
| 241    | 8   | 5.740 V  | 5.480 V |    |
| 247    | 11  | 5.770 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 182.0MV  |    | 260.0MV |
| 315    | 6   | 168.0MV  |    | 260.0MV |
| 321    | 8   | 196.0MV  |    | 260.0MV |
| 327    | 11  | 184.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----



| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -11.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 11.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 7

DDS-08-01-A PN 54HC86 ELECTRICAL TEST SEQ 12 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 540.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.980 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.820 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 132.0MV  |    | 260.0MV |
| 315    | 6   | 126.0MV  |    | 260.0MV |
| 321    | 8   | 144.0MV  |    | 260.0MV |
| 327    | 11  | 136.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.250 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 38.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 158.0MV  |    | 260.0MV |
| 315    | 6   | 146.0MV  |    | 260.0MV |
| 321    | 8   | 174.0MV  |    | 260.0MV |
| 327    | 11  | 160.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.780 V  | 5.480 V |    |
| 235    | 6   | 5.780 V  | 5.480 V |    |
| 241    | 8   | 5.740 V  | 5.480 V |    |
| 247    | 11  | 5.770 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 182.0MV  |    | 260.0MV |
| 315    | 6   | 164.0MV  |    | 260.0MV |
| 321    | 8   | 198.0MV  |    | 260.0MV |
| 327    | 11  | 186.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 13.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -11.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 11.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 8

DDS-08-01-A PN 54HC86 ELECTRICAL TEST SEQ 12 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.820 V  | 2.480 V |    |
| 247    | 11  | 2.830 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 132.0MV  |    | 260.0MV |
| 315    | 6   | 128.0MV  |    | 260.0MV |
| 321    | 8   | 140.0MV  |    | 260.0MV |
| 327    | 11  | 136.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.260 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 154.0MV  |    | 260.0MV |
| 315    | 6   | 148.0MV  |    | 260.0MV |
| 321    | 8   | 164.0MV  |    | 260.0MV |
| 327    | 11  | 162.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.780 V  | 5.480 V |    |
| 235    | 6   | 5.770 V  | 5.480 V |    |
| 241    | 8   | 5.750 V  | 5.480 V |    |
| 247    | 11  | 5.770 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 46.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 178.0MV  |    | 260.0MV |
| 315    | 6   | 166.0MV  |    | 260.0MV |
| 321    | 8   | 190.0MV  |    | 260.0MV |
| 327    | 11  | 184.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----



| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -11.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 11.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 9

DDS-08-01-A PN 54HC86 ELECTRICAL TEST SEQ 12 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 540.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.820 V  | 2.480 V |    |
| 247    | 11  | 2.830 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 138.0MV  |    | 260.0MV |
| 315    | 6   | 132.0MV  |    | 260.0MV |
| 321    | 8   | 142.0MV  |    | 260.0MV |
| 327    | 11  | 138.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.980 V |    |
| 235    | 6   | 4.270 V  | 3.980 V |    |
| 241    | 8   | 4.260 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 36.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 160.0MV  |    | 260.0MV |
| 315    | 6   | 152.0MV  |    | 260.0MV |
| 321    | 8   | 168.0MV  |    | 260.0MV |
| 327    | 11  | 162.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.970 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.770 V  | 5.480 V |    |
| 235    | 6   | 5.770 V  | 5.480 V |    |
| 241    | 8   | 5.740 V  | 5.480 V |    |
| 247    | 11  | 5.770 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 48.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 188.0MV  |    | 260.0MV |
| 315    | 6   | 168.0MV  |    | 260.0MV |
| 321    | 8   | 192.0MV  |    | 260.0MV |
| 327    | 11  | 188.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -10.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 12.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 10

DDS-08-01-A PN 54HC86 ELECTRICAL TEST SEQ 12 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 540.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 144.0MV  |    | 260.0MV |
| 315    | 6   | 128.0MV  |    | 260.0MV |
| 321    | 8   | 138.0MV  |    | 260.0MV |
| 327    | 11  | 134.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.260 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 170.0MV  |    | 260.0MV |
| 315    | 6   | 148.0MV  |    | 260.0MV |
| 321    | 8   | 164.0MV  |    | 260.0MV |
| 327    | 11  | 162.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.770 V  | 5.480 V |    |
| 235    | 6   | 5.780 V  | 5.480 V |    |
| 241    | 8   | 5.750 V  | 5.480 V |    |
| 247    | 11  | 5.780 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 52.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 190.0MV  |    | 260.0MV |
| 315    | 6   | 166.0MV  |    | 260.0MV |
| 321    | 8   | 190.0MV  |    | 260.0MV |
| 327    | 11  | 184.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----



| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -11.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 12.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 11

DDS-08-01-A PN 54HC86 ELECTRICAL TEST SEQ 12 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 540.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.980 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 136.0MV  |    | 260.0MV |
| 315    | 6   | 126.0MV  |    | 260.0MV |
| 321    | 8   | 138.0MV  |    | 260.0MV |
| 327    | 11  | 132.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.260 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 164.0MV  |    | 260.0MV |
| 315    | 6   | 146.0MV  |    | 260.0MV |
| 321    | 8   | 164.0MV  |    | 260.0MV |
| 327    | 11  | 158.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.780 V  | 5.480 V |    |
| 235    | 6   | 5.770 V  | 5.480 V |    |
| 241    | 8   | 5.750 V  | 5.480 V |    |
| 247    | 11  | 5.780 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 52.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 50.00MV  |    | 100.0MV |
| 286    | 11  | 52.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 194.0MV  |    | 260.0MV |
| 315    | 6   | 166.0MV  |    | 260.0MV |
| 321    | 8   | 190.0MV  |    | 260.0MV |
| 327    | 11  | 182.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -10.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 11.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT

STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 12

DDS-08-01-A PN 54HC86 ELECTRICAL TEST SEQ 12 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 540.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 142.0MV  |    | 260.0MV |
| 315    | 6   | 126.0MV  |    | 260.0MV |
| 321    | 8   | 138.0MV  |    | 260.0MV |
| 327    | 11  | 132.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.260 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |

280 8 36.00MV 100.0MV  
286 11 38.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 172.0MV  |    | 260.0MV |
| 315    | 6   | 146.0MV  |    | 260.0MV |
| 321    | 8   | 164.0MV  |    | 260.0MV |
| 327    | 11  | 160.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.960 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.770 V  | 5.480 V |    |
| 235    | 6   | 5.780 V  | 5.480 V |    |
| 241    | 8   | 5.750 V  | 5.480 V |    |
| 247    | 11  | 5.780 V  | 5.480 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 194.0MV  |    | 260.0MV |
| 315    | 6   | 164.0MV  |    | 260.0MV |
| 321    | 8   | 188.0MV  |    | 260.0MV |
| 327    | 11  | 184.0MV  |    | 260.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----



| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | 0 A      | -100.0NA | 100.0NA |
| 361    | 1   | 12.00NA  | -100.0NA | 100.0NA |
| 366    | 2   | -10.00NA | -100.0NA | 100.0NA |
| 369    | 2   | 12.00NA  | -100.0NA | 100.0NA |
| 374    | 4   | -10.00NA | -100.0NA | 100.0NA |
| 377    | 4   | 12.00NA  | -100.0NA | 100.0NA |
| 382    | 5   | -10.00NA | -100.0NA | 100.0NA |
| 385    | 5   | 12.00NA  | -100.0NA | 100.0NA |
| 390    | 9   | -10.00NA | -100.0NA | 100.0NA |
| 393    | 9   | 12.00NA  | -100.0NA | 100.0NA |
| 398    | 10  | -11.00NA | -100.0NA | 100.0NA |
| 401    | 10  | 12.00NA  | -100.0NA | 100.0NA |
| 406    | 12  | -10.00NA | -100.0NA | 100.0NA |
| 409    | 12  | 11.00NA  | -100.0NA | 100.0NA |
| 414    | 13  | -10.00NA | -100.0NA | 100.0NA |
| 417    | 13  | 12.00NA  | -100.0NA | 100.0NA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 8.000NA  |    | 1.000UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT



# MIL-PRF-38534 CLASS K DATAPACK

---

Pre Burn-In Test Results at +125°C



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 1

DDS-101-08-A PN 54HC86 ELECTRICAL TEST SEQ. 12 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -650.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -660.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -650.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -650.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -650.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -650.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -650.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -650.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -490.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 500.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 500.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
-----

VCC= 3  
VOH2 LIMIT 2.200

-----  
INST # PIN MEASURED LT GT  
229 3 2.830 V 2.200 V  
235 6 2.820 V 2.200 V  
241 8 2.810 V 2.200 V  
247 11 2.830 V 2.200 V

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03

-----  
INST # PIN MEASURED LT GT  
268 3 34.00MV 100.0MV  
274 6 32.00MV 100.0MV  
280 8 34.00MV 100.0MV  
286 11 32.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03

-----  
INST # PIN MEASURED LT GT  
309 3 138.0MV 400.0MV  
315 6 138.0MV 400.0MV  
321 8 144.0MV 400.0MV  
327 11 140.0MV 400.0MV

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400

-----  
INST # PIN MEASURED LT GT  
188 3 4.440 V 4.400 V  
194 6 4.440 V 4.400 V  
200 8 4.440 V 4.400 V  
206 11 4.440 V 4.400 V

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700

-----  
INST # PIN MEASURED LT GT  
229 3 4.270 V 3.700 V  
235 6 4.250 V 3.700 V  
241 8 4.240 V 3.700 V  
247 11 4.260 V 3.700 V

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03

-----  
INST # PIN MEASURED LT GT  
268 3 36.00MV 100.0MV  
274 6 36.00MV 100.0MV  
280 8 38.00MV 100.0MV  
286 11 38.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 160.0MV  |    | 400.0MV |
| 315    | 6   | 162.0MV  |    | 400.0MV |
| 321    | 8   | 170.0MV  |    | 400.0MV |
| 327    | 11  | 166.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.940 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.760 V  | 5.200 V |    |
| 235    | 6   | 5.730 V  | 5.200 V |    |
| 241    | 8   | 5.730 V  | 5.200 V |    |
| 247    | 11  | 5.750 V  | 5.200 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 52.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 184.0MV  |    | 400.0MV |
| 315    | 6   | 182.0MV  |    | 400.0MV |
| 321    | 8   | 192.0MV  |    | 400.0MV |
| 327    | 11  | 188.0MV  |    | 400.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | -3.000NA | -1.000UA | 1.000UA |
| 361    | 1   | 12.00NA  | -1.000UA | 1.000UA |

|     |    |          |          |         |
|-----|----|----------|----------|---------|
| 366 | 2  | -9.000NA | -1.000UA | 1.000UA |
| 369 | 2  | 10.00NA  | -1.000UA | 1.000UA |
| 374 | 4  | -9.000NA | -1.000UA | 1.000UA |
| 377 | 4  | 10.00NA  | -1.000UA | 1.000UA |
| 382 | 5  | -9.000NA | -1.000UA | 1.000UA |
| 385 | 5  | 10.00NA  | -1.000UA | 1.000UA |
| 390 | 9  | -10.00NA | -1.000UA | 1.000UA |
| 393 | 9  | 10.00NA  | -1.000UA | 1.000UA |
| 398 | 10 | -10.00NA | -1.000UA | 1.000UA |
| 401 | 10 | 10.00NA  | -1.000UA | 1.000UA |
| 406 | 12 | -10.00NA | -1.000UA | 1.000UA |
| 409 | 12 | 10.00NA  | -1.000UA | 1.000UA |
| 414 | 13 | -9.000NA | -1.000UA | 1.000UA |
| 417 | 13 | 10.00NA  | -1.000UA | 1.000UA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | -100.0NA |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

EIR 1.....10      FCT      DCT  
 0000000000      PASS      PASS      EOT



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 2

DDS-101-08-A PN 54HC86 ELECTRICAL TEST SEQ. 12 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -640.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -640.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -640.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -640.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -640.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -640.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -640.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -640.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -470.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 490.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 490.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |



-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.820 V  | 2.200 V |    |
| 235    | 6   | 2.810 V  | 2.200 V |    |
| 241    | 8   | 2.810 V  | 2.200 V |    |
| 247    | 11  | 2.830 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 142.0MV  |    | 400.0MV |
| 315    | 6   | 144.0MV  |    | 400.0MV |
| 321    | 8   | 146.0MV  |    | 400.0MV |
| 327    | 11  | 144.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.440 V  | 4.400 V |    |
| 200    | 8   | 4.440 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.270 V  | 3.700 V |    |
| 235    | 6   | 4.250 V  | 3.700 V |    |
| 241    | 8   | 4.240 V  | 3.700 V |    |
| 247    | 11  | 4.260 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |

|     |    |         |         |
|-----|----|---------|---------|
| 280 | 8  | 38.00MV | 100.0MV |
| 286 | 11 | 40.00MV | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 166.0MV  |    | 400.0MV |
| 315    | 6   | 168.0MV  |    | 400.0MV |
| 321    | 8   | 172.0MV  |    | 400.0MV |
| 327    | 11  | 170.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.750 V  | 5.200 V |    |
| 235    | 6   | 5.730 V  | 5.200 V |    |
| 241    | 8   | 5.730 V  | 5.200 V |    |
| 247    | 11  | 5.750 V  | 5.200 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 52.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 52.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 190.0MV  |    | 400.0MV |
| 315    | 6   | 192.0MV  |    | 400.0MV |
| 321    | 8   | 198.0MV  |    | 400.0MV |
| 327    | 11  | 194.0MV  |    | 400.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED  | LT       | GT      |
|--------|-----|-----------|----------|---------|
| 358    | 1   | -3.000NA  | -1.000UA | 1.000UA |
| 361    | 1   | 11.000NA  | -1.000UA | 1.000UA |
| 366    | 2   | -9.000NA  | -1.000UA | 1.000UA |
| 369    | 2   | 10.000NA  | -1.000UA | 1.000UA |
| 374    | 4   | -9.000NA  | -1.000UA | 1.000UA |
| 377    | 4   | 10.000NA  | -1.000UA | 1.000UA |
| 382    | 5   | -9.000NA  | -1.000UA | 1.000UA |
| 385    | 5   | 10.000NA  | -1.000UA | 1.000UA |
| 390    | 9   | -10.000NA | -1.000UA | 1.000UA |
| 393    | 9   | 11.000NA  | -1.000UA | 1.000UA |
| 398    | 10  | -10.000NA | -1.000UA | 1.000UA |
| 401    | 10  | 10.000NA  | -1.000UA | 1.000UA |
| 406    | 12  | -10.000NA | -1.000UA | 1.000UA |
| 409    | 12  | 10.000NA  | -1.000UA | 1.000UA |
| 414    | 13  | -9.000NA  | -1.000UA | 1.000UA |
| 417    | 13  | 10.000NA  | -1.000UA | 1.000UA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | -100.0NA |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 3

DDS-101-08-A PN 54HC86 ELECTRICAL TEST SEQ. 12 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -630.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -630.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -620.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -620.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -630.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -620.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -620.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -620.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -450.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 480.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 510.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 510.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 480.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.820 V  | 2.200 V |    |
| 235    | 6   | 2.800 V  | 2.200 V |    |
| 241    | 8   | 2.810 V  | 2.200 V |    |
| 247    | 11  | 2.820 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 150.0MV  |    | 400.0MV |
| 315    | 6   | 152.0MV  |    | 400.0MV |
| 321    | 8   | 152.0MV  |    | 400.0MV |
| 327    | 11  | 150.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.440 V  | 4.400 V |    |
| 200    | 8   | 4.440 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.260 V  | 3.700 V |    |
| 235    | 6   | 4.240 V  | 3.700 V |    |
| 241    | 8   | 4.240 V  | 3.700 V |    |
| 247    | 11  | 4.260 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 176.0MV  |    | 400.0MV |
| 315    | 6   | 178.0MV  |    | 400.0MV |
| 321    | 8   | 180.0MV  |    | 400.0MV |
| 327    | 11  | 176.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.750 V  | 5.200 V |    |
| 235    | 6   | 5.730 V  | 5.200 V |    |
| 241    | 8   | 5.720 V  | 5.200 V |    |
| 247    | 11  | 5.750 V  | 5.200 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 196.0MV  |    | 400.0MV |
| 315    | 6   | 198.0MV  |    | 400.0MV |
| 321    | 8   | 202.0MV  |    | 400.0MV |
| 327    | 11  | 198.0MV  |    | 400.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | -3.000NA | -1.000UA | 1.000UA |
| 361    | 1   | 11.00NA  | -1.000UA | 1.000UA |
| 366    | 2   | -9.000NA | -1.000UA | 1.000UA |
| 369    | 2   | 10.00NA  | -1.000UA | 1.000UA |
| 374    | 4   | -9.000NA | -1.000UA | 1.000UA |
| 377    | 4   | 10.00NA  | -1.000UA | 1.000UA |
| 382    | 5   | -9.000NA | -1.000UA | 1.000UA |
| 385    | 5   | 10.00NA  | -1.000UA | 1.000UA |
| 390    | 9   | -9.000NA | -1.000UA | 1.000UA |
| 393    | 9   | 10.00NA  | -1.000UA | 1.000UA |
| 398    | 10  | -10.00NA | -1.000UA | 1.000UA |
| 401    | 10  | 10.00NA  | -1.000UA | 1.000UA |
| 406    | 12  | -10.00NA | -1.000UA | 1.000UA |
| 409    | 12  | 10.00NA  | -1.000UA | 1.000UA |
| 414    | 13  | -9.000NA | -1.000UA | 1.000UA |
| 417    | 13  | 10.00NA  | -1.000UA | 1.000UA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | -100.0NA |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT





STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 4

DDS-101-08-A PN 54HC86 ELECTRICAL TEST SEQ. 12 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -520.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 520.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.200 V |    |
| 235    | 6   | 2.830 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.840 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 132.0MV  |    | 400.0MV |
| 315    | 6   | 132.0MV  |    | 400.0MV |
| 321    | 8   | 136.0MV  |    | 400.0MV |
| 327    | 11  | 134.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.440 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.700 V |    |
| 235    | 6   | 4.260 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 152.0MV  |    | 400.0MV |
| 315    | 6   | 154.0MV  |    | 400.0MV |
| 321    | 8   | 160.0MV  |    | 400.0MV |
| 327    | 11  | 156.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.780 V  | 5.200 V |    |
| 235    | 6   | 5.750 V  | 5.200 V |    |
| 241    | 8   | 5.740 V  | 5.200 V |    |
| 247    | 11  | 5.770 V  | 5.200 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 50.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 174.0MV  |    | 400.0MV |
| 315    | 6   | 172.0MV  |    | 400.0MV |
| 321    | 8   | 180.0MV  |    | 400.0MV |
| 327    | 11  | 178.0MV  |    | 400.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | -3.000NA | -1.000UA | 1.000UA |
| 361    | 1   | 11.00NA  | -1.000UA | 1.000UA |
| 366    | 2   | -9.000NA | -1.000UA | 1.000UA |
| 369    | 2   | 10.00NA  | -1.000UA | 1.000UA |
| 374    | 4   | -9.000NA | -1.000UA | 1.000UA |
| 377    | 4   | 10.00NA  | -1.000UA | 1.000UA |
| 382    | 5   | -9.000NA | -1.000UA | 1.000UA |
| 385    | 5   | 10.00NA  | -1.000UA | 1.000UA |
| 390    | 9   | -10.00NA | -1.000UA | 1.000UA |
| 393    | 9   | 10.00NA  | -1.000UA | 1.000UA |
| 398    | 10  | -10.00NA | -1.000UA | 1.000UA |
| 401    | 10  | 10.00NA  | -1.000UA | 1.000UA |
| 406    | 12  | -10.00NA | -1.000UA | 1.000UA |
| 409    | 12  | 10.00NA  | -1.000UA | 1.000UA |
| 414    | 13  | -9.000NA | -1.000UA | 1.000UA |
| 417    | 13  | 10.00NA  | -1.000UA | 1.000UA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 0 A      |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 5

DDS-101-08-A PN 54HC86 ELECTRICAL TEST SEQ. 12 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -520.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 530.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 530.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.200 V |    |
| 235    | 6   | 2.820 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.840 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 130.0MV  |    | 400.0MV |
| 315    | 6   | 132.0MV  |    | 400.0MV |
| 321    | 8   | 134.0MV  |    | 400.0MV |
| 327    | 11  | 130.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.440 V  | 4.400 V |    |
| 194    | 6   | 4.440 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.450 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.700 V |    |
| 235    | 6   | 4.260 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |



|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 38.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 152.0MV  |    | 400.0MV |
| 315    | 6   | 152.0MV  |    | 400.0MV |
| 321    | 8   | 156.0MV  |    | 400.0MV |
| 327    | 11  | 154.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.770 V  | 5.200 V |    |
| 235    | 6   | 5.750 V  | 5.200 V |    |
| 241    | 8   | 5.740 V  | 5.200 V |    |
| 247    | 11  | 5.770 V  | 5.200 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 172.0MV  |    | 400.0MV |
| 315    | 6   | 172.0MV  |    | 400.0MV |
| 321    | 8   | 178.0MV  |    | 400.0MV |
| 327    | 11  | 174.0MV  |    | 400.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED  | LT       | GT      |
|--------|-----|-----------|----------|---------|
| 358    | 1   | -3.000NA  | -1.000UA | 1.000UA |
| 361    | 1   | 12.000NA  | -1.000UA | 1.000UA |
| 366    | 2   | -9.000NA  | -1.000UA | 1.000UA |
| 369    | 2   | 10.000NA  | -1.000UA | 1.000UA |
| 374    | 4   | -9.000NA  | -1.000UA | 1.000UA |
| 377    | 4   | 10.000NA  | -1.000UA | 1.000UA |
| 382    | 5   | -9.000NA  | -1.000UA | 1.000UA |
| 385    | 5   | 10.000NA  | -1.000UA | 1.000UA |
| 390    | 9   | -10.000NA | -1.000UA | 1.000UA |
| 393    | 9   | 10.000NA  | -1.000UA | 1.000UA |
| 398    | 10  | -10.000NA | -1.000UA | 1.000UA |
| 401    | 10  | 10.000NA  | -1.000UA | 1.000UA |
| 406    | 12  | -10.000NA | -1.000UA | 1.000UA |
| 409    | 12  | 10.000NA  | -1.000UA | 1.000UA |
| 414    | 13  | -9.000NA  | -1.000UA | 1.000UA |
| 417    | 13  | 10.000NA  | -1.000UA | 1.000UA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 0 A      |    | 40.00UA |
| 453    | 14  | 0 A      |    | 40.00UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 6

DDS-101-08-A PN 54HC86 ELECTRICAL TEST SEQ. 12 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -640.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -640.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -640.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -640.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -640.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -640.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -640.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -640.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -470.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 490.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 490.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.200 V |    |
| 235    | 6   | 2.820 V  | 2.200 V |    |
| 241    | 8   | 2.810 V  | 2.200 V |    |
| 247    | 11  | 2.820 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 142.0MV  |    | 400.0MV |
| 315    | 6   | 144.0MV  |    | 400.0MV |
| 321    | 8   | 146.0MV  |    | 400.0MV |
| 327    | 11  | 142.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.440 V  | 4.400 V |    |
| 194    | 6   | 4.440 V  | 4.400 V |    |
| 200    | 8   | 4.440 V  | 4.400 V |    |
| 206    | 11  | 4.440 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.270 V  | 3.700 V |    |
| 235    | 6   | 4.250 V  | 3.700 V |    |
| 241    | 8   | 4.240 V  | 3.700 V |    |
| 247    | 11  | 4.260 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 38.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 168.0MV  |    | 400.0MV |
| 315    | 6   | 170.0MV  |    | 400.0MV |
| 321    | 8   | 172.0MV  |    | 400.0MV |
| 327    | 11  | 170.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.940 V  | 5.900 V |    |
| 194    | 6   | 5.940 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.750 V  | 5.200 V |    |
| 235    | 6   | 5.730 V  | 5.200 V |    |
| 241    | 8   | 5.720 V  | 5.200 V |    |
| 247    | 11  | 5.750 V  | 5.200 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 52.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 50.00MV  |    | 100.0MV |
| 286    | 11  | 52.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 192.0MV  |    | 400.0MV |
| 315    | 6   | 192.0MV  |    | 400.0MV |
| 321    | 8   | 198.0MV  |    | 400.0MV |
| 327    | 11  | 194.0MV  |    | 400.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED  | LT       | GT      |
|--------|-----|-----------|----------|---------|
| 358    | 1   | -4.000NA  | -1.000UA | 1.000UA |
| 361    | 1   | 12.000NA  | -1.000UA | 1.000UA |
| 366    | 2   | -9.000NA  | -1.000UA | 1.000UA |
| 369    | 2   | 10.000NA  | -1.000UA | 1.000UA |
| 374    | 4   | -10.000NA | -1.000UA | 1.000UA |
| 377    | 4   | 10.000NA  | -1.000UA | 1.000UA |
| 382    | 5   | -9.000NA  | -1.000UA | 1.000UA |
| 385    | 5   | 10.000NA  | -1.000UA | 1.000UA |
| 390    | 9   | -10.000NA | -1.000UA | 1.000UA |
| 393    | 9   | 11.000NA  | -1.000UA | 1.000UA |
| 398    | 10  | -10.000NA | -1.000UA | 1.000UA |
| 401    | 10  | 11.000NA  | -1.000UA | 1.000UA |
| 406    | 12  | -10.000NA | -1.000UA | 1.000UA |
| 409    | 12  | 10.000NA  | -1.000UA | 1.000UA |
| 414    | 13  | -9.000NA  | -1.000UA | 1.000UA |
| 417    | 13  | 10.000NA  | -1.000UA | 1.000UA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 0 A      |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT





STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 7

DDS-101-08-A PN 54HC86 ELECTRICAL TEST SEQ. 12 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -510.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 520.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.200 V |    |
| 235    | 6   | 2.830 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.840 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 128.0MV  |    | 400.0MV |
| 315    | 6   | 130.0MV  |    | 400.0MV |
| 321    | 8   | 138.0MV  |    | 400.0MV |
| 327    | 11  | 134.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.440 V  | 4.400 V |    |
| 194    | 6   | 4.440 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.440 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.700 V |    |
| 235    | 6   | 4.270 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

280 8 38.00MV 100.0MV  
286 11 38.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 150.0MV  |    | 400.0MV |
| 315    | 6   | 152.0MV  |    | 400.0MV |
| 321    | 8   | 162.0MV  |    | 400.0MV |
| 327    | 11  | 156.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.940 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.940 V  | 5.900 V |    |
| 206    | 11  | 5.940 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.780 V  | 5.200 V |    |
| 235    | 6   | 5.750 V  | 5.200 V |    |
| 241    | 8   | 5.740 V  | 5.200 V |    |
| 247    | 11  | 5.770 V  | 5.200 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 52.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 170.0MV  |    | 400.0MV |
| 315    | 6   | 170.0MV  |    | 400.0MV |
| 321    | 8   | 182.0MV  |    | 400.0MV |
| 327    | 11  | 178.0MV  |    | 400.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | -3.000NA | -1.000UA | 1.000UA |
| 361    | 1   | 12.00NA  | -1.000UA | 1.000UA |
| 366    | 2   | -9.000NA | -1.000UA | 1.000UA |
| 369    | 2   | 10.00NA  | -1.000UA | 1.000UA |
| 374    | 4   | -9.000NA | -1.000UA | 1.000UA |
| 377    | 4   | 10.00NA  | -1.000UA | 1.000UA |
| 382    | 5   | -9.000NA | -1.000UA | 1.000UA |
| 385    | 5   | 10.00NA  | -1.000UA | 1.000UA |
| 390    | 9   | -9.000NA | -1.000UA | 1.000UA |
| 393    | 9   | 10.00NA  | -1.000UA | 1.000UA |
| 398    | 10  | -10.00NA | -1.000UA | 1.000UA |
| 401    | 10  | 11.00NA  | -1.000UA | 1.000UA |
| 406    | 12  | -10.00NA | -1.000UA | 1.000UA |
| 409    | 12  | 10.00NA  | -1.000UA | 1.000UA |
| 414    | 13  | -9.000NA | -1.000UA | 1.000UA |
| 417    | 13  | 10.00NA  | -1.000UA | 1.000UA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | -100.0NA |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 8

DDS-101-08-A PN 54HC86 ELECTRICAL TEST SEQ. 12 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -520.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 530.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 530.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.200 V |    |
| 235    | 6   | 2.820 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.830 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 130.0MV  |    | 400.0MV |
| 315    | 6   | 132.0MV  |    | 400.0MV |
| 321    | 8   | 134.0MV  |    | 400.0MV |
| 327    | 11  | 132.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.440 V  | 4.400 V |    |
| 200    | 8   | 4.440 V  | 4.400 V |    |
| 206    | 11  | 4.440 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.700 V |    |
| 235    | 6   | 4.260 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |

280 8 36.00MV 100.0MV  
286 11 36.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 152.0MV  |    | 400.0MV |
| 315    | 6   | 154.0MV  |    | 400.0MV |
| 321    | 8   | 158.0MV  |    | 400.0MV |
| 327    | 11  | 154.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.940 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.770 V  | 5.200 V |    |
| 235    | 6   | 5.750 V  | 5.200 V |    |
| 241    | 8   | 5.740 V  | 5.200 V |    |
| 247    | 11  | 5.770 V  | 5.200 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 52.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 52.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 174.0MV  |    | 400.0MV |
| 315    | 6   | 172.0MV  |    | 400.0MV |
| 321    | 8   | 180.0MV  |    | 400.0MV |
| 327    | 11  | 176.0MV  |    | 400.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----



| INST # | PIN | MEASURED  | LT       | GT      |
|--------|-----|-----------|----------|---------|
| 358    | 1   | -3.000NA  | -1.000UA | 1.000UA |
| 361    | 1   | 12.000NA  | -1.000UA | 1.000UA |
| 366    | 2   | -9.000NA  | -1.000UA | 1.000UA |
| 369    | 2   | 10.000NA  | -1.000UA | 1.000UA |
| 374    | 4   | -9.000NA  | -1.000UA | 1.000UA |
| 377    | 4   | 10.000NA  | -1.000UA | 1.000UA |
| 382    | 5   | -9.000NA  | -1.000UA | 1.000UA |
| 385    | 5   | 10.000NA  | -1.000UA | 1.000UA |
| 390    | 9   | -10.000NA | -1.000UA | 1.000UA |
| 393    | 9   | 11.000NA  | -1.000UA | 1.000UA |
| 398    | 10  | -10.000NA | -1.000UA | 1.000UA |
| 401    | 10  | 10.000NA  | -1.000UA | 1.000UA |
| 406    | 12  | -10.000NA | -1.000UA | 1.000UA |
| 409    | 12  | 10.000NA  | -1.000UA | 1.000UA |
| 414    | 13  | -9.000NA  | -1.000UA | 1.000UA |
| 417    | 13  | 10.000NA  | -1.000UA | 1.000UA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 0 A      |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 9

DDS-101-08-A PN 54HC86 ELECTRICAL TEST SEQ. 12 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -520.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 530.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 530.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.200 V |    |
| 235    | 6   | 2.820 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.830 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 134.0MV  |    | 400.0MV |
| 315    | 6   | 138.0MV  |    | 400.0MV |
| 321    | 8   | 138.0MV  |    | 400.0MV |
| 327    | 11  | 134.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.440 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.440 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.700 V |    |
| 235    | 6   | 4.260 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 36.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 156.0MV  |    | 400.0MV |
| 315    | 6   | 158.0MV  |    | 400.0MV |
| 321    | 8   | 160.0MV  |    | 400.0MV |
| 327    | 11  | 156.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.770 V  | 5.200 V |    |
| 235    | 6   | 5.740 V  | 5.200 V |    |
| 241    | 8   | 5.740 V  | 5.200 V |    |
| 247    | 11  | 5.770 V  | 5.200 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 174.0MV  |    | 400.0MV |
| 315    | 6   | 176.0MV  |    | 400.0MV |
| 321    | 8   | 180.0MV  |    | 400.0MV |
| 327    | 11  | 176.0MV  |    | 400.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED | LT       | GT      |
|--------|-----|----------|----------|---------|
| 358    | 1   | -3.000NA | -1.000UA | 1.000UA |
| 361    | 1   | 11.00NA  | -1.000UA | 1.000UA |
| 366    | 2   | -9.000NA | -1.000UA | 1.000UA |
| 369    | 2   | 10.00NA  | -1.000UA | 1.000UA |
| 374    | 4   | -9.000NA | -1.000UA | 1.000UA |
| 377    | 4   | 10.00NA  | -1.000UA | 1.000UA |
| 382    | 5   | -9.000NA | -1.000UA | 1.000UA |
| 385    | 5   | 10.00NA  | -1.000UA | 1.000UA |
| 390    | 9   | -10.00NA | -1.000UA | 1.000UA |
| 393    | 9   | 10.00NA  | -1.000UA | 1.000UA |
| 398    | 10  | -10.00NA | -1.000UA | 1.000UA |
| 401    | 10  | 10.00NA  | -1.000UA | 1.000UA |
| 406    | 12  | -10.00NA | -1.000UA | 1.000UA |
| 409    | 12  | 10.00NA  | -1.000UA | 1.000UA |
| 414    | 13  | -9.000NA | -1.000UA | 1.000UA |
| 417    | 13  | 10.00NA  | -1.000UA | 1.000UA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 0 A      |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

EIR 1.....10 FCT DCT  
 0000000000 PASS PASS EOT



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 10

DDS-101-08-A PN 54HC86 ELECTRICAL TEST SEQ. 12 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -520.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 530.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 530.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |



-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.200 V |    |
| 235    | 6   | 2.830 V  | 2.200 V |    |
| 241    | 8   | 2.830 V  | 2.200 V |    |
| 247    | 11  | 2.840 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 132.0MV  |    | 400.0MV |
| 315    | 6   | 130.0MV  |    | 400.0MV |
| 321    | 8   | 134.0MV  |    | 400.0MV |
| 327    | 11  | 132.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.450 V  | 4.400 V |    |
| 200    | 8   | 4.440 V  | 4.400 V |    |
| 206    | 11  | 4.440 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.700 V |    |
| 235    | 6   | 4.270 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |

280 8 38.00MV 100.0MV  
286 11 38.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 154.0MV  |    | 400.0MV |
| 315    | 6   | 152.0MV  |    | 400.0MV |
| 321    | 8   | 158.0MV  |    | 400.0MV |
| 327    | 11  | 152.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.940 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.780 V  | 5.200 V |    |
| 235    | 6   | 5.750 V  | 5.200 V |    |
| 241    | 8   | 5.740 V  | 5.200 V |    |
| 247    | 11  | 5.770 V  | 5.200 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 50.00MV  |    | 100.0MV |
| 274    | 6   | 46.00MV  |    | 100.0MV |
| 280    | 8   | 48.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 172.0MV  |    | 400.0MV |
| 315    | 6   | 170.0MV  |    | 400.0MV |
| 321    | 8   | 178.0MV  |    | 400.0MV |
| 327    | 11  | 174.0MV  |    | 400.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED  | LT       | GT      |
|--------|-----|-----------|----------|---------|
| 358    | 1   | -4.000NA  | -1.000UA | 1.000UA |
| 361    | 1   | 12.000NA  | -1.000UA | 1.000UA |
| 366    | 2   | -9.000NA  | -1.000UA | 1.000UA |
| 369    | 2   | 10.000NA  | -1.000UA | 1.000UA |
| 374    | 4   | -9.000NA  | -1.000UA | 1.000UA |
| 377    | 4   | 10.000NA  | -1.000UA | 1.000UA |
| 382    | 5   | -9.000NA  | -1.000UA | 1.000UA |
| 385    | 5   | 10.000NA  | -1.000UA | 1.000UA |
| 390    | 9   | -9.000NA  | -1.000UA | 1.000UA |
| 393    | 9   | 11.000NA  | -1.000UA | 1.000UA |
| 398    | 10  | -10.000NA | -1.000UA | 1.000UA |
| 401    | 10  | 11.000NA  | -1.000UA | 1.000UA |
| 406    | 12  | -10.000NA | -1.000UA | 1.000UA |
| 409    | 12  | 10.000NA  | -1.000UA | 1.000UA |
| 414    | 13  | -9.000NA  | -1.000UA | 1.000UA |
| 417    | 13  | 10.000NA  | -1.000UA | 1.000UA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | -100.0NA |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT



STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 11

DDS-101-08-A PN 54HC86 ELECTRICAL TEST SEQ. 12 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -520.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 530.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 530.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.200 V |    |
| 235    | 6   | 2.830 V  | 2.200 V |    |
| 241    | 8   | 2.830 V  | 2.200 V |    |
| 247    | 11  | 2.840 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 130.0MV  |    | 400.0MV |
| 315    | 6   | 130.0MV  |    | 400.0MV |
| 321    | 8   | 132.0MV  |    | 400.0MV |
| 327    | 11  | 128.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.440 V  | 4.400 V |    |
| 200    | 8   | 4.440 V  | 4.400 V |    |
| 206    | 11  | 4.440 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.700 V |    |
| 235    | 6   | 4.270 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

|     |    |         |  |         |
|-----|----|---------|--|---------|
| 280 | 8  | 36.00MV |  | 100.0MV |
| 286 | 11 | 38.00MV |  | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 150.0MV  |    | 400.0MV |
| 315    | 6   | 152.0MV  |    | 400.0MV |
| 321    | 8   | 156.0MV  |    | 400.0MV |
| 327    | 11  | 150.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.780 V  | 5.200 V |    |
| 235    | 6   | 5.750 V  | 5.200 V |    |
| 241    | 8   | 5.740 V  | 5.200 V |    |
| 247    | 11  | 5.770 V  | 5.200 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 52.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 50.00MV  |    | 100.0MV |
| 286    | 11  | 52.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 174.0MV  |    | 400.0MV |
| 315    | 6   | 170.0MV  |    | 400.0MV |
| 321    | 8   | 178.0MV  |    | 400.0MV |
| 327    | 11  | 172.0MV  |    | 400.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED  | LT       | GT      |
|--------|-----|-----------|----------|---------|
| 358    | 1   | -3.000NA  | -1.000UA | 1.000UA |
| 361    | 1   | 12.000NA  | -1.000UA | 1.000UA |
| 366    | 2   | -9.000NA  | -1.000UA | 1.000UA |
| 369    | 2   | 10.000NA  | -1.000UA | 1.000UA |
| 374    | 4   | -9.000NA  | -1.000UA | 1.000UA |
| 377    | 4   | 10.000NA  | -1.000UA | 1.000UA |
| 382    | 5   | -9.000NA  | -1.000UA | 1.000UA |
| 385    | 5   | 10.000NA  | -1.000UA | 1.000UA |
| 390    | 9   | -10.000NA | -1.000UA | 1.000UA |
| 393    | 9   | 11.000NA  | -1.000UA | 1.000UA |
| 398    | 10  | -10.000NA | -1.000UA | 1.000UA |
| 401    | 10  | 10.000NA  | -1.000UA | 1.000UA |
| 406    | 12  | -10.000NA | -1.000UA | 1.000UA |
| 409    | 12  | 10.000NA  | -1.000UA | 1.000UA |
| 414    | 13  | -9.000NA  | -1.000UA | 1.000UA |
| 417    | 13  | 10.000NA  | -1.000UA | 1.000UA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | -100.0NA |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT





STAT1 05/29/11 07:07  
TEST PROGRAM 4HC86 S/N 12

DDS-101-08-A PN 54HC86 ELECTRICAL TEST SEQ. 12 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -510.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 520.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.200 V |    |
| 235    | 6   | 2.820 V  | 2.200 V |    |
| 241    | 8   | 2.830 V  | 2.200 V |    |
| 247    | 11  | 2.840 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 128.0MV  |    | 400.0MV |
| 315    | 6   | 132.0MV  |    | 400.0MV |
| 321    | 8   | 136.0MV  |    | 400.0MV |
| 327    | 11  | 130.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |
| 194    | 6   | 4.440 V  | 4.400 V |    |
| 200    | 8   | 4.450 V  | 4.400 V |    |
| 206    | 11  | 4.440 V  | 4.400 V |    |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.700 V |    |
| 235    | 6   | 4.260 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |

280 8 38.00MV 100.0MV  
286 11 38.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 152.0MV  |    | 400.0MV |
| 315    | 6   | 152.0MV  |    | 400.0MV |
| 321    | 8   | 160.0MV  |    | 400.0MV |
| 327    | 11  | 154.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.940 V  | 5.900 V |    |
| 194    | 6   | 5.940 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.940 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 5.770 V  | 5.200 V |    |
| 235    | 6   | 5.750 V  | 5.200 V |    |
| 241    | 8   | 5.730 V  | 5.200 V |    |
| 247    | 11  | 5.770 V  | 5.200 V |    |

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 52.00MV  |    | 100.0MV |
| 274    | 6   | 48.00MV  |    | 100.0MV |
| 280    | 8   | 50.00MV  |    | 100.0MV |
| 286    | 11  | 50.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 174.0MV  |    | 400.0MV |
| 315    | 6   | 174.0MV  |    | 400.0MV |
| 321    | 8   | 184.0MV  |    | 400.0MV |
| 327    | 11  | 176.0MV  |    | 400.0MV |

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

| INST # | PIN | MEASURED  | LT       | GT      |
|--------|-----|-----------|----------|---------|
| 358    | 1   | -3.000NA  | -1.000UA | 1.000UA |
| 361    | 1   | 12.000NA  | -1.000UA | 1.000UA |
| 366    | 2   | -9.000NA  | -1.000UA | 1.000UA |
| 369    | 2   | 10.000NA  | -1.000UA | 1.000UA |
| 374    | 4   | -9.000NA  | -1.000UA | 1.000UA |
| 377    | 4   | 10.000NA  | -1.000UA | 1.000UA |
| 382    | 5   | -9.000NA  | -1.000UA | 1.000UA |
| 385    | 5   | 10.000NA  | -1.000UA | 1.000UA |
| 390    | 9   | -9.000NA  | -1.000UA | 1.000UA |
| 393    | 9   | 10.000NA  | -1.000UA | 1.000UA |
| 398    | 10  | -10.000NA | -1.000UA | 1.000UA |
| 401    | 10  | 11.000NA  | -1.000UA | 1.000UA |
| 406    | 12  | -10.000NA | -1.000UA | 1.000UA |
| 409    | 12  | 10.000NA  | -1.000UA | 1.000UA |
| 414    | 13  | -9.000NA  | -1.000UA | 1.000UA |
| 417    | 13  | 10.000NA  | -1.000UA | 1.000UA |

-----  
 ICC TEST  
 VCC= 6  
 ICC LIMIT MAX. 1.0UA @25C/-55C  
 ICC LIMIT MAX. 40UA @+125C  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 0 A      |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

EIR 1.....10    FCT    DCT  
 0000000000    PASS    PASS    EOT



# MIL-PRF-38534 CLASS K DATAPACK

---

Post Burn-In Test Results at -55°C



STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 1  
DDS-101-08-A PN 54HC86 TEST SEQ14 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -580.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 620.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 620.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 570.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.860 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 118.0MV  |    | 260.0MV |
| 315    | 6   | 118.0MV  |    | 260.0MV |
| 321    | 8   | 120.0MV  |    | 260.0MV |
| 327    | 11  | 118.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |



|     |    |         |         |
|-----|----|---------|---------|
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.440 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
 VOH2 TEST  
 VCC= 4.500  
 VOH2 LIMIT 3.980  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.310 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.280 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
 VOL1 TEST  
 VCC= 4.500  
 VOL LIMIT 100.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 36.00MV  |    | 100.0MV |

-----  
 VOL2 TEST  
 VCC= 4.500  
 VOL2 LIMIT 260.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 134.0MV  |    | 260.0MV |
| 315    | 6   | 134.0MV  |    | 260.0MV |
| 321    | 8   | 138.0MV  |    | 260.0MV |
| 327    | 11  | 134.0MV  |    | 260.0MV |

-----  
 FUNCTIONAL TEST  
 VCC= 6  
 VIH= 4.200 VIL= 1.800  
 -----

-----  
 VOH1 TEST  
 VCC= 6  
 VOH LIMIT 5.900  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
 VOH2 TEST  
 VCC= 6  
 VOH2 LIMIT 5.480  
 -----

```

-----
INST #  PIN  MEASURED      LT      GT
229     3   5.800 V      5.480 V
235     6   5.780 V      5.480 V
241     8   5.770 V      5.480 V
247    11   5.790 V      5.480 V

```

```

-----
VOL1 TEST
VCC=      6
VOL LIMIT 100.0E-03
-----

```

```

INST #  PIN  MEASURED      LT      GT
268     3   50.00MV      100.0MV
274     6   48.00MV      100.0MV
280     8   48.00MV      100.0MV
286    11   48.00MV      100.0MV

```

```

-----
VOL2 TEST
VCC=      6
VOL2 LIMIT 260.0E-03
-----

```

```

INST #  PIN  MEASURED      LT      GT
309     3   150.0MV      260.0MV
315     6   150.0MV      260.0MV
321     8   156.0MV      260.0MV
327    11   152.0MV      260.0MV

```

```

-----
IIN TEST
VCC= 6
IIL/IIH LIMIT +- 0.1UA @25C/-55C
IIL/IIH LIMIT +- 1.0UA @+125C
-----

```

```

INST #  PIN  MEASURED      LT      GT
358     1     0 A      -100.0NA  100.0NA
361     1   11.00NA  -100.0NA  100.0NA
366     2   -9.000NA  -100.0NA  100.0NA
369     2   10.00NA  -100.0NA  100.0NA
374     4   -9.000NA  -100.0NA  100.0NA
377     4   10.00NA  -100.0NA  100.0NA
382     5   -9.000NA  -100.0NA  100.0NA
385     5   10.00NA  -100.0NA  100.0NA
390     9   -9.000NA  -100.0NA  100.0NA
393     9   10.00NA  -100.0NA  100.0NA
398    10  -10.00NA  -100.0NA  100.0NA
401    10   10.00NA  -100.0NA  100.0NA
406    12   -9.000NA  -100.0NA  100.0NA
409    12   10.00NA  -100.0NA  100.0NA
414    13   -9.000NA  -100.0NA  100.0NA
417    13   10.00NA  -100.0NA  100.0NA

```

```

-----
ICC TEST
VCC= 6
ICC LIMIT MAX. 1.0UA @25C/-55C
ICC LIMIT MAX. 40UA @+125C
-----

```

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 2  
DDS-101-08-A PN 54HC86 TEST SEQ14 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -720.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -720.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -560.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 610.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 610.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 560.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 122.0MV  |    | 260.0MV |
| 315    | 6   | 122.0MV  |    | 260.0MV |
| 321    | 8   | 124.0MV  |    | 260.0MV |
| 327    | 11  | 120.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.280 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 36.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 136.0MV  |    | 260.0MV |
| 315    | 6   | 138.0MV  |    | 260.0MV |
| 321    | 8   | 140.0MV  |    | 260.0MV |
| 327    | 11  | 138.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.790 V      5.480 V  
  235    6   5.770 V      5.480 V  
  241    8   5.770 V      5.480 V  
  247   11   5.790 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   50.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   46.00MV      100.0MV  
  286   11   50.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   154.0MV      260.0MV  
  315    6   154.0MV      260.0MV  
  321    8   160.0MV      260.0MV  
  327   11   156.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   11.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA   -100.0NA    100.0NA  
  374    4   -9.000NA   -100.0NA    100.0NA  
  377    4   10.00NA   -100.0NA    100.0NA  
  382    5   -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA   -100.0NA    100.0NA  
  390    9   -9.000NA   -100.0NA    100.0NA  
  393    9   10.00NA   -100.0NA    100.0NA  
  398   10   -9.000NA   -100.0NA    100.0NA  
  401   10   10.00NA   -100.0NA    100.0NA  
  406   12  -10.00NA   -100.0NA    100.0NA  
  409   12   11.00NA   -100.0NA    100.0NA  
  414   13   -9.000NA   -100.0NA    100.0NA  
  417   13   12.00NA   -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |



STAT1 06/11/11 06:49  
 TEST PROGRAM 4HC86 S/N 3  
 DDS-101-08-A PN 54HC86 TEST SEQ14 -55C

-----  
 CONTINUITY TEST  
 -----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -550.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 600.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
 FUNCTIONAL TEST  
 VCC= 2  
 VIH= 1.500 VIL= 500.0E-03  
 -----

-----  
 VOH1 TEST  
 VCC= 2  
 VOH LIMIT 1.900  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
 VOL1 TEST  
 VCC= 2  
 VOL LIMIT 100.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
 FUNCTIONAL TEST  
 VCC= 3  
 VIH= 2.100 VIL= 900.0E-03  
 -----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 128.0MV  |    | 260.0MV |
| 315    | 6   | 128.0MV  |    | 260.0MV |
| 321    | 8   | 130.0MV  |    | 260.0MV |
| 327    | 11  | 128.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 36.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 146.0MV  |    | 260.0MV |
| 315    | 6   | 144.0MV  |    | 260.0MV |
| 321    | 8   | 148.0MV  |    | 260.0MV |
| 327    | 11  | 142.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.780 V      5.480 V  
  235    6   5.770 V      5.480 V  
  241    8   5.760 V      5.480 V  
  247   11   5.780 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   48.00MV      100.0MV  
  274    6   46.00MV      100.0MV  
  280    8   46.00MV      100.0MV  
  286   11   48.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   160.0MV      260.0MV  
  315    6   158.0MV      260.0MV  
  321    8   164.0MV      260.0MV  
  327   11   162.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   11.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA    -100.0NA    100.0NA  
  369    2   10.00NA     -100.0NA    100.0NA  
  374    4   -9.000NA    -100.0NA    100.0NA  
  377    4   10.00NA     -100.0NA    100.0NA  
  382    5   -9.000NA    -100.0NA    100.0NA  
  385    5   10.00NA     -100.0NA    100.0NA  
  390    9   -9.000NA    -100.0NA    100.0NA  
  393    9   10.00NA     -100.0NA    100.0NA  
  398   10  -10.00NA    -100.0NA    100.0NA  
  401   10   10.00NA     -100.0NA    100.0NA  
  406   12  -10.00NA    -100.0NA    100.0NA  
  409   12   20.00NA     -100.0NA    100.0NA  
  414   13   -9.000NA    -100.0NA    100.0NA  
  417   13   20.00NA     -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
 TEST PROGRAM 4HC86 S/N 4  
 DDS-101-08-A PN 54HC86 TEST SEQ14 -55C

-----  
 CONTINUITY TEST  
 -----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -560.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 600.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 610.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 560.0MV  | 100.0MV  | 1.500 V  |

-----  
 FUNCTIONAL TEST  
 VCC= 2  
 VIH= 1.500 VIL= 500.0E-03  
 -----

-----  
 VOH1 TEST  
 VCC= 2  
 VOH LIMIT 1.900  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
 VOL1 TEST  
 VCC= 2  
 VOL LIMIT 100.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
 FUNCTIONAL TEST  
 VCC= 3  
 VIH= 2.100 VIL= 900.0E-03  
 -----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 120.0MV  |    | 260.0MV |
| 315    | 6   | 120.0MV  |    | 260.0MV |
| 321    | 8   | 124.0MV  |    | 260.0MV |
| 327    | 11  | 124.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.440 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.280 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 36.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 138.0MV  |    | 260.0MV |
| 315    | 6   | 138.0MV  |    | 260.0MV |
| 321    | 8   | 142.0MV  |    | 260.0MV |
| 327    | 11  | 140.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----



VOH2 LIMIT 5.480

-----  
INST # PIN MEASURED LT GT  
229 3 5.800 V 5.480 V  
235 6 5.770 V 5.480 V  
241 8 5.770 V 5.480 V  
247 11 5.790 V 5.480 V

-----  
VOL1 TEST  
VCC= 6  
VOL LIMIT 100.0E-03  
-----

INST # PIN MEASURED LT GT  
268 3 50.00MV 100.0MV  
274 6 48.00MV 100.0MV  
280 8 48.00MV 100.0MV  
286 11 50.00MV 100.0MV

-----  
VOL2 TEST  
VCC= 6  
VOL2 LIMIT 260.0E-03  
-----

INST # PIN MEASURED LT GT  
309 3 154.0MV 260.0MV  
315 6 154.0MV 260.0MV  
321 8 160.0MV 260.0MV  
327 11 158.0MV 260.0MV

-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----

INST # PIN MEASURED LT GT  
358 1 0 A -100.0NA 100.0NA  
361 1 11.00NA -100.0NA 100.0NA  
366 2 -9.000NA -100.0NA 100.0NA  
369 2 10.00NA -100.0NA 100.0NA  
374 4 -9.000NA -100.0NA 100.0NA  
377 4 10.00NA -100.0NA 100.0NA  
382 5 -9.000NA -100.0NA 100.0NA  
385 5 10.00NA -100.0NA 100.0NA  
390 9 -9.000NA -100.0NA 100.0NA  
393 9 16.00NA -100.0NA 100.0NA  
398 10 -10.00NA -100.0NA 100.0NA  
401 10 18.00NA -100.0NA 100.0NA  
406 12 -9.000NA -100.0NA 100.0NA  
409 12 34.00NA -100.0NA 100.0NA  
414 13 -19.00NA -100.0NA 100.0NA  
417 13 36.00NA -100.0NA 100.0NA

-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 16.00NA  |    | 1.000UA |
| 453    | 14  | 18.00NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 5  
DDS-101-08-A PN 54HC86 TEST SEQ14 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -590.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 630.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 640.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 590.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 118.0MV  |    | 260.0MV |
| 315    | 6   | 118.0MV  |    | 260.0MV |
| 321    | 8   | 120.0MV  |    | 260.0MV |
| 327    | 11  | 116.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.290 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 36.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 134.0MV  |    | 260.0MV |
| 315    | 6   | 132.0MV  |    | 260.0MV |
| 321    | 8   | 136.0MV  |    | 260.0MV |
| 327    | 11  | 134.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.800 V      5.480 V  
  235    6   5.780 V      5.480 V  
  241    8   5.780 V      5.480 V  
  247   11   5.800 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   50.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   50.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   150.0MV      260.0MV  
  315    6   150.0MV      260.0MV  
  321    8   154.0MV      260.0MV  
  327   11   152.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1  -2.000NA     -100.0NA    100.0NA  
  361    1   11.00NA     -100.0NA    100.0NA  
  366    2  -9.000NA     -100.0NA    100.0NA  
  369    2   10.00NA     -100.0NA    100.0NA  
  374    4  -9.000NA     -100.0NA    100.0NA  
  377    4   10.00NA     -100.0NA    100.0NA  
  382    5  -9.000NA     -100.0NA    100.0NA  
  385    5   10.00NA     -100.0NA    100.0NA  
  390    9  -9.000NA     -100.0NA    100.0NA  
  393    9   10.00NA     -100.0NA    100.0NA  
  398   10 -10.00NA     -100.0NA    100.0NA  
  401   10   10.00NA     -100.0NA    100.0NA  
  406   12 -10.00NA     -100.0NA    100.0NA  
  409   12   96.00NA     -100.0NA    100.0NA  
  414   13  -6.000NA     -100.0NA    100.0NA  
  417   13   77.00NA     -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
 TEST PROGRAM 4HC86 S/N 6  
 DDS-101-08-A PN 54HC86 TEST SEQ14 -55C

-----  
 CONTINUITY TEST  
 -----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -740.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -730.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -590.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 630.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 630.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 580.0MV  | 100.0MV  | 1.500 V  |

-----  
 FUNCTIONAL TEST  
 VCC= 2  
 VIH= 1.500 VIL= 500.0E-03  
 -----

-----  
 VOH1 TEST  
 VCC= 2  
 VOH LIMIT 1.900  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
 VOL1 TEST  
 VCC= 2  
 VOL LIMIT 100.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
 FUNCTIONAL TEST  
 VCC= 3  
 VIH= 2.100 VIL= 900.0E-03  
 -----



-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.860 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.820 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 116.0MV  |    | 260.0MV |
| 315    | 6   | 118.0MV  |    | 260.0MV |
| 321    | 8   | 144.0MV  |    | 260.0MV |
| 327    | 11  | 116.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.250 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 36.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 132.0MV  |    | 260.0MV |
| 315    | 6   | 134.0MV  |    | 260.0MV |
| 321    | 8   | 170.0MV  |    | 260.0MV |
| 327    | 11  | 134.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
229     3    5.790 V      5.480 V  
235     6    5.780 V      5.480 V  
241     8    5.750 V      5.480 V  
247    11    5.800 V      5.480 V  
-----
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
268     3    50.00MV      100.0MV  
274     6    48.00MV      100.0MV  
280     8    48.00MV      100.0MV  
286    11    50.00MV      100.0MV  
-----
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
309     3    150.0MV      260.0MV  
315     6    150.0MV      260.0MV  
321     8    182.0MV      260.0MV  
327    11    152.0MV      260.0MV  
-----
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
358     1     0 A      -100.0NA    100.0NA  
361     1    11.00NA    -100.0NA    100.0NA  
366     2   -9.000NA   -100.0NA    100.0NA  
369     2    10.00NA    -100.0NA    100.0NA  
374     4   -9.000NA   -100.0NA    100.0NA  
377     4    10.00NA    -100.0NA    100.0NA  
382     5   -9.000NA   -100.0NA    100.0NA  
385     5    10.00NA    -100.0NA    100.0NA  
390     9   -9.000NA   -100.0NA    100.0NA  
393     9    12.00NA    -100.0NA    100.0NA  
398    10  -10.00NA    -100.0NA    100.0NA  
401    10    12.00NA    -100.0NA    100.0NA  
406    12  -10.00NA    -100.0NA    100.0NA  
409    12    56.00NA    -100.0NA    100.0NA  
414    13   -7.000NA   -100.0NA    100.0NA  
417    13    50.00NA    -100.0NA    100.0NA  
-----
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 7  
DDS-101-08-A PN 54HC86 TEST SEQ14 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -730.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -740.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -580.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 630.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 630.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 580.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.860 V  | 2.480 V |    |
| 235    | 6   | 2.850 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 114.0MV  |    | 260.0MV |
| 315    | 6   | 116.0MV  |    | 260.0MV |
| 321    | 8   | 120.0MV  |    | 260.0MV |
| 327    | 11  | 116.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.440 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.310 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.280 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 36.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 130.0MV  |    | 260.0MV |
| 315    | 6   | 130.0MV  |    | 260.0MV |
| 321    | 8   | 138.0MV  |    | 260.0MV |
| 327    | 11  | 132.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.940 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.800 V      5.480 V  
  235    6   5.780 V      5.480 V  
  241    8   5.770 V      5.480 V  
  247   11   5.790 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   50.00MV      100.0MV  
  274    6   46.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   48.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   148.0MV      260.0MV  
  315    6   148.0MV      260.0MV  
  321    8   156.0MV      260.0MV  
  327   11   152.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   11.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA   -100.0NA    100.0NA  
  374    4   -9.000NA   -100.0NA    100.0NA  
  377    4   12.00NA   -100.0NA    100.0NA  
  382    5   -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA   -100.0NA    100.0NA  
  390    9   -9.000NA   -100.0NA    100.0NA  
  393    9   16.00NA   -100.0NA    100.0NA  
  398   10  -10.00NA   -100.0NA    100.0NA  
  401   10   16.00NA   -100.0NA    100.0NA  
  406   12  -10.00NA   -100.0NA    100.0NA  
  409   12   28.00NA   -100.0NA    100.0NA  
  414   13   -9.000NA   -100.0NA    100.0NA  
  417   13   30.00NA   -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```



-----  
INST # PIN MEASURED LT GT  
446 14 4.000NA 1.000UA  
453 14 4.000NA 1.000UA

EIR 1.....10 FCT DCT  
0000000000 PASS PASS EOT

STAT1 06/11/11 06:49  
 TEST PROGRAM 4HC86 S/N 8  
 DDS-101-08-A PN 54HC86 TEST SEQ14 -55C

-----  
 CONTINUITY TEST  
 -----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -720.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -720.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -560.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 610.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 610.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 560.0MV  | 100.0MV  | 1.500 V  |

-----  
 FUNCTIONAL TEST  
 VCC= 2  
 VIH= 1.500 VIL= 500.0E-03  
 -----

-----  
 VOH1 TEST  
 VCC= 2  
 VOH LIMIT 1.900  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
 VOL1 TEST  
 VCC= 2  
 VOL LIMIT 100.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
 FUNCTIONAL TEST  
 VCC= 3  
 VIH= 2.100 VIL= 900.0E-03  
 -----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 120.0MV  |    | 260.0MV |
| 315    | 6   | 120.0MV  |    | 260.0MV |
| 321    | 8   | 126.0MV  |    | 260.0MV |
| 327    | 11  | 120.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 136.0MV  |    | 260.0MV |
| 315    | 6   | 136.0MV  |    | 260.0MV |
| 321    | 8   | 144.0MV  |    | 260.0MV |
| 327    | 11  | 138.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.790 V      5.480 V  
  235    6   5.770 V      5.480 V  
  241    8   5.760 V      5.480 V  
  247   11   5.780 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   50.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   50.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   152.0MV      260.0MV  
  315    6   152.0MV      260.0MV  
  321    8   162.0MV      260.0MV  
  327   11   156.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   12.00NA    -100.0NA    100.0NA  
  366    2  -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA   -100.0NA    100.0NA  
  374    4  -9.000NA   -100.0NA    100.0NA  
  377    4   12.00NA   -100.0NA    100.0NA  
  382    5  -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA   -100.0NA    100.0NA  
  390    9  -10.00NA   -100.0NA    100.0NA  
  393    9   34.00NA   -100.0NA    100.0NA  
  398   10  -9.000NA   -100.0NA    100.0NA  
  401   10   37.00NA   -100.0NA    100.0NA  
  406   12  -10.00NA   -100.0NA    100.0NA  
  409   12   30.00NA   -100.0NA    100.0NA  
  414   13  -22.00NA   -100.0NA    100.0NA  
  417   13   36.00NA   -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 19.00NA  |    | 1.000UA |
| 453    | 14  | 25.00NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
 TEST PROGRAM 4HC86 S/N 9  
 DDS-101-08-A PN 54HC86 TEST SEQ14 -55C

-----  
 CONTINUITY TEST  
 -----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -720.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -720.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -720.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -720.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -570.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 620.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 610.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 570.0MV  | 100.0MV  | 1.500 V  |

-----  
 FUNCTIONAL TEST  
 VCC= 2  
 VIH= 1.500 VIL= 500.0E-03  
 -----

-----  
 VOH1 TEST  
 VCC= 2  
 VOH LIMIT 1.900  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
 VOL1 TEST  
 VCC= 2  
 VOL LIMIT 100.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
 FUNCTIONAL TEST  
 VCC= 3  
 VIH= 2.100 VIL= 900.0E-03  
 -----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 122.0MV  |    | 260.0MV |
| 315    | 6   | 124.0MV  |    | 260.0MV |
| 321    | 8   | 124.0MV  |    | 260.0MV |
| 327    | 11  | 122.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|



|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.280 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 36.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 136.0MV  |    | 260.0MV |
| 315    | 6   | 138.0MV  |    | 260.0MV |
| 321    | 8   | 142.0MV  |    | 260.0MV |
| 327    | 11  | 138.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.790 V      5.480 V  
  235    6   5.770 V      5.480 V  
  241    8   5.770 V      5.480 V  
  247   11   5.790 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   48.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   50.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   154.0MV      260.0MV  
  315    6   154.0MV      260.0MV  
  321    8   158.0MV      260.0MV  
  327   11   154.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   11.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA    -100.0NA    100.0NA  
  374    4   -9.000NA   -100.0NA    100.0NA  
  377    4   12.00NA    -100.0NA    100.0NA  
  382    5   -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA    -100.0NA    100.0NA  
  390    9  -10.00NA   -100.0NA    100.0NA  
  393    9   53.00NA    -100.0NA    100.0NA  
  398   10   -9.000NA   -100.0NA    100.0NA  
  401   10   58.00NA    -100.0NA    100.0NA  
  406   12  -11.00NA   -100.0NA    100.0NA  
  409   12   50.00NA    -100.0NA    100.0NA  
  414   13  -27.00NA   -100.0NA    100.0NA  
  417   13   64.00NA    -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----  
INST # PIN MEASURED LT GT  
446 14 26.00NA 1.000UA  
453 14 38.00NA 1.000UA

EIR 1.....10 FCT DCT  
0000000000 PASS PASS EOT

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 10  
DDS-101-08-A PN 54HC86 TEST SEQ14 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -550.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 600.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 600.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 126.0MV  |    | 260.0MV |
| 315    | 6   | 124.0MV  |    | 260.0MV |
| 321    | 8   | 128.0MV  |    | 260.0MV |
| 327    | 11  | 124.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.280 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 36.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 144.0MV  |    | 260.0MV |
| 315    | 6   | 142.0MV  |    | 260.0MV |
| 321    | 8   | 146.0MV  |    | 260.0MV |
| 327    | 11  | 142.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.790 V      5.480 V  
  235    6   5.770 V      5.480 V  
  241    8   5.770 V      5.480 V  
  247   11   5.790 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   50.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   50.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   162.0MV      260.0MV  
  315    6   160.0MV      260.0MV  
  321    8   166.0MV      260.0MV  
  327   11   164.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1  -2.000NA     -100.0NA    100.0NA  
  361    1   11.00NA     -100.0NA    100.0NA  
  366    2  -9.000NA     -100.0NA    100.0NA  
  369    2   10.00NA     -100.0NA    100.0NA  
  374    4  -9.000NA     -100.0NA    100.0NA  
  377    4   10.00NA     -100.0NA    100.0NA  
  382    5  -9.000NA     -100.0NA    100.0NA  
  385    5   10.00NA     -100.0NA    100.0NA  
  390    9  -9.000NA     -100.0NA    100.0NA  
  393    9   10.00NA     -100.0NA    100.0NA  
  398   10  -9.000NA     -100.0NA    100.0NA  
  401   10   10.00NA     -100.0NA    100.0NA  
  406   12 -10.00NA     -100.0NA    100.0NA  
  409   12   10.00NA     -100.0NA    100.0NA  
  414   13  -9.000NA     -100.0NA    100.0NA  
  417   13   10.00NA     -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |



STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 11  
DDS-101-08-A PN 54HC86 TEST SEQ14 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -550.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.980 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

```

-----
          VOH1 TEST
          VCC=      3
          VOH LIMIT 2.900
-----

```

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

```

-----
          VOH2 TEST
          VCC=      3
          VOH2 LIMIT 2.480
-----

```

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

```

-----
          VOL1 TEST
          VCC=      3
          VOL LIMIT 100.0E-03
-----

```

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

```

-----
          VOL2 TEST
          VCC=      3
          VOL2 LIMIT 260.0E-03
-----

```

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 122.0MV  |    | 260.0MV |
| 315    | 6   | 124.0MV  |    | 260.0MV |
| 321    | 8   | 126.0MV  |    | 260.0MV |
| 327    | 11  | 122.0MV  |    | 260.0MV |

```

-----
          FUNCTIONAL TEST
          VCC=      4.500
          VIH=      3.150      VIL=      1.350
-----

```

```

-----
          VOH1 TEST
          VCC=      4.500
          VOH LIMIT 4.400
-----

```

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.440 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 144.0MV  |    | 260.0MV |
| 315    | 6   | 142.0MV  |    | 260.0MV |
| 321    | 8   | 148.0MV  |    | 260.0MV |
| 327    | 11  | 144.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.790 V      5.480 V  
  235    6   5.770 V      5.480 V  
  241    8   5.760 V      5.480 V  
  247   11   5.780 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   52.00MV      100.0MV  
  274    6   50.00MV      100.0MV  
  280    8   50.00MV      100.0MV  
  286   11   50.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   164.0MV      260.0MV  
  315    6   162.0MV      260.0MV  
  321    8   168.0MV      260.0MV  
  327   11   164.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   12.00NA    -100.0NA    100.0NA  
  366    2  -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA   -100.0NA    100.0NA  
  374    4  -9.000NA   -100.0NA    100.0NA  
  377    4   10.00NA   -100.0NA    100.0NA  
  382    5  -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA   -100.0NA    100.0NA  
  390    9  -9.000NA   -100.0NA    100.0NA  
  393    9   10.00NA   -100.0NA    100.0NA  
  398   10 -10.00NA   -100.0NA    100.0NA  
  401   10   10.00NA   -100.0NA    100.0NA  
  406   12  -9.000NA   -100.0NA    100.0NA  
  409   12   11.00NA   -100.0NA    100.0NA  
  414   13  -9.000NA   -100.0NA    100.0NA  
  417   13   12.00NA   -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 5.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 12  
DDS-101-08-A PN 54HC86 TEST SEQ14 -55C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -710.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -710.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -560.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 600.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 610.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 560.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 116.0MV  |    | 260.0MV |
| 315    | 6   | 118.0MV  |    | 260.0MV |
| 321    | 8   | 122.0MV  |    | 260.0MV |
| 327    | 11  | 118.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.290 V  | 3.980 V |    |
| 241    | 8   | 4.280 V  | 3.980 V |    |
| 247    | 11  | 4.300 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 134.0MV  |    | 260.0MV |
| 315    | 6   | 136.0MV  |    | 260.0MV |
| 321    | 8   | 140.0MV  |    | 260.0MV |
| 327    | 11  | 136.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----



VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.800 V      5.480 V  
  235    6   5.780 V      5.480 V  
  241    8   5.770 V      5.480 V  
  247   11   5.790 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   50.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   50.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   152.0MV      260.0MV  
  315    6   152.0MV      260.0MV  
  321    8   158.0MV      260.0MV  
  327   11   156.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   11.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA   -100.0NA    100.0NA  
  374    4   -9.000NA   -100.0NA    100.0NA  
  377    4   10.00NA   -100.0NA    100.0NA  
  382    5   -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA   -100.0NA    100.0NA  
  390    9   -9.000NA   -100.0NA    100.0NA  
  393    9   14.00NA   -100.0NA    100.0NA  
  398   10  -10.00NA   -100.0NA    100.0NA  
  401   10   16.00NA   -100.0NA    100.0NA  
  406   12  -10.00NA   -100.0NA    100.0NA  
  409   12   56.00NA   -100.0NA    100.0NA  
  414   13  -18.00NA   -100.0NA    100.0NA  
  417   13   56.00NA   -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 17.00NA  |    | 1.000UA |
| 453    | 14  | 20.00NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |



# MIL-PRF-38534 CLASS K DATAPACK

---

Post Burn-In Test Results at 25°C



STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 1  
DDS-101-08-A PN 54HC86 TEST SEQ14 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 540.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 128.0MV  |    | 260.0MV |
| 315    | 6   | 126.0MV  |    | 260.0MV |
| 321    | 8   | 132.0MV  |    | 260.0MV |
| 327    | 11  | 128.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.450 V  | 4.400 V |    |

|     |    |         |         |
|-----|----|---------|---------|
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.440 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.270 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 146.0MV  |    | 260.0MV |
| 315    | 6   | 146.0MV  |    | 260.0MV |
| 321    | 8   | 152.0MV  |    | 260.0MV |
| 327    | 11  | 148.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.480  
-----

```

-----
INST #  PIN  MEASURED      LT      GT
    229   3   5.780 V      5.480 V
    235   6   5.760 V      5.480 V
    241   8   5.750 V      5.480 V
    247  11   5.780 V      5.480 V

```

```

-----
VOL1 TEST
VCC=      6
VOL LIMIT 100.0E-03
-----

```

```

INST #  PIN  MEASURED      LT      GT
    268   3   50.00MV      100.0MV
    274   6   48.00MV      100.0MV
    280   8   48.00MV      100.0MV
    286  11   48.00MV      100.0MV

```

```

-----
VOL2 TEST
VCC=      6
VOL2 LIMIT 260.0E-03
-----

```

```

INST #  PIN  MEASURED      LT      GT
    309   3   166.0MV      260.0MV
    315   6   164.0MV      260.0MV
    321   8   172.0MV      260.0MV
    327  11   168.0MV      260.0MV

```

```

-----
IIN TEST
VCC= 6
IIL/IIH LIMIT +- 0.1UA @25C/-55C
IIL/IIH LIMIT +- 1.0UA @+125C
-----

```

```

INST #  PIN  MEASURED      LT      GT
    358   1     0 A      -100.0NA  100.0NA
    361   1   12.00NA     -100.0NA  100.0NA
    366   2   -9.000NA     -100.0NA  100.0NA
    369   2   10.00NA     -100.0NA  100.0NA
    374   4   -9.000NA     -100.0NA  100.0NA
    377   4   10.00NA     -100.0NA  100.0NA
    382   5   -9.000NA     -100.0NA  100.0NA
    385   5   10.00NA     -100.0NA  100.0NA
    390   9   -9.000NA     -100.0NA  100.0NA
    393   9   10.00NA     -100.0NA  100.0NA
    398  10  -10.00NA     -100.0NA  100.0NA
    401  10   10.00NA     -100.0NA  100.0NA
    406  12  -10.00NA     -100.0NA  100.0NA
    409  12   10.00NA     -100.0NA  100.0NA
    414  13   -9.000NA     -100.0NA  100.0NA
    417  13   10.00NA     -100.0NA  100.0NA

```

```

-----
ICC TEST
VCC= 6
ICC LIMIT MAX. 1.0UA @25C/-55C
ICC LIMIT MAX. 40UA @+125C
-----

```

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |



STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 2  
DDS-101-08-A PN 54HC86 TEST SEQ14 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 128.0MV  |    | 260.0MV |
| 315    | 6   | 128.0MV  |    | 260.0MV |
| 321    | 8   | 130.0MV  |    | 260.0MV |
| 327    | 11  | 128.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.440 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.270 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 148.0MV  |    | 260.0MV |
| 315    | 6   | 146.0MV  |    | 260.0MV |
| 321    | 8   | 152.0MV  |    | 260.0MV |
| 327    | 11  | 150.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.780 V      5.480 V  
  235    6   5.760 V      5.480 V  
  241    8   5.750 V      5.480 V  
  247   11   5.780 V      5.480 V  
-----
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  268    3   50.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   50.00MV      100.0MV  
-----
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  309    3   166.0MV      260.0MV  
  315    6   168.0MV      260.0MV  
  321    8   170.0MV      260.0MV  
  327   11   168.0MV      260.0MV  
-----
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   11.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA   -100.0NA    100.0NA  
  374    4   -9.000NA   -100.0NA    100.0NA  
  377    4   10.00NA   -100.0NA    100.0NA  
  382    5   -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA   -100.0NA    100.0NA  
  390    9   -9.000NA   -100.0NA    100.0NA  
  393    9   10.00NA   -100.0NA    100.0NA  
  398   10  -10.00NA   -100.0NA    100.0NA  
  401   10   10.00NA   -100.0NA    100.0NA  
  406   12  -10.00NA   -100.0NA    100.0NA  
  409   12   10.00NA   -100.0NA    100.0NA  
  414   13   -9.000NA   -100.0NA    100.0NA  
  417   13   10.00NA   -100.0NA    100.0NA  
-----
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 3

DDS-101-08-A PN 54HC86 TEST SEQ14 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.820 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 132.0MV  |    | 260.0MV |
| 315    | 6   | 134.0MV  |    | 260.0MV |
| 321    | 8   | 134.0MV  |    | 260.0MV |
| 327    | 11  | 130.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.270 V  | 3.980 V |    |
| 241    | 8   | 4.260 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 152.0MV  |    | 260.0MV |
| 315    | 6   | 152.0MV  |    | 260.0MV |
| 321    | 8   | 154.0MV  |    | 260.0MV |
| 327    | 11  | 152.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----



VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.780 V      5.480 V  
  235    6   5.760 V      5.480 V  
  241    8   5.750 V      5.480 V  
  247   11   5.780 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   48.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   46.00MV      100.0MV  
  286   11   48.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   170.0MV      260.0MV  
  315    6   170.0MV      260.0MV  
  321    8   174.0MV      260.0MV  
  327   11   170.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   11.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA    -100.0NA    100.0NA  
  374    4   -9.000NA   -100.0NA    100.0NA  
  377    4   10.00NA    -100.0NA    100.0NA  
  382    5   -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA    -100.0NA    100.0NA  
  390    9   -9.000NA   -100.0NA    100.0NA  
  393    9   10.00NA    -100.0NA    100.0NA  
  398   10  -10.00NA    -100.0NA    100.0NA  
  401   10   10.00NA    -100.0NA    100.0NA  
  406   12   -9.000NA   -100.0NA    100.0NA  
  409   12   10.00NA    -100.0NA    100.0NA  
  414   13   -9.000NA   -100.0NA    100.0NA  
  417   13   10.00NA    -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 4  
DDS-101-08-A PN 54HC86 TEST SEQ14 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 540.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.980 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 128.0MV  |    | 260.0MV |
| 315    | 6   | 128.0MV  |    | 260.0MV |
| 321    | 8   | 132.0MV  |    | 260.0MV |
| 327    | 11  | 130.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.440 V | 4.400 V |
| 194 | 6  | 4.440 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.270 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 146.0MV  |    | 260.0MV |
| 315    | 6   | 146.0MV  |    | 260.0MV |
| 321    | 8   | 152.0MV  |    | 260.0MV |
| 327    | 11  | 150.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT      GT  
229     3    5.790 V      5.480 V  
235     6    5.760 V      5.480 V  
241     8    5.750 V      5.480 V  
247    11    5.780 V      5.480 V  
-----
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT      GT  
268     3    52.00MV      100.0MV  
274     6    48.00MV      100.0MV  
280     8    48.00MV      100.0MV  
286    11    50.00MV      100.0MV  
-----
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT      GT  
309     3    168.0MV      260.0MV  
315     6    166.0MV      260.0MV  
321     8    174.0MV      260.0MV  
327    11    172.0MV      260.0MV  
-----
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
-----  
INST #  PIN  MEASURED      LT      GT  
358     1      0 A      -100.0NA  100.0NA  
361     1    12.00NA     -100.0NA  100.0NA  
366     2   -9.000NA     -100.0NA  100.0NA  
369     2    10.00NA     -100.0NA  100.0NA  
374     4   -9.000NA     -100.0NA  100.0NA  
377     4    10.00NA     -100.0NA  100.0NA  
382     5   -9.000NA     -100.0NA  100.0NA  
385     5    10.00NA     -100.0NA  100.0NA  
390     9   -9.000NA     -100.0NA  100.0NA  
393     9    10.00NA     -100.0NA  100.0NA  
398    10  -10.00NA     -100.0NA  100.0NA  
401    10    10.00NA     -100.0NA  100.0NA  
406    12   -9.000NA     -100.0NA  100.0NA  
409    12    10.00NA     -100.0NA  100.0NA  
414    13   -9.000NA     -100.0NA  100.0NA  
417    13    10.00NA     -100.0NA  100.0NA  
-----
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
 TEST PROGRAM 4HC86 S/N 5  
 DDS-101-08-A PN 54HC86 TEST SEQ14 +25C

-----  
 CONTINUITY TEST  
 -----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
 FUNCTIONAL TEST  
 VCC= 2  
 VIH= 1.500 VIL= 500.0E-03  
 -----

-----  
 VOH1 TEST  
 VCC= 2  
 VOH LIMIT 1.900  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
 VOL1 TEST  
 VCC= 2  
 VOL LIMIT 100.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
 FUNCTIONAL TEST  
 VCC= 3  
 VIH= 2.100 VIL= 900.0E-03  
 -----



-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 128.0MV  |    | 260.0MV |
| 315    | 6   | 130.0MV  |    | 260.0MV |
| 321    | 8   | 132.0MV  |    | 260.0MV |
| 327    | 11  | 130.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.440 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.270 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 148.0MV  |    | 260.0MV |
| 315    | 6   | 148.0MV  |    | 260.0MV |
| 321    | 8   | 152.0MV  |    | 260.0MV |
| 327    | 11  | 150.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.780 V      5.480 V  
  235    6   5.760 V      5.480 V  
  241    8   5.760 V      5.480 V  
  247   11   5.780 V      5.480 V  
-----
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  268    3   50.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   50.00MV      100.0MV  
-----
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  309    3   168.0MV      260.0MV  
  315    6   168.0MV      260.0MV  
  321    8   172.0MV      260.0MV  
  327   11   170.0MV      260.0MV  
-----
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   11.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA   -100.0NA    100.0NA  
  374    4   -9.000NA   -100.0NA    100.0NA  
  377    4   10.00NA   -100.0NA    100.0NA  
  382    5   -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA   -100.0NA    100.0NA  
  390    9   -9.000NA   -100.0NA    100.0NA  
  393    9   10.00NA   -100.0NA    100.0NA  
  398   10  -10.00NA   -100.0NA    100.0NA  
  401   10   10.00NA   -100.0NA    100.0NA  
  406   12   -9.000NA   -100.0NA    100.0NA  
  409   12   10.00NA   -100.0NA    100.0NA  
  414   13   -9.000NA   -100.0NA    100.0NA  
  417   13   10.00NA   -100.0NA    100.0NA  
-----
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 5.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 6

DDS-101-08-A PN 54HC86 TEST SEQ14 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
 VOH1 TEST  
 VCC= 3  
 VOH LIMIT 2.900  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
 VOH2 TEST  
 VCC= 3  
 VOH2 LIMIT 2.480  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
 VOL1 TEST  
 VCC= 3  
 VOL LIMIT 100.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
 VOL2 TEST  
 VCC= 3  
 VOL2 LIMIT 260.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 128.0MV  |    | 260.0MV |
| 315    | 6   | 130.0MV  |    | 260.0MV |
| 321    | 8   | 130.0MV  |    | 260.0MV |
| 327    | 11  | 128.0MV  |    | 260.0MV |

-----  
 FUNCTIONAL TEST  
 VCC= 4.500  
 VIH= 3.150 VIL= 1.350  
 -----

-----  
 VOH1 TEST  
 VCC= 4.500  
 VOH LIMIT 4.400  
 -----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.270 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 148.0MV  |    | 260.0MV |
| 315    | 6   | 150.0MV  |    | 260.0MV |
| 321    | 8   | 150.0MV  |    | 260.0MV |
| 327    | 11  | 148.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT      GT  
  229    3   5.780 V      5.480 V  
  235    6   5.760 V      5.480 V  
  241    8   5.760 V      5.480 V  
  247   11   5.780 V      5.480 V  
-----
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT      GT  
  268    3   50.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   52.00MV      100.0MV  
-----
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT      GT  
  309    3   168.0MV      260.0MV  
  315    6   168.0MV      260.0MV  
  321    8   172.0MV      260.0MV  
  327   11   172.0MV      260.0MV  
-----
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT      GT  
  358    1     0 A      -100.0NA  100.0NA  
  361    1   11.00NA     -100.0NA  100.0NA  
  366    2   -9.000NA     -100.0NA  100.0NA  
  369    2   10.00NA      -100.0NA  100.0NA  
  374    4   -9.000NA     -100.0NA  100.0NA  
  377    4   10.00NA      -100.0NA  100.0NA  
  382    5   -9.000NA     -100.0NA  100.0NA  
  385    5   10.00NA      -100.0NA  100.0NA  
  390    9   -9.000NA     -100.0NA  100.0NA  
  393    9   10.00NA      -100.0NA  100.0NA  
  398   10   -9.000NA     -100.0NA  100.0NA  
  401   10   10.00NA      -100.0NA  100.0NA  
  406   12  -10.00NA     -100.0NA  100.0NA  
  409   12   10.00NA      -100.0NA  100.0NA  
  414   13   -9.000NA     -100.0NA  100.0NA  
  417   13   10.00NA      -100.0NA  100.0NA  
-----
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```



-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 5.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 7

DDS-101-08-A PN 54HC86 TEST SEQ14 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 540.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.980 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.840 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 124.0MV  |    | 260.0MV |
| 315    | 6   | 124.0MV  |    | 260.0MV |
| 321    | 8   | 132.0MV  |    | 260.0MV |
| 327    | 11  | 128.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.440 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.440 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.300 V  | 3.980 V |    |
| 235    | 6   | 4.280 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 144.0MV  |    | 260.0MV |
| 315    | 6   | 144.0MV  |    | 260.0MV |
| 321    | 8   | 154.0MV  |    | 260.0MV |
| 327    | 11  | 150.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.790 V      5.480 V  
  235    6   5.760 V      5.480 V  
  241    8   5.750 V      5.480 V  
  247   11   5.780 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   52.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   50.00MV      100.0MV  
  286   11   50.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   166.0MV      260.0MV  
  315    6   164.0MV      260.0MV  
  321    8   174.0MV      260.0MV  
  327   11   170.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   11.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA    -100.0NA    100.0NA  
  374    4   -9.000NA   -100.0NA    100.0NA  
  377    4   10.00NA    -100.0NA    100.0NA  
  382    5   -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA    -100.0NA    100.0NA  
  390    9   -9.000NA   -100.0NA    100.0NA  
  393    9   10.00NA    -100.0NA    100.0NA  
  398   10  -10.00NA   -100.0NA    100.0NA  
  401   10   10.00NA    -100.0NA    100.0NA  
  406   12   -9.000NA   -100.0NA    100.0NA  
  409   12   10.00NA    -100.0NA    100.0NA  
  414   13   -9.000NA   -100.0NA    100.0NA  
  417   13   10.00NA    -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 8  
DDS-101-08-A PN 54HC86 TEST SEQ14 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 128.0MV  |    | 260.0MV |
| 315    | 6   | 126.0MV  |    | 260.0MV |
| 321    | 8   | 132.0MV  |    | 260.0MV |
| 327    | 11  | 130.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|



|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.270 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.280 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 148.0MV  |    | 260.0MV |
| 315    | 6   | 148.0MV  |    | 260.0MV |
| 321    | 8   | 152.0MV  |    | 260.0MV |
| 327    | 11  | 148.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.780 V      5.480 V  
  235    6   5.760 V      5.480 V  
  241    8   5.750 V      5.480 V  
  247   11   5.770 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   52.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   50.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   166.0MV      260.0MV  
  315    6   166.0MV      260.0MV  
  321    8   172.0MV      260.0MV  
  327   11   170.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   11.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA    -100.0NA    100.0NA  
  374    4   -9.000NA   -100.0NA    100.0NA  
  377    4   10.00NA    -100.0NA    100.0NA  
  382    5   -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA    -100.0NA    100.0NA  
  390    9   -9.000NA   -100.0NA    100.0NA  
  393    9   10.00NA    -100.0NA    100.0NA  
  398   10  -10.00NA   -100.0NA    100.0NA  
  401   10   10.00NA    -100.0NA    100.0NA  
  406   12  -10.00NA   -100.0NA    100.0NA  
  409   12   10.00NA    -100.0NA    100.0NA  
  414   13   -9.000NA   -100.0NA    100.0NA  
  417   13   10.00NA    -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 9  
DDS-101-08-A PN 54HC86 TEST SEQ14 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 550.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 130.0MV  |    | 260.0MV |
| 315    | 6   | 132.0MV  |    | 260.0MV |
| 321    | 8   | 132.0MV  |    | 260.0MV |
| 327    | 11  | 130.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.440 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.260 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 36.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 150.0MV  |    | 260.0MV |
| 315    | 6   | 150.0MV  |    | 260.0MV |
| 321    | 8   | 154.0MV  |    | 260.0MV |
| 327    | 11  | 150.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.780 V      5.480 V  
  235    6   5.760 V      5.480 V  
  241    8   5.760 V      5.480 V  
  247   11   5.780 V      5.480 V  
-----
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   48.00MV      100.0MV  
  274    6   46.00MV      100.0MV  
  280    8   46.00MV      100.0MV  
  286   11   50.00MV      100.0MV  
-----
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   168.0MV      260.0MV  
  315    6   170.0MV      260.0MV  
  321    8   172.0MV      260.0MV  
  327   11   170.0MV      260.0MV  
-----
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   11.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA    -100.0NA    100.0NA  
  369    2   10.00NA     -100.0NA    100.0NA  
  374    4   -9.000NA    -100.0NA    100.0NA  
  377    4   10.00NA     -100.0NA    100.0NA  
  382    5   -9.000NA    -100.0NA    100.0NA  
  385    5   10.00NA     -100.0NA    100.0NA  
  390    9   -9.000NA    -100.0NA    100.0NA  
  393    9   10.00NA     -100.0NA    100.0NA  
  398   10  -10.00NA    -100.0NA    100.0NA  
  401   10   10.00NA     -100.0NA    100.0NA  
  406   12   -9.000NA    -100.0NA    100.0NA  
  409   12   10.00NA     -100.0NA    100.0NA  
  414   13   -9.000NA    -100.0NA    100.0NA  
  417   13   10.00NA     -100.0NA    100.0NA  
-----
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |



STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 10  
DDS-101-08-A PN 54HC86 TEST SEQ14 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 540.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 130.0MV  |    | 260.0MV |
| 315    | 6   | 128.0MV  |    | 260.0MV |
| 321    | 8   | 130.0MV  |    | 260.0MV |
| 327    | 11  | 128.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.440 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.270 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 148.0MV  |    | 260.0MV |
| 315    | 6   | 146.0MV  |    | 260.0MV |
| 321    | 8   | 152.0MV  |    | 260.0MV |
| 327    | 11  | 148.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.780 V      5.480 V  
  235    6   5.760 V      5.480 V  
  241    8   5.760 V      5.480 V  
  247   11   5.780 V      5.480 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   52.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   50.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   168.0MV      260.0MV  
  315    6   166.0MV      260.0MV  
  321    8   172.0MV      260.0MV  
  327   11   170.0MV      260.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   12.00NA    -100.0NA    100.0NA  
  366    2  -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA   -100.0NA    100.0NA  
  374    4  -9.000NA   -100.0NA    100.0NA  
  377    4   10.00NA   -100.0NA    100.0NA  
  382    5  -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA   -100.0NA    100.0NA  
  390    9  -10.00NA   -100.0NA    100.0NA  
  393    9   10.00NA   -100.0NA    100.0NA  
  398   10  -10.00NA   -100.0NA    100.0NA  
  401   10   10.00NA   -100.0NA    100.0NA  
  406   12  -9.000NA   -100.0NA    100.0NA  
  409   12   10.00NA   -100.0NA    100.0NA  
  414   13  -9.000NA   -100.0NA    100.0NA  
  417   13   10.00NA   -100.0NA    100.0NA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 11  
DDS-101-08-A PN 54HC86 TEST SEQ14 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -690.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -690.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 580.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 540.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.830 V  | 2.480 V |    |
| 247    | 11  | 2.850 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 126.0MV  |    | 260.0MV |
| 315    | 6   | 124.0MV  |    | 260.0MV |
| 321    | 8   | 130.0MV  |    | 260.0MV |
| 327    | 11  | 124.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.440 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.440 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.270 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 36.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 146.0MV  |    | 260.0MV |
| 315    | 6   | 146.0MV  |    | 260.0MV |
| 321    | 8   | 150.0MV  |    | 260.0MV |
| 327    | 11  | 148.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----



VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.780 V      5.480 V  
  235    6   5.760 V      5.480 V  
  241    8   5.750 V      5.480 V  
  247   11   5.780 V      5.480 V  
-----
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  268    3   52.00MV      100.0MV  
  274    6   50.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   52.00MV      100.0MV  
-----
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  309    3   168.0MV      260.0MV  
  315    6   166.0MV      260.0MV  
  321    8   172.0MV      260.0MV  
  327   11   168.0MV      260.0MV  
-----
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   12.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA   -100.0NA    100.0NA  
  374    4   -9.000NA   -100.0NA    100.0NA  
  377    4   10.00NA   -100.0NA    100.0NA  
  382    5   -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA   -100.0NA    100.0NA  
  390    9   -9.000NA   -100.0NA    100.0NA  
  393    9   10.00NA   -100.0NA    100.0NA  
  398   10  -10.00NA   -100.0NA    100.0NA  
  401   10   10.00NA   -100.0NA    100.0NA  
  406   12   -9.000NA   -100.0NA    100.0NA  
  409   12   10.00NA   -100.0NA    100.0NA  
  414   13   -9.000NA   -100.0NA    100.0NA  
  417   13   10.00NA   -100.0NA    100.0NA  
-----
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 12  
DDS-101-08-A PN 54HC86 TEST SEQ14 +25C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -700.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -700.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -540.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 540.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 590.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 540.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.970 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.480  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.850 V  | 2.480 V |    |
| 235    | 6   | 2.830 V  | 2.480 V |    |
| 241    | 8   | 2.840 V  | 2.480 V |    |
| 247    | 11  | 2.840 V  | 2.480 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 124.0MV  |    | 260.0MV |
| 315    | 6   | 126.0MV  |    | 260.0MV |
| 321    | 8   | 128.0MV  |    | 260.0MV |
| 327    | 11  | 126.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.440 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.440 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.980  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.980 V |    |
| 235    | 6   | 4.270 V  | 3.980 V |    |
| 241    | 8   | 4.270 V  | 3.980 V |    |
| 247    | 11  | 4.290 V  | 3.980 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 36.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 260.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 146.0MV  |    | 260.0MV |
| 315    | 6   | 146.0MV  |    | 260.0MV |
| 321    | 8   | 150.0MV  |    | 260.0MV |
| 327    | 11  | 148.0MV  |    | 260.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.480

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.780 V      5.480 V  
  235    6   5.760 V      5.480 V  
  241    8   5.750 V      5.480 V  
  247   11   5.770 V      5.480 V  
-----
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  268    3   52.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   52.00MV      100.0MV  
-----
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 260.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  309    3   166.0MV      260.0MV  
  315    6   166.0MV      260.0MV  
  321    8   172.0MV      260.0MV  
  327   11   168.0MV      260.0MV  
-----
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  358    1     0 A      -100.0NA    100.0NA  
  361    1   11.00NA    -100.0NA    100.0NA  
  366    2   -9.000NA   -100.0NA    100.0NA  
  369    2   10.00NA   -100.0NA    100.0NA  
  374    4   -9.000NA   -100.0NA    100.0NA  
  377    4   10.00NA   -100.0NA    100.0NA  
  382    5   -9.000NA   -100.0NA    100.0NA  
  385    5   10.00NA   -100.0NA    100.0NA  
  390    9   -9.000NA   -100.0NA    100.0NA  
  393    9   10.00NA   -100.0NA    100.0NA  
  398   10   -9.000NA   -100.0NA    100.0NA  
  401   10   10.00NA   -100.0NA    100.0NA  
  406   12  -10.00NA   -100.0NA    100.0NA  
  409   12   10.00NA   -100.0NA    100.0NA  
  414   13   -9.000NA   -100.0NA    100.0NA  
  417   13   10.00NA   -100.0NA    100.0NA  
-----
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 4.000NA  |    | 1.000UA |
| 453    | 14  | 4.000NA  |    | 1.000UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |



# MIL-PRF-38534 CLASS K DATAPACK

---

Post Burn-In Test Results at +125°C





STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 1  
DDS-101-08-A PN 54HC86 TEST SEQ14 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -580.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -580.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -580.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -580.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -580.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -580.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -580.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -580.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -400.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 440.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 450.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 450.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 440.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 36.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.820 V  | 2.200 V |    |
| 235    | 6   | 2.800 V  | 2.200 V |    |
| 241    | 8   | 2.790 V  | 2.200 V |    |
| 247    | 11  | 2.810 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 154.0MV  |    | 400.0MV |
| 315    | 6   | 156.0MV  |    | 400.0MV |
| 321    | 8   | 160.0MV  |    | 400.0MV |
| 327    | 11  | 158.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 4.440 V  | 4.400 V |    |

|     |    |         |         |
|-----|----|---------|---------|
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.440 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.260 V  | 3.700 V |    |
| 235    | 6   | 4.240 V  | 3.700 V |    |
| 241    | 8   | 4.230 V  | 3.700 V |    |
| 247    | 11  | 4.250 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 40.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 40.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 182.0MV  |    | 400.0MV |
| 315    | 6   | 182.0MV  |    | 400.0MV |
| 321    | 8   | 190.0MV  |    | 400.0MV |
| 327    | 11  | 186.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
VOH2 LIMIT 5.200  
-----

```

-----
INST #  PIN  MEASURED      LT      GT
229     3    5.750 V      5.200 V
235     6    5.730 V      5.200 V
241     8    5.710 V      5.200 V
247    11    5.740 V      5.200 V

```

```

-----
VOL1 TEST
VCC=      6
VOL LIMIT 100.0E-03
-----

```

```

INST #  PIN  MEASURED      LT      GT
268     3    52.00MV      100.0MV
274     6    48.00MV      100.0MV
280     8    48.00MV      100.0MV
286    11    52.00MV      100.0MV

```

```

-----
VOL2 TEST
VCC=      6
VOL2 LIMIT 400.0E-03
-----

```

```

INST #  PIN  MEASURED      LT      GT
309     3    204.0MV      400.0MV
315     6    204.0MV      400.0MV
321     8    212.0MV      400.0MV
327    11    210.0MV      400.0MV

```

```

-----
IIN TEST
VCC= 6
IIL/IIH LIMIT +- 0.1UA @25C/-55C
IIL/IIH LIMIT +- 1.0UA @+125C
-----

```

```

INST #  PIN  MEASURED      LT      GT
358     1     0 A      -1.000UA  1.000UA
361     1    12.00NA  -1.000UA  1.000UA
366     2   -9.000NA  -1.000UA  1.000UA
369     2    11.00NA  -1.000UA  1.000UA
374     4   -9.000NA  -1.000UA  1.000UA
377     4    10.00NA  -1.000UA  1.000UA
382     5   -9.000NA  -1.000UA  1.000UA
385     5    10.00NA  -1.000UA  1.000UA
390     9   -9.000NA  -1.000UA  1.000UA
393     9    11.00NA  -1.000UA  1.000UA
398    10  -10.00NA  -1.000UA  1.000UA
401    10    10.00NA  -1.000UA  1.000UA
406    12   -9.000NA  -1.000UA  1.000UA
409    12    10.00NA  -1.000UA  1.000UA
414    13   -9.000NA  -1.000UA  1.000UA
417    13    11.00NA  -1.000UA  1.000UA

```

```

-----
ICC TEST
VCC= 6
ICC LIMIT MAX. 1.0UA @25C/-55C
ICC LIMIT MAX. 40UA @+125C
-----

```

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 0 A      |    | 40.00UA |
| 453    | 14  | 0 A      |    | 40.00UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 2  
DDS-101-08-A PN 54HC86 TEST SEQ14 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -510.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 520.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.980 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.200 V |    |
| 235    | 6   | 2.820 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.830 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 138.0MV  |    | 400.0MV |
| 315    | 6   | 138.0MV  |    | 400.0MV |
| 321    | 8   | 142.0MV  |    | 400.0MV |
| 327    | 11  | 138.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.440 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.270 V  | 3.700 V |    |
| 235    | 6   | 4.260 V  | 3.700 V |    |
| 241    | 8   | 4.250 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 40.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 162.0MV  |    | 400.0MV |
| 315    | 6   | 164.0MV  |    | 400.0MV |
| 321    | 8   | 166.0MV  |    | 400.0MV |
| 327    | 11  | 164.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.960 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----



VOH2 LIMIT 5.200

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.770 V      5.200 V  
  235    6   5.750 V      5.200 V  
  241    8   5.740 V      5.200 V  
  247   11   5.760 V      5.200 V  
-----
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  268    3   52.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   52.00MV      100.0MV  
-----
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 400.0E-03  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  309    3   186.0MV      400.0MV  
  315    6   184.0MV      400.0MV  
  321    8   190.0MV      400.0MV  
  327   11   188.0MV      400.0MV  
-----
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
-----  
INST #  PIN  MEASURED      LT          GT  
  358    1  -3.000NA     -1.000UA     1.000UA  
  361    1   12.00NA     -1.000UA     1.000UA  
  366    2  -9.000NA     -1.000UA     1.000UA  
  369    2   10.00NA     -1.000UA     1.000UA  
  374    4  -9.000NA     -1.000UA     1.000UA  
  377    4   10.00NA     -1.000UA     1.000UA  
  382    5  -9.000NA     -1.000UA     1.000UA  
  385    5   10.00NA     -1.000UA     1.000UA  
  390    9  -10.00NA     -1.000UA     1.000UA  
  393    9   10.00NA     -1.000UA     1.000UA  
  398   10  -10.00NA     -1.000UA     1.000UA  
  401   10   10.00NA     -1.000UA     1.000UA  
  406   12  -9.000NA     -1.000UA     1.000UA  
  409   12   10.00NA     -1.000UA     1.000UA  
  414   13  -9.000NA     -1.000UA     1.000UA  
  417   13   10.00NA     -1.000UA     1.000UA  
-----
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----  
INST # PIN MEASURED LT GT  
446 14 0 A 40.00UA  
453 14 -100.0NA 40.00UA

EIR 1.....10 FCT DCT  
0000000000 PASS PASS EOT

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 3  
DDS-101-08-A PN 54HC86 TEST SEQ14 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -510.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 530.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 530.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.200 V |    |
| 235    | 6   | 2.820 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.830 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 144.0MV  |    | 400.0MV |
| 315    | 6   | 142.0MV  |    | 400.0MV |
| 321    | 8   | 146.0MV  |    | 400.0MV |
| 327    | 11  | 142.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.270 V  | 3.700 V |    |
| 235    | 6   | 4.250 V  | 3.700 V |    |
| 241    | 8   | 4.250 V  | 3.700 V |    |
| 247    | 11  | 4.270 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 40.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 166.0MV  |    | 400.0MV |
| 315    | 6   | 166.0MV  |    | 400.0MV |
| 321    | 8   | 170.0MV  |    | 400.0MV |
| 327    | 11  | 168.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.200

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.770 V      5.200 V  
  235    6   5.740 V      5.200 V  
  241    8   5.730 V      5.200 V  
  247   11   5.760 V      5.200 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   50.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   50.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 400.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   190.0MV      400.0MV  
  315    6   188.0MV      400.0MV  
  321    8   194.0MV      400.0MV  
  327   11   192.0MV      400.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1  -3.000NA     -1.000UA     1.000UA  
  361    1   12.00NA     -1.000UA     1.000UA  
  366    2  -9.000NA     -1.000UA     1.000UA  
  369    2   10.00NA     -1.000UA     1.000UA  
  374    4  -9.000NA     -1.000UA     1.000UA  
  377    4   10.00NA     -1.000UA     1.000UA  
  382    5  -9.000NA     -1.000UA     1.000UA  
  385    5   10.00NA     -1.000UA     1.000UA  
  390    9  -9.000NA     -1.000UA     1.000UA  
  393    9   10.00NA     -1.000UA     1.000UA  
  398   10 -10.00NA     -1.000UA     1.000UA  
  401   10   10.00NA     -1.000UA     1.000UA  
  406   12  -9.000NA     -1.000UA     1.000UA  
  409   12   10.00NA     -1.000UA     1.000UA  
  414   13  -9.000NA     -1.000UA     1.000UA  
  417   13   10.00NA     -1.000UA     1.000UA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----  
INST # PIN MEASURED LT GT  
446 14 0 A 40.00UA  
453 14 -100.0NA 40.00UA

EIR 1.....10 FCT DCT  
0000000000 PASS PASS EOT

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 4  
DDS-101-08-A PN 54HC86 TEST SEQ14 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -510.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 520.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----



-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.200 V |    |
| 235    | 6   | 2.820 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.840 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 134.0MV  |    | 400.0MV |
| 315    | 6   | 134.0MV  |    | 400.0MV |
| 321    | 8   | 140.0MV  |    | 400.0MV |
| 327    | 11  | 138.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.440 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.700 V |    |
| 235    | 6   | 4.270 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 158.0MV  |    | 400.0MV |
| 315    | 6   | 158.0MV  |    | 400.0MV |
| 321    | 8   | 166.0MV  |    | 400.0MV |
| 327    | 11  | 164.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.200

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.770 V      5.200 V  
  235    6   5.750 V      5.200 V  
  241    8   5.740 V      5.200 V  
  247   11   5.770 V      5.200 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   52.00MV      100.0MV  
  274    6   50.00MV      100.0MV  
  280    8   50.00MV      100.0MV  
  286   11   52.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 400.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   182.0MV      400.0MV  
  315    6   180.0MV      400.0MV  
  321    8   188.0MV      400.0MV  
  327   11   186.0MV      400.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1  -3.000NA     -1.000UA     1.000UA  
  361    1   12.00NA     -1.000UA     1.000UA  
  366    2  -9.000NA     -1.000UA     1.000UA  
  369    2   10.00NA     -1.000UA     1.000UA  
  374    4  -9.000NA     -1.000UA     1.000UA  
  377    4   10.00NA     -1.000UA     1.000UA  
  382    5  -10.00NA     -1.000UA     1.000UA  
  385    5   10.00NA     -1.000UA     1.000UA  
  390    9  -10.00NA     -1.000UA     1.000UA  
  393    9   10.00NA     -1.000UA     1.000UA  
  398   10  -10.00NA     -1.000UA     1.000UA  
  401   10   10.00NA     -1.000UA     1.000UA  
  406   12  -9.000NA     -1.000UA     1.000UA  
  409   12   10.00NA     -1.000UA     1.000UA  
  414   13  -9.000NA     -1.000UA     1.000UA  
  417   13   10.00NA     -1.000UA     1.000UA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | -100.0NA |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
 TEST PROGRAM 4HC86 S/N 5  
 DDS-101-08-A PN 54HC86 TEST SEQ14 +125C

-----  
 CONTINUITY TEST  
 -----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -520.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 530.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 530.0MV  | 100.0MV  | 1.500 V  |

-----  
 FUNCTIONAL TEST  
 VCC= 2  
 VIH= 1.500 VIL= 500.0E-03  
 -----

-----  
 VOH1 TEST  
 VCC= 2  
 VOH LIMIT 1.900  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
 VOL1 TEST  
 VCC= 2  
 VOL LIMIT 100.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
 FUNCTIONAL TEST  
 VCC= 3  
 VIH= 2.100 VIL= 900.0E-03  
 -----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.970 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.200 V |    |
| 235    | 6   | 2.820 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.830 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 32.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 136.0MV  |    | 400.0MV |
| 315    | 6   | 138.0MV  |    | 400.0MV |
| 321    | 8   | 138.0MV  |    | 400.0MV |
| 327    | 11  | 138.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.700 V |    |
| 235    | 6   | 4.260 V  | 3.700 V |    |
| 241    | 8   | 4.250 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 162.0MV  |    | 400.0MV |
| 315    | 6   | 160.0MV  |    | 400.0MV |
| 321    | 8   | 164.0MV  |    | 400.0MV |
| 327    | 11  | 164.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.960 V  | 5.900 V |    |
| 206    | 11  | 5.960 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.200

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.770 V      5.200 V  
  235    6   5.750 V      5.200 V  
  241    8   5.740 V      5.200 V  
  247   11   5.770 V      5.200 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   50.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   52.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 400.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   182.0MV      400.0MV  
  315    6   182.0MV      400.0MV  
  321    8   186.0MV      400.0MV  
  327   11   186.0MV      400.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1  -3.000NA     -1.000UA     1.000UA  
  361    1   11.00NA     -1.000UA     1.000UA  
  366    2  -9.000NA     -1.000UA     1.000UA  
  369    2   10.00NA     -1.000UA     1.000UA  
  374    4  -9.000NA     -1.000UA     1.000UA  
  377    4   10.00NA     -1.000UA     1.000UA  
  382    5  -9.000NA     -1.000UA     1.000UA  
  385    5   10.00NA     -1.000UA     1.000UA  
  390    9  -9.000NA     -1.000UA     1.000UA  
  393    9   10.00NA     -1.000UA     1.000UA  
  398   10 -10.00NA     -1.000UA     1.000UA  
  401   10   10.00NA     -1.000UA     1.000UA  
  406   12 -10.00NA     -1.000UA     1.000UA  
  409   12   10.00NA     -1.000UA     1.000UA  
  414   13  -9.000NA     -1.000UA     1.000UA  
  417   13   10.00NA     -1.000UA     1.000UA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```



-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | -100.0NA |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 6  
DDS-101-08-A PN 54HC86 TEST SEQ14 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -510.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 530.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.200 V |    |
| 235    | 6   | 2.830 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.840 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 136.0MV  |    | 400.0MV |
| 315    | 6   | 136.0MV  |    | 400.0MV |
| 321    | 8   | 138.0MV  |    | 400.0MV |
| 327    | 11  | 136.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.440 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.700 V |    |
| 235    | 6   | 4.260 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 160.0MV  |    | 400.0MV |
| 315    | 6   | 162.0MV  |    | 400.0MV |
| 321    | 8   | 164.0MV  |    | 400.0MV |
| 327    | 11  | 162.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.200

```
-----  
INST #  PIN  MEASURED      LT          GT  
229     3    5.760 V      5.200 V  
235     6    5.750 V      5.200 V  
241     8    5.740 V      5.200 V  
247    11    5.770 V      5.200 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
268     3    52.00MV      100.0MV  
274     6    50.00MV      100.0MV  
280     8    50.00MV      100.0MV  
286    11    52.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 400.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
309     3    184.0MV      400.0MV  
315     6    184.0MV      400.0MV  
321     8    188.0MV      400.0MV  
327    11    186.0MV      400.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
358     1   -3.000NA     -1.000UA     1.000UA  
361     1   11.00NA      -1.000UA     1.000UA  
366     2   -9.000NA     -1.000UA     1.000UA  
369     2   10.00NA      -1.000UA     1.000UA  
374     4   -9.000NA     -1.000UA     1.000UA  
377     4   10.00NA      -1.000UA     1.000UA  
382     5   -9.000NA     -1.000UA     1.000UA  
385     5   10.00NA      -1.000UA     1.000UA  
390     9   -9.000NA     -1.000UA     1.000UA  
393     9   10.00NA      -1.000UA     1.000UA  
398    10  -10.00NA     -1.000UA     1.000UA  
401    10   10.00NA      -1.000UA     1.000UA  
406    12   -9.000NA     -1.000UA     1.000UA  
409    12   10.00NA      -1.000UA     1.000UA  
414    13   -9.000NA     -1.000UA     1.000UA  
417    13   10.00NA      -1.000UA     1.000UA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | -100.0NA |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 7  
DDS-101-08-A PN 54HC86 TEST SEQ14 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -650.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -650.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -650.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -650.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -650.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -650.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -650.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -650.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -470.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 490.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 530.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 530.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 500.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.200 V |    |
| 235    | 6   | 2.830 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.830 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 138.0MV  |    | 400.0MV |
| 315    | 6   | 140.0MV  |    | 400.0MV |
| 321    | 8   | 148.0MV  |    | 400.0MV |
| 327    | 11  | 144.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|



|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.440 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.440 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.700 V |    |
| 235    | 6   | 4.260 V  | 3.700 V |    |
| 241    | 8   | 4.250 V  | 3.700 V |    |
| 247    | 11  | 4.270 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 40.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 40.00MV  |    | 100.0MV |
| 286    | 11  | 40.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 162.0MV  |    | 400.0MV |
| 315    | 6   | 164.0MV  |    | 400.0MV |
| 321    | 8   | 174.0MV  |    | 400.0MV |
| 327    | 11  | 168.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.200

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.770 V      5.200 V  
  235    6   5.750 V      5.200 V  
  241    8   5.740 V      5.200 V  
  247   11   5.760 V      5.200 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   52.00MV      100.0MV  
  274    6   48.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   52.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 400.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   186.0MV      400.0MV  
  315    6   184.0MV      400.0MV  
  321    8   196.0MV      400.0MV  
  327   11   194.0MV      400.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1  -4.000NA     -1.000UA     1.000UA  
  361    1   11.00NA     -1.000UA     1.000UA  
  366    2  -9.000NA     -1.000UA     1.000UA  
  369    2   10.00NA     -1.000UA     1.000UA  
  374    4  -9.000NA     -1.000UA     1.000UA  
  377    4   10.00NA     -1.000UA     1.000UA  
  382    5  -9.000NA     -1.000UA     1.000UA  
  385    5   10.00NA     -1.000UA     1.000UA  
  390    9  -10.00NA     -1.000UA     1.000UA  
  393    9   10.00NA     -1.000UA     1.000UA  
  398   10  -10.00NA     -1.000UA     1.000UA  
  401   10   10.00NA     -1.000UA     1.000UA  
  406   12  -9.000NA     -1.000UA     1.000UA  
  409   12   10.00NA     -1.000UA     1.000UA  
  414   13  -9.000NA     -1.000UA     1.000UA  
  417   13   10.00NA     -1.000UA     1.000UA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | -100.0NA |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 8  
DDS-101-08-A PN 54HC86 TEST SEQ14 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -510.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 560.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 520.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.200 V |    |
| 235    | 6   | 2.820 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.830 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 138.0MV  |    | 400.0MV |
| 315    | 6   | 138.0MV  |    | 400.0MV |
| 321    | 8   | 142.0MV  |    | 400.0MV |
| 327    | 11  | 142.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.440 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.440 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.700 V |    |
| 235    | 6   | 4.260 V  | 3.700 V |    |
| 241    | 8   | 4.250 V  | 3.700 V |    |
| 247    | 11  | 4.270 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 40.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 164.0MV  |    | 400.0MV |
| 315    | 6   | 164.0MV  |    | 400.0MV |
| 321    | 8   | 172.0MV  |    | 400.0MV |
| 327    | 11  | 166.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.200

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.770 V      5.200 V  
  235    6   5.740 V      5.200 V  
  241    8   5.730 V      5.200 V  
  247   11   5.760 V      5.200 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   52.00MV     100.0MV  
  274    6   48.00MV     100.0MV  
  280    8   48.00MV     100.0MV  
  286   11   52.00MV     100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 400.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   188.0MV     400.0MV  
  315    6   186.0MV     400.0MV  
  321    8   194.0MV     400.0MV  
  327   11   192.0MV     400.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1  -4.000NA    -1.000UA    1.000UA  
  361    1   12.00NA    -1.000UA    1.000UA  
  366    2  -9.000NA    -1.000UA    1.000UA  
  369    2   10.00NA    -1.000UA    1.000UA  
  374    4  -9.000NA    -1.000UA    1.000UA  
  377    4   10.00NA    -1.000UA    1.000UA  
  382    5  -9.000NA    -1.000UA    1.000UA  
  385    5   10.00NA    -1.000UA    1.000UA  
  390    9  -9.000NA    -1.000UA    1.000UA  
  393    9   10.00NA    -1.000UA    1.000UA  
  398   10 -10.00NA    -1.000UA    1.000UA  
  401   10   10.00NA    -1.000UA    1.000UA  
  406   12 -10.00NA    -1.000UA    1.000UA  
  409   12   10.00NA    -1.000UA    1.000UA  
  414   13  -9.000NA    -1.000UA    1.000UA  
  417   13   10.00NA    -1.000UA    1.000UA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----  
INST # PIN MEASURED LT GT  
446 14 -100.0NA 40.00UA  
453 14 -100.0NA 40.00UA

EIR 1.....10 FCT DCT  
0000000000 PASS PASS EOT



STAT1 06/11/11 06:49  
 TEST PROGRAM 4HC86 S/N 9  
 DDS-101-08-A PN 54HC86 TEST SEQ14 +125C

-----  
 CONTINUITY TEST  
 -----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -660.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -660.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -660.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -660.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -660.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -660.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -660.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -500.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 520.0MV  | 100.0MV  | 1.500 V  |

-----  
 FUNCTIONAL TEST  
 VCC= 2  
 VIH= 1.500 VIL= 500.0E-03  
 -----

-----  
 VOH1 TEST  
 VCC= 2  
 VOH LIMIT 1.900  
 -----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
 VOL1 TEST  
 VCC= 2  
 VOL LIMIT 100.0E-03  
 -----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
 FUNCTIONAL TEST  
 VCC= 3  
 VIH= 2.100 VIL= 900.0E-03  
 -----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.970 V  | 2.900 V |    |
| 194    | 6   | 2.970 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.200 V |    |
| 235    | 6   | 2.820 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.830 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 140.0MV  |    | 400.0MV |
| 315    | 6   | 142.0MV  |    | 400.0MV |
| 321    | 8   | 142.0MV  |    | 400.0MV |
| 327    | 11  | 140.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.270 V  | 3.700 V |    |
| 235    | 6   | 4.250 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 162.0MV  |    | 400.0MV |
| 315    | 6   | 166.0MV  |    | 400.0MV |
| 321    | 8   | 166.0MV  |    | 400.0MV |
| 327    | 11  | 164.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.200

```
-----  
INST #  PIN  MEASURED      LT      GT  
  229    3   5.770 V      5.200 V  
  235    6   5.740 V      5.200 V  
  241    8   5.740 V      5.200 V  
  247   11   5.770 V      5.200 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT      GT  
  268    3   50.00MV      100.0MV  
  274    6   46.00MV      100.0MV  
  280    8   46.00MV      100.0MV  
  286   11   50.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 400.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT      GT  
  309    3   184.0MV      400.0MV  
  315    6   184.0MV      400.0MV  
  321    8   186.0MV      400.0MV  
  327   11   186.0MV      400.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT      GT  
  358    1  -3.000NA     -1.000UA   1.000UA  
  361    1   11.00NA     -1.000UA   1.000UA  
  366    2  -9.000NA     -1.000UA   1.000UA  
  369    2   10.00NA     -1.000UA   1.000UA  
  374    4  -9.000NA     -1.000UA   1.000UA  
  377    4   10.00NA     -1.000UA   1.000UA  
  382    5  -9.000NA     -1.000UA   1.000UA  
  385    5   10.00NA     -1.000UA   1.000UA  
  390    9  -10.00NA     -1.000UA   1.000UA  
  393    9   10.00NA     -1.000UA   1.000UA  
  398   10  -10.00NA     -1.000UA   1.000UA  
  401   10   11.00NA     -1.000UA   1.000UA  
  406   12  -10.00NA     -1.000UA   1.000UA  
  409   12   10.00NA     -1.000UA   1.000UA  
  414   13  -9.000NA     -1.000UA   1.000UA  
  417   13   10.00NA     -1.000UA   1.000UA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----  
INST # PIN MEASURED LT GT  
446 14 0 A 40.00UA  
453 14 -100.0NA 40.00UA

EIR 1.....10 FCT DCT  
0000000000 PASS PASS EOT

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 10  
DDS-101-08-A PN 54HC86 TEST SEQ14 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -670.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -670.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -500.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 520.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 550.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 510.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.200 V |    |
| 235    | 6   | 2.830 V  | 2.200 V |    |
| 241    | 8   | 2.820 V  | 2.200 V |    |
| 247    | 11  | 2.830 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 32.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 140.0MV  |    | 400.0MV |
| 315    | 6   | 138.0MV  |    | 400.0MV |
| 321    | 8   | 142.0MV  |    | 400.0MV |
| 327    | 11  | 138.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.280 V  | 3.700 V |    |
| 235    | 6   | 4.260 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 40.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 166.0MV  |    | 400.0MV |
| 315    | 6   | 162.0MV  |    | 400.0MV |
| 321    | 8   | 168.0MV  |    | 400.0MV |
| 327    | 11  | 166.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----



VOH2 LIMIT 5.200

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.770 V      5.200 V  
  235    6   5.740 V      5.200 V  
  241    8   5.740 V      5.200 V  
  247   11   5.770 V      5.200 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   52.00MV     100.0MV  
  274    6   50.00MV     100.0MV  
  280    8   48.00MV     100.0MV  
  286   11   52.00MV     100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 400.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   188.0MV     400.0MV  
  315    6   186.0MV     400.0MV  
  321    8   192.0MV     400.0MV  
  327   11   190.0MV     400.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1  -3.000NA    -1.000UA    1.000UA  
  361    1   12.00NA    -1.000UA    1.000UA  
  366    2  -9.000NA    -1.000UA    1.000UA  
  369    2   11.00NA    -1.000UA    1.000UA  
  374    4  -9.000NA    -1.000UA    1.000UA  
  377    4   10.00NA    -1.000UA    1.000UA  
  382    5  -9.000NA    -1.000UA    1.000UA  
  385    5   10.00NA    -1.000UA    1.000UA  
  390    9  -9.000NA    -1.000UA    1.000UA  
  393    9   10.00NA    -1.000UA    1.000UA  
  398   10 -10.00NA    -1.000UA    1.000UA  
  401   10   10.00NA    -1.000UA    1.000UA  
  406   12 -10.00NA    -1.000UA    1.000UA  
  409   12   10.00NA    -1.000UA    1.000UA  
  414   13  -9.000NA    -1.000UA    1.000UA  
  417   13   10.00NA    -1.000UA    1.000UA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 0 A      |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 11  
DDS-101-08-A PN 54HC86 TEST SEQ14 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -630.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -630.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -630.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -630.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -630.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -630.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -630.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -630.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -460.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 490.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 500.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 500.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 490.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST

VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST

VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.980 V  | 1.900 V |    |
| 194    | 6   | 1.980 V  | 1.900 V |    |
| 200    | 8   | 1.980 V  | 1.900 V |    |
| 206    | 11  | 1.980 V  | 1.900 V |    |

-----  
VOL1 TEST

VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST

VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----

-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.830 V  | 2.200 V |    |
| 235    | 6   | 2.820 V  | 2.200 V |    |
| 241    | 8   | 2.810 V  | 2.200 V |    |
| 247    | 11  | 2.830 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 144.0MV  |    | 400.0MV |
| 315    | 6   | 142.0MV  |    | 400.0MV |
| 321    | 8   | 146.0MV  |    | 400.0MV |
| 327    | 11  | 144.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.440 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.440 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.270 V  | 3.700 V |    |
| 235    | 6   | 4.250 V  | 3.700 V |    |
| 241    | 8   | 4.240 V  | 3.700 V |    |
| 247    | 11  | 4.260 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 40.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 40.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 170.0MV  |    | 400.0MV |
| 315    | 6   | 170.0MV  |    | 400.0MV |
| 321    | 8   | 174.0MV  |    | 400.0MV |
| 327    | 11  | 172.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.200

```
-----  
INST #  PIN  MEASURED      LT          GT  
229     3    5.770 V      5.200 V  
235     6    5.740 V      5.200 V  
241     8    5.730 V      5.200 V  
247    11    5.760 V      5.200 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
268     3    52.00MV     100.0MV  
274     6    50.00MV     100.0MV  
280     8    50.00MV     100.0MV  
286    11    54.00MV     100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 400.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
309     3    196.0MV     400.0MV  
315     6    194.0MV     400.0MV  
321     8    198.0MV     400.0MV  
327    11    198.0MV     400.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
358     1   -3.000NA    -1.000UA    1.000UA  
361     1   12.00NA     -1.000UA    1.000UA  
366     2   -9.000NA    -1.000UA    1.000UA  
369     2   10.00NA     -1.000UA    1.000UA  
374     4   -9.000NA    -1.000UA    1.000UA  
377     4   10.00NA     -1.000UA    1.000UA  
382     5   -9.000NA    -1.000UA    1.000UA  
385     5   10.00NA     -1.000UA    1.000UA  
390     9   -9.000NA    -1.000UA    1.000UA  
393     9   10.00NA     -1.000UA    1.000UA  
398    10  -10.00NA    -1.000UA    1.000UA  
401    10   10.00NA     -1.000UA    1.000UA  
406    12   -9.000NA    -1.000UA    1.000UA  
409    12   10.00NA     -1.000UA    1.000UA  
414    13   -9.000NA    -1.000UA    1.000UA  
417    13   10.00NA     -1.000UA    1.000UA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----  
INST # PIN MEASURED LT GT  
446 14 0 A 40.00UA  
453 14 -100.0NA 40.00UA

EIR 1.....10 FCT DCT  
0000000000 PASS PASS EOT

STAT1 06/11/11 06:49  
TEST PROGRAM 4HC86 S/N 12  
DDS-101-08-A PN 54HC86 TEST SEQ14 +125C

-----  
CONTINUITY TEST  
-----

| INST # | PIN | MEASURED | LT       | GT       |
|--------|-----|----------|----------|----------|
| 56     | 1   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 2   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 4   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 5   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 9   | -680.0MV | -1.500 V | -100.0MV |
| 56     | 10  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 12  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 13  | -680.0MV | -1.500 V | -100.0MV |
| 56     | 14  | -520.0MV | -1.500 V | -100.0MV |
| 66     | 3   | 530.0MV  | 100.0MV  | 1.500 V  |
| 66     | 6   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 8   | 570.0MV  | 100.0MV  | 1.500 V  |
| 66     | 11  | 530.0MV  | 100.0MV  | 1.500 V  |

-----  
FUNCTIONAL TEST  
VCC= 2  
VIH= 1.500 VIL= 500.0E-03  
-----

-----  
VOH1 TEST  
VCC= 2  
VOH LIMIT 1.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 1.970 V  | 1.900 V |    |
| 194    | 6   | 1.970 V  | 1.900 V |    |
| 200    | 8   | 1.970 V  | 1.900 V |    |
| 206    | 11  | 1.970 V  | 1.900 V |    |

-----  
VOL1 TEST  
VCC= 2  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 34.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 34.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
FUNCTIONAL TEST  
VCC= 3  
VIH= 2.100 VIL= 900.0E-03  
-----



-----  
VOH1 TEST  
VCC= 3  
VOH LIMIT 2.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 2.980 V  | 2.900 V |    |
| 194    | 6   | 2.980 V  | 2.900 V |    |
| 200    | 8   | 2.980 V  | 2.900 V |    |
| 206    | 11  | 2.980 V  | 2.900 V |    |

-----  
VOH2 TEST  
VCC= 3  
VOH2 LIMIT 2.200  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 2.840 V  | 2.200 V |    |
| 235    | 6   | 2.830 V  | 2.200 V |    |
| 241    | 8   | 2.830 V  | 2.200 V |    |
| 247    | 11  | 2.840 V  | 2.200 V |    |

-----  
VOL1 TEST  
VCC= 3  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 32.00MV  |    | 100.0MV |
| 274    | 6   | 34.00MV  |    | 100.0MV |
| 280    | 8   | 32.00MV  |    | 100.0MV |
| 286    | 11  | 34.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 3  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 130.0MV  |    | 400.0MV |
| 315    | 6   | 132.0MV  |    | 400.0MV |
| 321    | 8   | 134.0MV  |    | 400.0MV |
| 327    | 11  | 130.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 4.500  
VIH= 3.150 VIL= 1.350  
-----

-----  
VOH1 TEST  
VCC= 4.500  
VOH LIMIT 4.400  
-----

| INST # | PIN | MEASURED | LT | GT |
|--------|-----|----------|----|----|
|--------|-----|----------|----|----|

|     |    |         |         |
|-----|----|---------|---------|
| 188 | 3  | 4.450 V | 4.400 V |
| 194 | 6  | 4.450 V | 4.400 V |
| 200 | 8  | 4.450 V | 4.400 V |
| 206 | 11 | 4.450 V | 4.400 V |

-----  
VOH2 TEST  
VCC= 4.500  
VOH2 LIMIT 3.700  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 229    | 3   | 4.290 V  | 3.700 V |    |
| 235    | 6   | 4.270 V  | 3.700 V |    |
| 241    | 8   | 4.260 V  | 3.700 V |    |
| 247    | 11  | 4.280 V  | 3.700 V |    |

-----  
VOL1 TEST  
VCC= 4.500  
VOL LIMIT 100.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 268    | 3   | 38.00MV  |    | 100.0MV |
| 274    | 6   | 38.00MV  |    | 100.0MV |
| 280    | 8   | 38.00MV  |    | 100.0MV |
| 286    | 11  | 38.00MV  |    | 100.0MV |

-----  
VOL2 TEST  
VCC= 4.500  
VOL2 LIMIT 400.0E-03  
-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 309    | 3   | 152.0MV  |    | 400.0MV |
| 315    | 6   | 150.0MV  |    | 400.0MV |
| 321    | 8   | 158.0MV  |    | 400.0MV |
| 327    | 11  | 154.0MV  |    | 400.0MV |

-----  
FUNCTIONAL TEST  
VCC= 6  
VIH= 4.200 VIL= 1.800  
-----

-----  
VOH1 TEST  
VCC= 6  
VOH LIMIT 5.900  
-----

| INST # | PIN | MEASURED | LT      | GT |
|--------|-----|----------|---------|----|
| 188    | 3   | 5.950 V  | 5.900 V |    |
| 194    | 6   | 5.950 V  | 5.900 V |    |
| 200    | 8   | 5.950 V  | 5.900 V |    |
| 206    | 11  | 5.950 V  | 5.900 V |    |

-----  
VOH2 TEST  
VCC= 6  
-----

VOH2 LIMIT 5.200

```
-----  
INST #  PIN  MEASURED      LT          GT  
  229    3   5.780 V      5.200 V  
  235    6   5.760 V      5.200 V  
  241    8   5.750 V      5.200 V  
  247   11   5.770 V      5.200 V
```

```
-----  
VOL1 TEST  
VCC=      6  
VOL LIMIT 100.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  268    3   52.00MV      100.0MV  
  274    6   50.00MV      100.0MV  
  280    8   48.00MV      100.0MV  
  286   11   52.00MV      100.0MV
```

```
-----  
VOL2 TEST  
VCC=      6  
VOL2 LIMIT 400.0E-03  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  309    3   172.0MV      400.0MV  
  315    6   172.0MV      400.0MV  
  321    8   178.0MV      400.0MV  
  327   11   176.0MV      400.0MV
```

```
-----  
IIN TEST  
VCC= 6  
IIL/IIH LIMIT +- 0.1UA @25C/-55C  
IIL/IIH LIMIT +- 1.0UA @+125C  
-----
```

```
INST #  PIN  MEASURED      LT          GT  
  358    1  -3.000NA     -1.000UA     1.000UA  
  361    1   12.00NA     -1.000UA     1.000UA  
  366    2  -9.000NA     -1.000UA     1.000UA  
  369    2   10.00NA     -1.000UA     1.000UA  
  374    4  -9.000NA     -1.000UA     1.000UA  
  377    4   10.00NA     -1.000UA     1.000UA  
  382    5  -9.000NA     -1.000UA     1.000UA  
  385    5   10.00NA     -1.000UA     1.000UA  
  390    9  -10.00NA     -1.000UA     1.000UA  
  393    9   10.00NA     -1.000UA     1.000UA  
  398   10  -10.00NA     -1.000UA     1.000UA  
  401   10   10.00NA     -1.000UA     1.000UA  
  406   12  -10.00NA     -1.000UA     1.000UA  
  409   12   10.00NA     -1.000UA     1.000UA  
  414   13  -9.000NA     -1.000UA     1.000UA  
  417   13   10.00NA     -1.000UA     1.000UA
```

```
-----  
ICC TEST  
VCC= 6  
ICC LIMIT MAX. 1.0UA @25C/-55C  
ICC LIMIT MAX. 40UA @+125C  
-----
```

-----

| INST # | PIN | MEASURED | LT | GT      |
|--------|-----|----------|----|---------|
| 446    | 14  | 0 A      |    | 40.00UA |
| 453    | 14  | -100.0NA |    | 40.00UA |

|              |      |      |     |  |
|--------------|------|------|-----|--|
| EIR 1.....10 | FCT  | DCT  |     |  |
| 0000000000   | PASS | PASS | EOT |  |



# MIL-PRF-38534 CLASS K DATAPACK

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Scanning Electron Microscopy (SEM) analysis



# TANDEX TEST LABS, INC.

15849 Business Ctr. Dr. Irwindale CA. 91706

Phone: (626)-962-7166 Fax: (626)-960-6896

## SCANNING ELECTRON MICROSCOPE ANALYSIS

DIE DEVICES

TTL Job # DDS-101-08-W

Date: June 25, 2018

Part Number: 54HC86

Part Type: CMOS LOGIC MICROCIRCUIT

Lot: Lot# 1555 D/C: 1810 WFR# 42

Quantity: Eight (8)

Purchase Order: SS139

Submitted by: \_\_\_\_\_

  
Jason A. Salinas

DPA/MTS

Approved by: \_\_\_\_\_

  
Deborah M. Gorham

Quality Assurance

## TANDEX TEST LABS TTL Job # DDS-101-08-W

Summary

Eight (8) CMOS Logic Microcircuit P/N: 54HC86 were submitted by Die Devices for Scanning Electron Microscopy Analysis. This Analysis was performed in accordance with Mil-Std-883, Method 2018.6 The devices were assigned sample number 1 through 8 by Tandex Test Labs.

1. **Plasma Etching** Carbon Tetraflouride Gas 92% and 8% Oxygen was used to remove the glassivation. This etching is destructive and uneven in the rates of glass removal in various areas of the die.
2. **SEM Inspection** was performed on all eight devices. All eight devices revealed adequate metallization coverage and met the requirements of MIL-STD-883, Method 2018.6. See DPA form on page 3 and figures 1 through 3, for typical photographs.

**Conclusion:** This lot is acceptable for use.

TANDEX TEST LABS TTL Job # DDS-101-08-W  
SEM EXAMINATION

|   |                           |   |   |
|---|---------------------------|---|---|
| TTL Job No.<br><br>DDS-101-08-W                     | Part Number<br><br>54HC86 | Part Type<br><br>CMOS Logic<br>Microcircuit | Date<br><br>June 4, 2018                            |
| Lot Date Code:<br>WFR# 42<br>Lot# 1555<br>D/C: 1810 | Sample Qty.<br><br>8      | Serial Numbers<br><br>1 - 8                 | Test Specifications<br>Mil-Std-883<br>Method 2018.6 |
| Misc. ID No.  | Qty. Accept<br><br>8      | Qty. Reject<br><br>0                        | Qty. Suspect<br><br>0                               |

**Notes:**

| S/N | Investigation Findings / Comments | A/R/S |
|-----|-----------------------------------|-------|
| 1   | No Anomalies                      | A     |
| 2   | No Anomalies                      | A     |
| 3   | No Anomalies                      | A     |
| 4   | No Anomalies                      | A     |
| 5   | No Anomalies                      | A     |
| 6   | No Anomalies                      | A     |
| 7   | No Anomalies                      | A     |
| 8   | No Anomalies                      | A     |

Each sample was inspected for the general metallization condition at a magnification between 1,000 X and 6,000 X over 25% of the total metallization (unless specified differently). Each sample was inspected from four (4) viewing directions at a magnification between 5,000 X and 20,000 X

Inspection required Yes: X No:    Devices constructed with expanded Metallization Yes: X No:

Sample Glassivated Yes: X No:    Dual Level Metallization Yes: No: X

Glassivation Removed Using: PLASMA ETCHING

Beam accelerating voltage 10kV to 20kV Viewing angle 45 deg



\_\_\_\_\_  
**Technician Stamp:**



TANDEX TEST LABS TTL Job # DDS-101-08-W

## Photodocumentation

TANDEX TEST LABS TTL Job # DDS-101-08-W

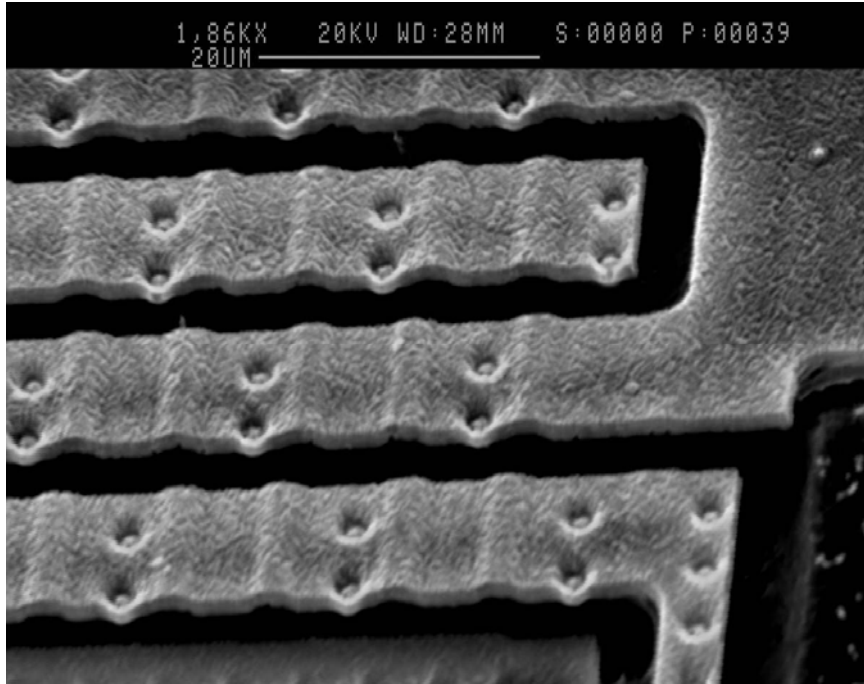


Fig: 1

Mag: 1,860X

S/N: 6

Description: SEM photograph of general metallization.

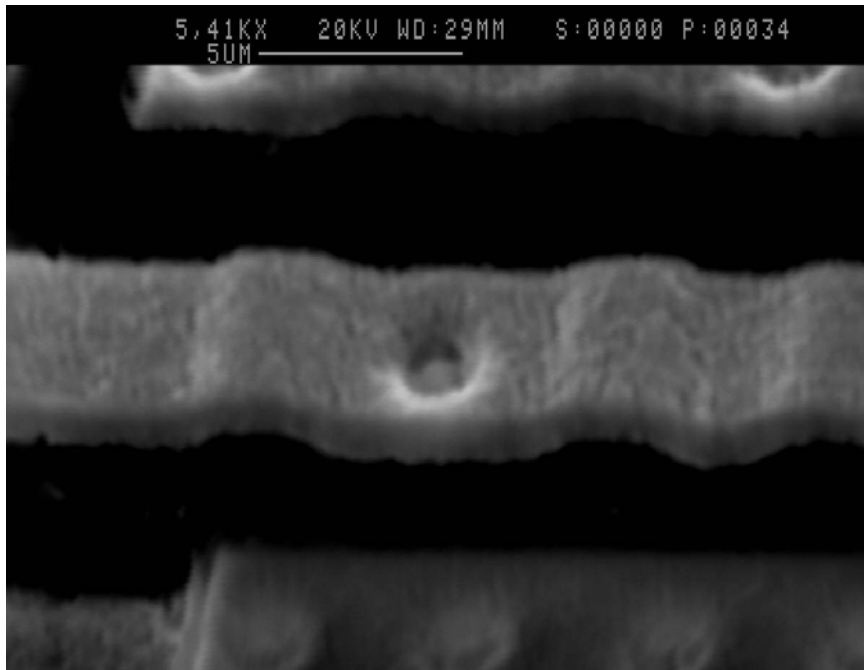


Fig: 2

Mag: 5,410X

S/N: 6

Description: SEM photograph of metallization typical step.

Note: Minor glass remaining on the die surface.

TANDEX TEST LABS TTL Job # DDS-101-08-W

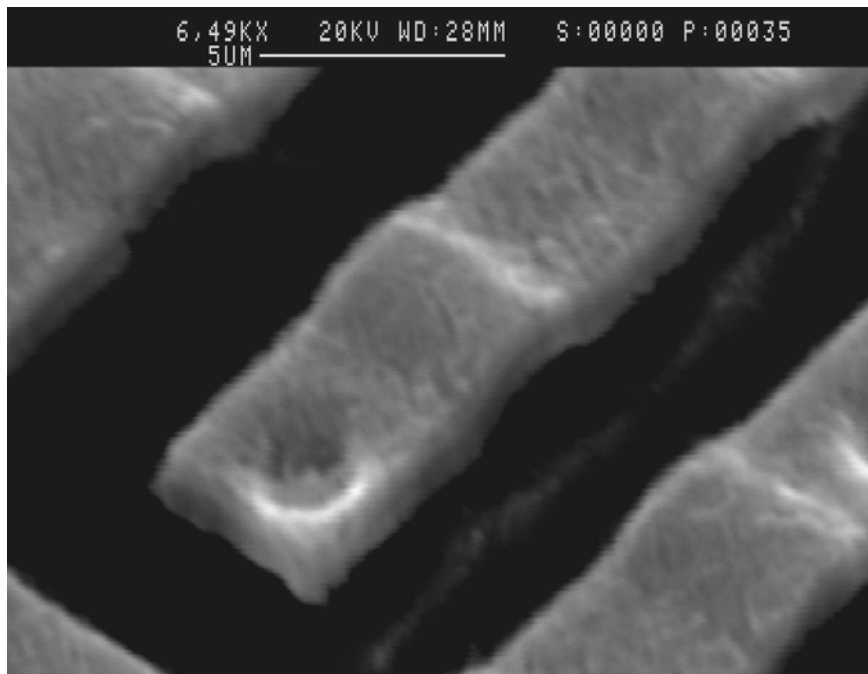


Fig: 3

Mag: 6,490X

S/N: 6

Description: SEM photograph of typical contact window device rotated 90°.

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<http://www.tandexlabs.com>

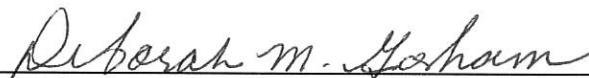
e-mail: via web site

## Certificate of Conformance

|                  |  |                       |
|------------------|--|-----------------------|
| CUSTOMER:        | Silicon Supplies Limited<br>47 Wherry Road<br><br>Norwich, NR1, 1WS<br>United Kingdom Vat<br>GB# 114 3513 56 | DATE: June 25, 2018   |
| TEST REPORT:     | DDS-101-08-W   | QUANTITY REQUIRED: 8  |
| P.O. NUMBER:     | SS139  | QUANTITY PROCESSED: 8 |
| DESCRIPTION:     | CMOS LOGIC MICROCIRCUIT  | QUANTITY PASSED: 8    |
| PART NUMBER(S):  | 54HC86   | QUANTITY FAILED: 0    |
| MFG PART NUMBER  | 54HC86   | QUANTITY SHIPPING: 8  |
| LOT / DATE CODE: | LOT# 1555 WFR# 42<br>D/C: 1810   |                       |
| MFG:             | SILICON SUPPLIES   |                       |

METHOD OF TESTING: MIL-STD-883 METHOD 2018.6

I hereby certify that the subject components have been processed and inspected in accordance with instructions with specifications referenced in your purchase order. Physical records and/or data pertinent to applicable military, proprietary, and/or commercial specifications are on file and available upon request for inspection at this facility.



Deborah M. Gorham  
QUALITY ASSURANCE

