



Reliability Report – CD4013B

CMOS High Voltage Logic - Dual D-Type Flip-Flop with Set and Reset

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

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- Scanning Electron Microscopy (SEM) analysis.





MIL-PRF-38534 CLASS K DATAPACK

Certificate of Conformance



TANDEX TEST LABS, INC.

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

Phone: (626)962-7166 FAX: (626)960-6896

<http://www.tandexlabs.com>

e-mail: via web site

Certificate of Conformance

CUSTOMER:	SILICON SUPPLIES LIMITED	DATE: AUGUST 10, 2018
	47 WHERRY ROAD NORWICH, NR1, 1WS UNITED KINGDOM VAT GB#114 3513 56	
TEST REPORT:	DDS-101-02-A	QUANTITY RECEIVED: 30 DIE
P.O. NUMBER:	SS139	QUANTITY REQUIRED: 10/5/8
DESCRIPTION:	CMOS LOGIC MICROCIRCUIT	QUANTITY PROCESSED: 17
PART NUMBER(S):	CD4013B	QUANTITY PASSED: 17
P/N: AS RECEIVED / MFG. PART NUMBER:	CD4013B	QUANTITY FAILED: 0
LOT / DATE CODE:	1810 LOT# 60273 WF39	
MANUFACTURE: CAGE CODE:	SILICON SUPPLIES	QUANTITY SHIPPING: 17*
		INCLUDES: 10 PROCESS ACCEPT 5 BOND PULL DEVICES 2 SPARES
TANDEX CAGE CODE:	1FE65	*8 DIE TRANSFERRED TO DDS-101-02-W 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.


Jessica Iraheta
QUALITY ASSURANCE 

QMF 30



MIL-PRF-38534 CLASS K DATAPACK

Process Flow Chart + Mechanical Test Results



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QMF22B

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

PROCESS FLOW CHART

FLOW NUMBER: DDS-101-02-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139
 PART NUMBER: CD4013B P/N AS RECEIVED: CD4013B
 PART TYPE: CMOS LOGIC MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-02-A
 LDC AS RECEIVED: 1810 LOT# 60273 WF39 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 P-1223	FLOW PREPARED BY: <u>LSS</u> ON: <u>3/23/18</u> CONTRACTUAL AGREEMENT REVIEW <table border="0"> <tr> <td>Y</td> <td>N</td> <td>NOT SPECIFIED</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☒ Q-CLAUSES</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☐ DPAS</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☐ DFAR</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☐ ITAR</td> </tr> <tr> <td>☐</td> <td>☐</td> <td>OTHER SPECIFIED</td> </tr> </table>	Y	N	NOT SPECIFIED	☐	☒	☒ Q-CLAUSES	☐	☒	☐ DPAS	☐	☒	☐ DFAR	☐	☒	☐ ITAR	☐	☐	OTHER SPECIFIED						QA TANDEX 5
Y	N	NOT SPECIFIED																									
☐	☒	☒ Q-CLAUSES																									
☐	☒	☐ DPAS																									
☐	☒	☐ DFAR																									
☐	☒	☐ ITAR																									
☐	☐	OTHER SPECIFIED																									
02	QC1		TANDEX QUALITY CONTROL INSPECTION. FLOW APPROVED BY: <u>JMI</u> ON: <u>3/23/18</u>						QA TANDEX 7																		
03	RCV	P-1070	VERIFY PART NUMBER. ENTER INTO INCOMING LOG. <u>X</u> CUSTOMER COUNT	30			3/23/18		QA TANDEX 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. EQUIPMENT USED: <u>Olympus</u> ASSET #: <u>20091</u>	30	0	30	3/29/18		TTL 4																		
ESD MAT DUE DATE: <u>4/27/18</u>																											
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. DIE ATTACH: SCREENING EUTETIC BOND PULL Lot#: <u>149555</u> Exp. Date: <u>N/A</u> SEM * Package Type: 14 PIN DIP TRANSFER TO DDS-101-02-W MIL-STD-883 METHOD 2018	10+2 5 8	0 0 0	10+2 5 8	4/11/18 4/11/18 3/29/18		TTL 30 TTL 30 TTL 4																		
ESD MAT DUE DATE: <u>4/27/18</u>																											
		P-4010	WIRE BOND: Utilize 1 Mil Au Wire (.001) 1 Mil Au bonder <u>MECH-EL</u> Asset #: <u>20060</u> Gold Wire: Lot#: <u>9001882915</u> Exp. Date: <u>3/21/2019</u>	17	0	17	4/11/18		TTL 30																		

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

PROCESS FLOW CHART

FLOW NUMBER: DDS-101-02-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139
 PART NUMBER: CD4013B P/N AS RECEIVED: CD4013B
 PART TYPE: CMOS LOGIC MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-02-A
 LDC AS RECEIVED: 1810 LOT# 60273 WF39 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. EQUIPMENT USED: <u>BAVECH #1 LOWB</u> ASSET #: <u>30772</u>	17	Q	17	4/11/18	TTL 27
07	SEAL		SEAL DEVICES VACUUM BAKE: Pre Seal Bake Time: Temp: <u>125°C</u> Time: <u>24 hrs</u> Actual time in: <u>1:10 PM - 4/11/18</u> Actual time out: <u>1:25 PM - 4/12/18</u> FURNACE LDC STAMP Actual temp: <u>125°C</u> <u>1815</u> <u>TTL 30</u>	10+2	Q	10+2	4/12/18	TTL 30
08	ELEC		PERFORM 100% ELECTRICAL VERIFICATION TEST PER MFG DATA SHEET AND MIL-PRF-38534 @ AMBIENT OPERATING TEMPERATURE GO / NO GO EQUIPMENT USED: <u>Sentry 4</u> ASSET #: <u>15599</u> +25°C TEST FIXTURE: <u>1377/1201</u> SOFTWARE ID: <u>4013</u> REV <u>—</u>	10+2	Q	10+2	5/4/18	TTL 10
09	TEMP		PERFORM TEMPERATURE CYCLING PER MIL-STD-883 METHOD 1010 CONDITION C & MIL-PRF-38534 C.3.3.3. TEN (10) CYCLES TA = -65°C +0 -10 to +150°C +15 -0 10 MINUTES AT EXTREMES DATE IN TIME IN DATE OUT TIME OUT EQUIPMENT USED: <u>TENNEY</u> ASSET #: <u>30369</u> EQUIPMENT USED: <u>OMEGA HH309A</u> ASSET #: <u>31662</u>	10+2 10+2	Q Q	10+2 10+2	5/15/18 11:36 AM 5/16/18 4:25 AM	TTL 48 TTL 48
10	ACCE		PERFORM CONSTANT ACCELERATION PER MIL-PRF-38534 MIL-STD-883 METHOD 2001. Y1 DIRECTION ONLY @ 3000 G's (min) EQUIPMENT USED: <u>TRIO Tech</u> ASSET #: <u>30260</u>	10+2	Q	10+2	5/16/18	TTL 11
11	SER		SERIALIZE <u>S/N: 01-10</u> <u>S/N: 01-12</u> <u>4/5/18</u>	10+2	Q	10+2	5/17/18	TTL 19

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

QMF22B

PROCESS FLOW CHART

FLOW NUMBER: DDS-101-02-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139
 PART NUMBER: CD4013B P/N AS RECEIVED: CD4013B
 PART TYPE: CMOS LOGIC MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-02-A
 LDC AS RECEIVED: 1810 LOT# 60273 WF39 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. STATIC AND FUNCTIONAL TESTS +25°C 10+2 0 10+2 5/25/18 -55°C 10+2 0 10+2 5/25/18 +125°C 10+2 0 10+2 5/25/18 EQUIPMENT USED: <u>Sentry</u> ASSET#: <u>1093</u> TEST FIXTURE: <u>1337/1261</u> SOFTWARE ID: <u>540013</u> REV <u>M/A</u> TEMPERATURE SOAK <u>10</u> SEC.					
13	BI		PERFORM BURN IN PER BURN IN CIRCUIT PER FIGURE 1 OF DWG# 1026-16668, AND MIL-STD 883 METHOD 1015. TA = 125°C (min) DATE IN: 12 0 12 5/31/18 T = 240 HRS (min) TIME IN: 8:20AM BURN-IN BOARD # / DESC: <u>31273</u> DATE OUT: 12 0 12 6/11/18 BURN-IN OVEN #: <u>21</u> TIME OUT: 5:35AM					
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. STATIC AND FUNCTIONAL TESTS +25°C 12 0 12 6/11/18 -55°C 12 0 12 6/11/18 +125°C 12 0 12 6/11/18 TEST +25°C WITHIN 96 HOURS EQUIPMENT USED: <u>Sentry</u> ASSET#: <u>1093</u> TEST FIXTURE: <u>1337/1261</u> SOFTWARE ID: <u>40113</u> REV <u>—</u> TEMPERATURE SOAK <u>5</u> SEC.					
15	ER		PER PO REQUIREMENTS: REVIEW AT POST 240 HR. BURN-IN EMAIL: <u>ben.white@diedevices.com</u> POST 240 HR BURN-IN ELECTRICAL TEST DATA. HOLD FOR APPROVAL TO PROCEED DATE SENT: <u>6/19/18</u>					

TANDEX TEST LABS
BURN - IN MONITOR SHEET

PAGE 1 OF 1

JOB NUMBER DDS-101-02-A

TEMPERATURE TA = +125°C M

PART NUMBER CD4013B

TEMP. METER # 31368

DATE CODE 1810 LOT# 60273 WF39

VOLTAGE VCC = +5VDC

BURN-IN TIME 240 hrs Min

VOLT METER# 31223

ΘJC = N/A

POWER SUPPLY# 31594

BOARD# 31273

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	1:38PM	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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QMF22B

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

PROCESS FLOW CHART

FLOW NUMBER: DDS-101-02-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139
 PART NUMBER: CD4013B P/N AS RECEIVED: CD4013B
 PART TYPE: CMOS LOGIC MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-02-A
 LDC AS RECEIVED: 1810 LOT# 60273 WF39 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. TA = 125°C (min) T = 1000 HRS (min) DATE IN: 12 TIME IN: 0 DATE OUT: 12 TIME OUT: 0 BURN-IN BOARD # / DESC: 31284 BURN-IN OVEN #: 21	12	0	12	6/25/18 6:00 AM 8/6/18 6:00 AM	TTL 13 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. STATIC AND FUNCTIONAL TESTS +25°C 12 -55°C 12 +125°C 12 TEST +25°C WITHIN 96 HOURS EQUIPMENT USED: SENTRY ASSET#: 1093 TEST FIXTURE: 1377/1201 SOFTWARE ID: 4013R REV	12	0	12	8/6/18 8/6/18 8/6/18	TTL 35 TTL 35 TTL 35
18	DBP		PERFORM WIRE BOND PULL PER MIL-STD-883 METHOD 2011, & MIL-PRF-38534 C.3.3.3, C3.3.5. TEN (10) WIRES, *DO NOT USE ELECTRICAL TEST SAMPLES* EQUIPMENT USED: DAGE ASSET #: 30785	5	0	5	7/5/18	#4
19	SEM		PULLED 8 DEVICES AT SEQ. 05 AND TRANSFERRED TO: DDS-101-01-W	8	0	8	7/29/18	

ESD MAT DUE DATE:

8/27/18

ESD MAT DUE DATE:

8/27/18

TANDEX TEST LABS
BURN - IN MONITOR SHEET

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JOB NUMBER DDS-101-02-A

TEMPERATURE TA = +125°C Min

PART NUMBER CD 4013B

TEMP. METER # 31368

DATE CODE 1810 LOT # 60273 W/F39

VOLTAGE VCC = +5VDC

BURN-IN TIME 1000hrs Min

VOLT METER# 31223

ΘJC = N/A

POWER SUPPLY# 31110

BOARD# 31284

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

PAGE 2 OF 4

JOB NUMBER DDS-101-02-A

TEMPERATURE TA = +125°C Min

PART NUMBER CD 4013 B

TEMP. METER # 31368

DATE CODE 1810 LOT# 60273 WF39

VOLTAGE VCC = +5 VDC

BURN-IN TIME 1000hrs Min

VOLT METER# 31223

ΘJC = N/A

POWER SUPPLY# 31110

BOARD# 31284

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

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JOB NUMBER DDS-101-62-4

TEMPERATURE TA = +125°C Min

PART NUMBER CD4013B

TEMP. METER# 31368

DATE CODE 1810 LOT# 60273 WF39

VOLTAGE VCC = +5VDC

BURN-IN TIME 1000hrs Min

VOLT METER# 31223

ΘJC = N/A

POWER SUPPLY# 31110

BOARD# 31284

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	10:50AM	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

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JOB NUMBER DDS-101-02-A

TEMPERATURE TA = +125'C Min

PART NUMBER CD 4013B

TEMP. METER # 31368

DATE CODE 1810 LOT # 60273 WF39

VOLTAGE VCC = +5 VDC

BURN-IN TIME 1000hrs Min

VOLT METER # 31223

ΘJC = N/A

POWER SUPPLY # 31110

BOARD # 31284

OVEN # 21

DATE	TIME	VOLTAGE	CURRENT	TEMP.	INITIAL	COMMENTS
8/3/18	6:45 AM	VCC = +5VDC	ICC = 5mA	127.3'C	CM	
8/6/18	6:00 AM	VCC = +5VDC	ICC = 5mA	126.1'C	CM	

BOND PULL**BOND STRENGTH TESTING**

TTL Job No. DDS-101-02-A	Part Number CD4013B	Part Type CMOS LOGIC MICROCIRCUIT	Date July 5, 2018
Lot Date Code LOT# 60273 W# 39 1810	Sample Qty. 5	Serial Numbers 11-15	Test Specifications Mil-Std-883 Method 2011
Misc.	Qty Accept 5	Qty Reject 0	Suspect 0

WIRE TYPE Au	PACKAGE/POST Au	BOND TYPE BALL BOND
DIE METALIZATION Al	WIRE SIZE 0.001	MINIMUM PULL STRENGTH 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	5.0	G	1	4.5	G	1	4.0	G	1	3.5	G	1	4.5	G	1		
2	4.5	G	2	6.0	G	2	3.5	G	2	4.0	G	2	3.5	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: _____

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

PROCESS FLOW CHART

FLOW NUMBER: DDS-101-02-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139
PART NUMBER: CD4013B P/N AS RECEIVED: CD4013B
PART TYPE: CMOS LOGIC MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883
DUE DATE: 7/12/18 JOB NUMBER: DDS-101-02-A
LDC AS RECEIVED: 1810 LOT# 60273 WF39 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. QCI TO VERIFY CAR IN SEQ. 01 IS COMPLIANT	17	0	17	8/10/18	QA TANDEX 7
21	PKG		USE ORIGINAL OR TANDEX PACKAGING.	17	0	17	8/10/18	QA TANDEX 7
22	QAR	P-1213	TANDEX QUALITY ASSURANCE REVIEW. SHIP VIA: SHIP / BILL TO: DIE DEVICES 47 WHERRY ROAD NORWICH, NR1, 1WS UNITED KINGDOM VAT GB#114 3513 56 <i>* includes: 5 Bond Pull Samples 10 process accepts 2 spares. * 8 parts transferred to DDS-101-02-A for SEM.</i>	17			8/10/18	QA TANDEX 7



MIL-PRF-38534 CLASS K DATAPACK

Pre Burn-In Test Results at -55°C



STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 1
DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-720.0MV	-1.500 V	-100.0MV
61	2	-720.0MV	-1.500 V	-100.0MV
61	3	-760.0MV	-1.500 V	-100.0MV
61	4	-760.0MV	-1.500 V	-100.0MV
61	5	-760.0MV	-1.500 V	-100.0MV
61	6	-760.0MV	-1.500 V	-100.0MV
61	8	-760.0MV	-1.500 V	-100.0MV
61	9	-760.0MV	-1.500 V	-100.0MV
61	10	-760.0MV	-1.500 V	-100.0MV
61	11	-760.0MV	-1.500 V	-100.0MV
61	12	-720.0MV	-1.500 V	-100.0MV
61	13	-720.0MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

```

-----
IOH  TEST
VDD=      5
IOH >= -640.0E-06
VO =      4.600
-----

```

INST #	PIN	MEASURED	LT	GT
328	1	-1.500MA		-640.0UA
334	13	-1.510MA		-640.0UA
343	2	-1.640MA		-640.0UA
349	12	-1.660MA		-640.0UA

```

-----
IOH2 TEST
VDD=      5
IOH >= -2.000E-03
VO =      2.500
-----

```

INST #	PIN	MEASURED	LT	GT
373	1	-6.600MA		-2.000MA
379	13	-6.600MA		-2.000MA
388	2	-7.300MA		-2.000MA
394	12	-7.300MA		-2.000MA

```

-----
IOL  TEST
VDD=      5
IOL >=  640.0E-06
VO=    400.0E-03
-----

```

INST #	PIN	MEASURED	LT	GT
418	1	2.050MA	640.0UA	
424	13	2.080MA	640.0UA	
433	2	2.420MA	640.0UA	
439	12	2.490MA	640.0UA	

```

-----
FUNCTIONAL TEST
VDD=    10
VIH=     7      VIL=     3
-----

```

```

-----
VOH  TEST
VDD=    10
VOH >=  9.950
-----

```

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

```

-----
VOH  TEST
IOH= -1UA
VDD=    10
VIH=     7      VIL=     3
VOH >=     9
-----

```

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	
225	13	9.960 V	9 V	
232	2	9.970 V	9 V	
236	12	9.960 V	9 V	

```

-----
VOL TEST
VDD= 10
VOL >= 50MV
-----

INST # PIN MEASURED LT GT
254 1 20.02MV 50.00MV
258 13 20.02MV 50.00MV
265 2 20.02MV 50.00MV
269 12 30.03MV 50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9
-----

INST # PIN MEASURED LT GT
289 1 20.02MV 9 V
293 13 20.02MV 9 V
300 2 30.03MV 9 V
304 12 20.02MV 9 V

```

```

-----
IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500
-----

INST # PIN MEASURED LT GT
328 1 -3.330MA -1.600MA
334 13 -3.360MA -1.600MA
343 2 -3.600MA -1.600MA
349 12 -3.700MA -1.600MA

```

```

-----
IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03
-----

INST # PIN MEASURED LT GT
418 1 4.920MA 1.600MA
424 13 5.040MA 1.600MA
433 2 5.630MA 1.600MA
439 12 5.880MA 1.600MA

```

```

-----
FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4
-----

```

```

-----
VOH TEST
VDD= 15
VOH >= 14.95
-----

INST # PIN MEASURED LT GT
184 1 14.98 V 14.95 V
188 13 14.97 V 14.95 V
195 2 14.97 V 14.95 V
199 12 14.97 V 14.95 V

```

```

-----
VOH TEST
IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
-----

```

VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.95 V	13.50 V	
225	13	14.95 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	20.02MV		1.500 V
300	2	30.03MV		1.500 V
304	12	20.02MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-12.80MA		-4.200MA
334	13	-12.90MA		-4.200MA
343	2	-13.90MA		-4.200MA
349	12	-14.20MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	18.80MA	4.200MA	
424	13	19.30MA	4.200MA	
433	2	21.40MA	4.200MA	
439	12	22.30MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-8.000NA	-100.0NA	
508	9	-8.000NA	-100.0NA	
512	10	-8.000NA	-100.0NA	
516	11	-8.000NA	-100.0NA	

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	2.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	1.000NA		100.0NA
558	9	1.000NA		100.0NA
562	10	1.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD >    1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >    1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >    2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >    2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >    4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >    4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    20.00E-06
      VIN =      20
-----

INST #  PIN  MEASURED      LT      GT
    611   14  -6.000NA              20.00UA

-----

      IDD  TEST
      VDD=      20
      IDD >    20.00E-06
      VIN =      0
-----

INST #  PIN  MEASURED      LT      GT
    627   14  -5.000NA              20.00UA

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

```

STAT1 05/25/11 07:12
 TEST PROGRAM 4013B S/N 2
 DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 -55C

 CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-720.0MV	-1.500 V	-100.0MV
61	2	-720.0MV	-1.500 V	-100.0MV
61	3	-760.0MV	-1.500 V	-100.0MV
61	4	-760.0MV	-1.500 V	-100.0MV
61	5	-760.0MV	-1.500 V	-100.0MV
61	6	-760.0MV	-1.500 V	-100.0MV
61	8	-760.0MV	-1.500 V	-100.0MV
61	9	-760.0MV	-1.500 V	-100.0MV
61	10	-760.0MV	-1.500 V	-100.0MV
61	11	-760.0MV	-1.500 V	-100.0MV
61	12	-720.0MV	-1.500 V	-100.0MV
61	13	-720.0MV	-1.500 V	-100.0MV

 FUNCTIONAL TEST
 VDD= 5
 VIH= 3.500 VIL= 1.500

 VOH TEST
 VDD= 5
 VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

 VOH TEST
 IOH= -1UA
 VDD= 5
 VIH= 3.500 VIL= 1.500
 VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

 VOL TEST
 VDD= 5
 VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

 VOL TEST
 IOL= 1UA
 VDD= 5
 VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.500MA		-640.0UA
334	13	-1.500MA		-640.0UA
343	2	-1.630MA		-640.0UA
349	12	-1.660MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-6.600MA		-2.000MA
379	13	-6.600MA		-2.000MA
388	2	-7.300MA		-2.000MA
394	12	-7.300MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	2.050MA	640.0UA	
424	13	2.080MA	640.0UA	
433	2	2.410MA	640.0UA	
439	12	2.490MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-3.330MA		-1.600MA
334	13	-3.360MA		-1.600MA
343	2	-3.600MA		-1.600MA
349	12	-3.700MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.920MA	1.600MA	
424	13	5.030MA	1.600MA	
433	2	5.580MA	1.600MA	
439	12	5.910MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.95 V	13.50 V	
225	13	14.95 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	20.02MV		1.500 V
300	2	30.03MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-12.80MA		-4.200MA
334	13	-13.00MA		-4.200MA
343	2	-13.80MA		-4.200MA
349	12	-14.30MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	18.80MA	4.200MA	
424	13	19.20MA	4.200MA	
433	2	21.20MA	4.200MA	
439	12	22.40MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-33.00NA	-100.0NA	
492	4	-9.000NA	-100.0NA	
496	5	-62.00NA	-100.0NA	
500	6	-68.00NA	-100.0NA	
504	8	-7.000NA	-100.0NA	

508	9	-7.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-12.00NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	29.00NA		100.0NA
542	4	4.000NA		100.0NA
546	5	71.00NA		100.0NA
550	6	80.00NA		100.0NA
554	8	1.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-2.000NA		4.000UA

IDD TEST
VDD = 20
IDD > 20.00E-06
VIN = 20

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

IDD TEST
VDD= 20
IDD > 20.00E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	-2.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 3
DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-679.9MV	-1.500 V	-100.0MV
61	2	-679.9MV	-1.500 V	-100.0MV
61	3	-720.0MV	-1.500 V	-100.0MV
61	4	-720.0MV	-1.500 V	-100.0MV
61	5	-720.0MV	-1.500 V	-100.0MV
61	6	-720.0MV	-1.500 V	-100.0MV
61	8	-720.0MV	-1.500 V	-100.0MV
61	9	-720.0MV	-1.500 V	-100.0MV
61	10	-720.0MV	-1.500 V	-100.0MV
61	11	-720.0MV	-1.500 V	-100.0MV
61	12	-720.0MV	-1.500 V	-100.0MV
61	13	-720.0MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.410MA		-640.0UA
334	13	-1.440MA		-640.0UA
343	2	-1.530MA		-640.0UA
349	12	-1.590MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-6.300MA		-2.000MA
379	13	-6.400MA		-2.000MA
388	2	-7.000MA		-2.000MA
394	12	-7.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.960MA	640.0UA	
424	13	2.000MA	640.0UA	
433	2	2.270MA	640.0UA	
439	12	2.390MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-3.160MA		-1.600MA
334	13	-3.250MA		-1.600MA
343	2	-3.370MA		-1.600MA
349	12	-3.590MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.710MA	1.600MA	
424	13	4.870MA	1.600MA	
433	2	5.190MA	1.600MA	
439	12	5.690MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221     1   14.95 V      13.50 V
225    13   14.95 V      13.50 V
232     2   14.96 V      13.50 V
236    12   14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254     1   30.03MV      50.00MV
258    13   20.02MV      50.00MV
265     2   20.02MV      50.00MV
269    12   20.02MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289     1   30.03MV      1.500 V
293    13   30.03MV      1.500 V
300     2   30.03MV      1.500 V
304    12   20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328     1  -12.30MA      -4.200MA
334    13  -12.70MA      -4.200MA
343     2  -13.10MA      -4.200MA
349    12  -13.90MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418     1   18.00MA      4.200MA
424    13   18.80MA      4.200MA
433     2   19.80MA      4.200MA
439    12   21.70MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488     3   -8.000NA     -100.0NA
492     4   -8.000NA     -100.0NA
496     5   -8.000NA     -100.0NA
500     6   -8.000NA     -100.0NA
504     8   -8.000NA     -100.0NA

```


508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-7.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	2.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	1.000NA		100.0NA
558	9	1.000NA		100.0NA
562	10	1.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 4

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-720.0MV	-1.500 V	-100.0MV
61	2	-720.0MV	-1.500 V	-100.0MV
61	3	-720.0MV	-1.500 V	-100.0MV
61	4	-720.0MV	-1.500 V	-100.0MV
61	5	-720.0MV	-1.500 V	-100.0MV
61	6	-720.0MV	-1.500 V	-100.0MV
61	8	-720.0MV	-1.500 V	-100.0MV
61	9	-720.0MV	-1.500 V	-100.0MV
61	10	-720.0MV	-1.500 V	-100.0MV
61	11	-720.0MV	-1.500 V	-100.0MV
61	12	-720.0MV	-1.500 V	-100.0MV
61	13	-720.0MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.450MA		-640.0UA
334	13	-1.470MA		-640.0UA
343	2	-1.560MA		-640.0UA
349	12	-1.630MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-6.500MA		-2.000MA
379	13	-6.500MA		-2.000MA
388	2	-7.100MA		-2.000MA
394	12	-7.300MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.970MA	640.0UA	
424	13	2.020MA	640.0UA	
433	2	2.280MA	640.0UA	
439	12	2.420MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-3.230MA		-1.600MA
334	13	-3.320MA		-1.600MA
343	2	-3.410MA		-1.600MA
349	12	-3.650MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.720MA	1.600MA	
424	13	4.920MA	1.600MA	
433	2	5.180MA	1.600MA	
439	12	5.740MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.95 V      13.50 V
225   13    14.96 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    30.03MV      50.00MV
265    2    20.02MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    30.03MV      1.500 V
300    2    20.02MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -12.50MA      -4.200MA
334   13   -12.90MA      -4.200MA
343    2   -13.20MA      -4.200MA
349   12   -14.20MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    18.10MA      4.200MA
424   13    18.90MA      4.200MA
433    2    19.90MA      4.200MA
439   12    21.90MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -10.00NA     -100.0NA
492    4   -9.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -8.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-11.00NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	5.000NA		100.0NA
546	5	2.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	1.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	1.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	0 A		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	0 A		4.000UA

IDD TEST
VDD = 20
IDD > 20.00E-06
VIN = 20

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

IDD TEST
VDD= 20
IDD > 20.00E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	0 A		20.00UA

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

STAT1 05/25/11 07:12
 TEST PROGRAM 4013B S/N 5
 DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 -55C

 CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-679.9MV	-1.500 V	-100.0MV
61	2	-679.9MV	-1.500 V	-100.0MV
61	3	-720.0MV	-1.500 V	-100.0MV
61	4	-720.0MV	-1.500 V	-100.0MV
61	5	-720.0MV	-1.500 V	-100.0MV
61	6	-720.0MV	-1.500 V	-100.0MV
61	8	-720.0MV	-1.500 V	-100.0MV
61	9	-720.0MV	-1.500 V	-100.0MV
61	10	-720.0MV	-1.500 V	-100.0MV
61	11	-720.0MV	-1.500 V	-100.0MV
61	12	-679.9MV	-1.500 V	-100.0MV
61	13	-679.9MV	-1.500 V	-100.0MV

 FUNCTIONAL TEST
 VDD= 5
 VIH= 3.500 VIL= 1.500

 VOH TEST
 VDD= 5
 VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

 VOH TEST
 IOH= -1UA
 VDD= 5
 VIH= 3.500 VIL= 1.500
 VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

 VOL TEST
 VDD= 5
 VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

 VOL TEST
 IOL= 1UA
 VDD= 5
 VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.380MA		-640.0UA
334	13	-1.420MA		-640.0UA
343	2	-1.490MA		-640.0UA
349	12	-1.570MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-6.200MA		-2.000MA
379	13	-6.300MA		-2.000MA
388	2	-6.800MA		-2.000MA
394	12	-7.000MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.930MA	640.0UA	
424	13	1.960MA	640.0UA	
433	2	2.240MA	640.0UA	
439	12	2.360MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-3.130MA		-1.600MA
334	13	-3.240MA		-1.600MA
343	2	-3.280MA		-1.600MA
349	12	-3.560MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.630MA	1.600MA	
424	13	4.820MA	1.600MA	
433	2	5.060MA	1.600MA	
439	12	5.640MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.95 V	13.50 V	
225	13	14.96 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	30.03MV		1.500 V
300	2	30.03MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-12.20MA		-4.200MA
334	13	-12.70MA		-4.200MA
343	2	-12.80MA		-4.200MA
349	12	-13.90MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	17.90MA	4.200MA	
424	13	18.70MA	4.200MA	
433	2	19.50MA	4.200MA	
439	12	21.70MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-36.00NA	-100.0NA	
492	4	-18.00NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-7.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-11.00NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	9.000NA		100.0NA
542	4	6.000NA		100.0NA
546	5	2.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD >  1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >  1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	3.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >  2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >  2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	5.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >  4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >  4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	7.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 6

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-720.0MV	-1.500 V	-100.0MV
61	2	-720.0MV	-1.500 V	-100.0MV
61	3	-720.0MV	-1.500 V	-100.0MV
61	4	-720.0MV	-1.500 V	-100.0MV
61	5	-720.0MV	-1.500 V	-100.0MV
61	6	-720.0MV	-1.500 V	-100.0MV
61	8	-720.0MV	-1.500 V	-100.0MV
61	9	-720.0MV	-1.500 V	-100.0MV
61	10	-720.0MV	-1.500 V	-100.0MV
61	11	-720.0MV	-1.500 V	-100.0MV
61	12	-720.0MV	-1.500 V	-100.0MV
61	13	-720.0MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.430MA		-640.0UA
334	13	-1.430MA		-640.0UA
343	2	-1.540MA		-640.0UA
349	12	-1.570MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-6.400MA		-2.000MA
379	13	-6.300MA		-2.000MA
388	2	-7.000MA		-2.000MA
394	12	-7.000MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.950MA	640.0UA	
424	13	2.000MA	640.0UA	
433	2	2.260MA	640.0UA	
439	12	2.390MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.970 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-3.210MA		-1.600MA
334	13	-3.250MA		-1.600MA
343	2	-3.370MA		-1.600MA
349	12	-3.580MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.680MA	1.600MA	
424	13	4.880MA	1.600MA	
433	2	5.090MA	1.600MA	
439	12	5.700MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.95 V      13.50 V
225   13    14.96 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    30.03MV      50.00MV
265    2    20.02MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    30.03MV      1.500 V
300    2    30.03MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -12.50MA      -4.200MA
334   13   -12.70MA      -4.200MA
343    2   -13.10MA      -4.200MA
349   12   -13.90MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    18.00MA      4.200MA
424   13    18.80MA      4.200MA
433    2    19.70MA      4.200MA
439   12    21.80MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -32.00NA     -100.0NA
492    4   -26.00NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -7.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-20.00NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	27.00NA		100.0NA
542	4	25.00NA		100.0NA
546	5	2.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	7.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD >  1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >  1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	9.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >  2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >  2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	10.00NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >  4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >  4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	10.00NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	11.00NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 7

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-679.9MV	-1.500 V	-100.0MV
61	2	-679.9MV	-1.500 V	-100.0MV
61	3	-720.0MV	-1.500 V	-100.0MV
61	4	-720.0MV	-1.500 V	-100.0MV
61	5	-720.0MV	-1.500 V	-100.0MV
61	6	-720.0MV	-1.500 V	-100.0MV
61	8	-720.0MV	-1.500 V	-100.0MV
61	9	-720.0MV	-1.500 V	-100.0MV
61	10	-720.0MV	-1.500 V	-100.0MV
61	11	-720.0MV	-1.500 V	-100.0MV
61	12	-679.9MV	-1.500 V	-100.0MV
61	13	-679.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.400MA		-640.0UA
334	13	-1.410MA		-640.0UA
343	2	-1.520MA		-640.0UA
349	12	-1.570MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-6.300MA		-2.000MA
379	13	-6.300MA		-2.000MA
388	2	-7.000MA		-2.000MA
394	12	-7.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.960MA	640.0UA	
424	13	2.000MA	640.0UA	
433	2	2.260MA	640.0UA	
439	12	2.380MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.970 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.970 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	30.03MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-3.170MA		-1.600MA
334	13	-3.230MA		-1.600MA
343	2	-3.350MA		-1.600MA
349	12	-3.570MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.690MA	1.600MA	
424	13	4.880MA	1.600MA	
433	2	5.160MA	1.600MA	
439	12	5.680MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.95 V	13.50 V	
225	13	14.96 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	30.03MV		1.500 V
300	2	20.02MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-12.30MA		-4.200MA
334	13	-12.60MA		-4.200MA
343	2	-13.10MA		-4.200MA
349	12	-13.90MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	18.10MA	4.200MA	
424	13	18.90MA	4.200MA	
433	2	19.80MA	4.200MA	
439	12	21.80MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-46.00NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-7.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	1.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD >  1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-8.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >  1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	12.00NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >  2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-8.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >  2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	14.00NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >  4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-8.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >  4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	16.00NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-8.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	18.00NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 8

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-679.9MV	-1.500 V	-100.0MV
61	2	-679.9MV	-1.500 V	-100.0MV
61	3	-720.0MV	-1.500 V	-100.0MV
61	4	-720.0MV	-1.500 V	-100.0MV
61	5	-720.0MV	-1.500 V	-100.0MV
61	6	-720.0MV	-1.500 V	-100.0MV
61	8	-720.0MV	-1.500 V	-100.0MV
61	9	-720.0MV	-1.500 V	-100.0MV
61	10	-720.0MV	-1.500 V	-100.0MV
61	11	-720.0MV	-1.500 V	-100.0MV
61	12	-679.9MV	-1.500 V	-100.0MV
61	13	-679.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.370MA		-640.0UA
334	13	-1.380MA		-640.0UA
343	2	-1.490MA		-640.0UA
349	12	-1.530MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-6.200MA		-2.000MA
379	13	-6.200MA		-2.000MA
388	2	-6.800MA		-2.000MA
394	12	-6.900MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.920MA	640.0UA	
424	13	1.960MA	640.0UA	
433	2	2.250MA	640.0UA	
439	12	2.360MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.970 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-3.110MA		-1.600MA
334	13	-3.180MA		-1.600MA
343	2	-3.290MA		-1.600MA
349	12	-3.500MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.630MA	1.600MA	
424	13	4.800MA	1.600MA	
433	2	5.120MA	1.600MA	
439	12	5.640MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.96 V      13.50 V
225   13    14.96 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    20.02MV      50.00MV
265    2    20.02MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    30.03MV      1.500 V
300    2    30.03MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -12.20MA      -4.200MA
334   13   -12.40MA      -4.200MA
343    2   -12.80MA      -4.200MA
349   12   -13.60MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   17.90MA      4.200MA
424   13   18.60MA      4.200MA
433    2   19.70MA      4.200MA
439   12   21.50MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -87.00NA     -100.0NA
492    4   -26.00NA     -100.0NA
496    5   -9.000NA     -100.0NA
500    6   -9.000NA     -100.0NA
504    8   -7.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	27.00NA		100.0NA
542	4	24.00NA		100.0NA
546	5	4.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	1.000NA		100.0NA
558	9	1.000NA		100.0NA
562	10	1.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-8.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	19.00NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-9.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	19.00NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-9.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	19.00NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-9.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	19.00NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 9

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-679.9MV	-1.500 V	-100.0MV
61	2	-679.9MV	-1.500 V	-100.0MV
61	3	-720.0MV	-1.500 V	-100.0MV
61	4	-720.0MV	-1.500 V	-100.0MV
61	5	-720.0MV	-1.500 V	-100.0MV
61	6	-720.0MV	-1.500 V	-100.0MV
61	8	-720.0MV	-1.500 V	-100.0MV
61	9	-720.0MV	-1.500 V	-100.0MV
61	10	-720.0MV	-1.500 V	-100.0MV
61	11	-720.0MV	-1.500 V	-100.0MV
61	12	-679.9MV	-1.500 V	-100.0MV
61	13	-720.0MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.370MA		-640.0UA
334	13	-1.380MA		-640.0UA
343	2	-1.480MA		-640.0UA
349	12	-1.530MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-6.100MA		-2.000MA
379	13	-6.100MA		-2.000MA
388	2	-6.700MA		-2.000MA
394	12	-6.800MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.910MA	640.0UA	
424	13	1.950MA	640.0UA	
433	2	2.210MA	640.0UA	
439	12	2.320MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-3.110MA		-1.600MA
334	13	-3.180MA		-1.600MA
343	2	-3.280MA		-1.600MA
349	12	-3.510MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.610MA	1.600MA	
424	13	4.780MA	1.600MA	
433	2	5.060MA	1.600MA	
439	12	5.580MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.96 V	13.50 V	
225	13	14.95 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	20.02MV		1.500 V
300	2	20.02MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-12.10MA		-4.200MA
334	13	-12.40MA		-4.200MA
343	2	-12.80MA		-4.200MA
349	12	-13.70MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	17.80MA	4.200MA	
424	13	18.50MA	4.200MA	
433	2	19.40MA	4.200MA	
439	12	21.40MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-92.00NA	-100.0NA	
492	4	-18.00NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-7.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-7.000NA	-100.0NA
516	11	-7.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	17.00NA		100.0NA
542	4	13.00NA		100.0NA
546	5	3.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	1.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-8.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	20.00NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-9.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	20.00NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-10.00NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	23.00NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-10.00NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	24.00NA		20.00UA

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

STAT1 05/25/11 07:12
 TEST PROGRAM 4013B S/N 10
 DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 -55C

 CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-679.9MV	-1.500 V	-100.0MV
61	2	-679.9MV	-1.500 V	-100.0MV
61	3	-720.0MV	-1.500 V	-100.0MV
61	4	-720.0MV	-1.500 V	-100.0MV
61	5	-720.0MV	-1.500 V	-100.0MV
61	6	-720.0MV	-1.500 V	-100.0MV
61	8	-720.0MV	-1.500 V	-100.0MV
61	9	-720.0MV	-1.500 V	-100.0MV
61	10	-720.0MV	-1.500 V	-100.0MV
61	11	-720.0MV	-1.500 V	-100.0MV
61	12	-679.9MV	-1.500 V	-100.0MV
61	13	-679.9MV	-1.500 V	-100.0MV

 FUNCTIONAL TEST
 VDD= 5
 VIH= 3.500 VIL= 1.500

 VOH TEST
 VDD= 5
 VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

 VOH TEST
 IOH= -1UA
 VDD= 5
 VIH= 3.500 VIL= 1.500
 VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

 VOL TEST
 VDD= 5
 VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

 VOL TEST
 IOL= 1UA
 VDD= 5
 VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.360MA		-640.0UA
334	13	-1.370MA		-640.0UA
343	2	-1.480MA		-640.0UA
349	12	-1.520MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-6.200MA		-2.000MA
379	13	-6.100MA		-2.000MA
388	2	-6.800MA		-2.000MA
394	12	-6.900MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.890MA	640.0UA	
424	13	1.910MA	640.0UA	
433	2	2.190MA	640.0UA	
439	12	2.290MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-3.110MA		-1.600MA
334	13	-3.170MA		-1.600MA
343	2	-3.270MA		-1.600MA
349	12	-3.510MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.560MA	1.600MA	
424	13	4.720MA	1.600MA	
433	2	4.970MA	1.600MA	
439	12	5.510MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.95 V      13.50 V
225   13    14.96 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    20.02MV      50.00MV
265    2    30.03MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    20.02MV      1.500 V
300    2    20.02MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -12.20MA      -4.200MA
334   13   -12.50MA      -4.200MA
343    2   -12.80MA      -4.200MA
349   12   -13.70MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   17.70MA      4.200MA
424   13   18.40MA      4.200MA
433    2   19.20MA      4.200MA
439   12   21.30MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -16.00NA     -100.0NA
492    4   -10.00NA     -100.0NA
496    5    -8.000NA     -100.0NA
500    6    -8.000NA     -100.0NA
504    8    -7.000NA     -100.0NA

```

508	9	-7.000NA	-100.0NA
512	10	-7.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	1.000NA		100.0NA
562	10	1.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD >  1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >  1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >  2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >  2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-2.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >  4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >  4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-2.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	0 A		20.00UA

```

EIR 1.....10    FCT    DCT
      0000000000    PASS    PASS    EOT
GLOB 3
GLOB#      F.P.    OCTAL    LITERAL
      3      3      20540000    0L

```

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 11
DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-720.0MV	-1.500 V	-100.0MV
61	2	-720.0MV	-1.500 V	-100.0MV
61	3	-720.0MV	-1.500 V	-100.0MV
61	4	-720.0MV	-1.500 V	-100.0MV
61	5	-720.0MV	-1.500 V	-100.0MV
61	6	-720.0MV	-1.500 V	-100.0MV
61	8	-720.0MV	-1.500 V	-100.0MV
61	9	-720.0MV	-1.500 V	-100.0MV
61	10	-720.0MV	-1.500 V	-100.0MV
61	11	-720.0MV	-1.500 V	-100.0MV
61	12	-720.0MV	-1.500 V	-100.0MV
61	13	-720.0MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.420MA		-640.0UA
334	13	-1.420MA		-640.0UA
343	2	-1.530MA		-640.0UA
349	12	-1.580MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-6.400MA		-2.000MA
379	13	-6.400MA		-2.000MA
388	2	-7.000MA		-2.000MA
394	12	-7.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	2.030MA	640.0UA	
424	13	2.050MA	640.0UA	
433	2	2.330MA	640.0UA	
439	12	2.460MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	30.03MV		9 V
300	2	30.03MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-3.210MA		-1.600MA
334	13	-3.240MA		-1.600MA
343	2	-3.340MA		-1.600MA
349	12	-3.580MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.870MA	1.600MA	
424	13	4.990MA	1.600MA	
433	2	5.220MA	1.600MA	
439	12	5.830MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.96 V	13.50 V	
225	13	14.95 V	13.50 V	
232	2	14.95 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	20.02MV		1.500 V
300	2	30.03MV		1.500 V
304	12	20.02MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-12.40MA		-4.200MA
334	13	-12.50MA		-4.200MA
343	2	-12.80MA		-4.200MA
349	12	-13.70MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	18.50MA	4.200MA	
424	13	18.90MA	4.200MA	
433	2	19.60MA	4.200MA	
439	12	21.90MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-90.00NA	-100.0NA	
492	4	-20.00NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-7.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	20.00NA		100.0NA
542	4	17.00NA		100.0NA
546	5	3.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	1.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-8.000NA		1.000UA

```

-----
      IDD TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	17.00NA		1.000UA

```

-----
      IDD TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-9.000NA		2.000UA

```

-----
      IDD TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	19.00NA		2.000UA

```

-----
      IDD TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-9.000NA		4.000UA

```

-----
      IDD TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	19.00NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-10.00NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	19.00NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 12
DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-720.0MV	-1.500 V	-100.0MV
61	2	-720.0MV	-1.500 V	-100.0MV
61	3	-720.0MV	-1.500 V	-100.0MV
61	4	-720.0MV	-1.500 V	-100.0MV
61	5	-720.0MV	-1.500 V	-100.0MV
61	6	-720.0MV	-1.500 V	-100.0MV
61	8	-720.0MV	-1.500 V	-100.0MV
61	9	-720.0MV	-1.500 V	-100.0MV
61	10	-720.0MV	-1.500 V	-100.0MV
61	11	-720.0MV	-1.500 V	-100.0MV
61	12	-720.0MV	-1.500 V	-100.0MV
61	13	-720.0MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.410MA		-640.0UA
334	13	-1.420MA		-640.0UA
343	2	-1.530MA		-640.0UA
349	12	-1.570MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-6.300MA		-2.000MA
379	13	-6.300MA		-2.000MA
388	2	-6.900MA		-2.000MA
394	12	-7.000MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.940MA	640.0UA	
424	13	1.970MA	640.0UA	
433	2	2.260MA	640.0UA	
439	12	2.350MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.970 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-3.180MA		-1.600MA
334	13	-3.210MA		-1.600MA
343	2	-3.380MA		-1.600MA
349	12	-3.530MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.670MA	1.600MA	
424	13	4.790MA	1.600MA	
433	2	5.180MA	1.600MA	
439	12	5.620MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.95 V	13.50 V	
225	13	14.96 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	20.02MV		1.500 V
300	2	20.02MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-12.30MA		-4.200MA
334	13	-12.50MA		-4.200MA
343	2	-13.00MA		-4.200MA
349	12	-13.80MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	17.90MA	4.200MA	
424	13	18.50MA	4.200MA	
433	2	19.70MA	4.200MA	
439	12	21.50MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-57.00NA	-100.0NA	
492	4	-40.00NA	-100.0NA	
496	5	-49.00NA	-100.0NA	
500	6	-47.00NA	-100.0NA	
504	8	-7.000NA	-100.0NA	

508	9	-7.000NA	-100.0NA
512	10	-7.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	41.00NA		100.0NA
542	4	40.00NA		100.0NA
546	5	48.00NA		100.0NA
550	6	48.00NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	3.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	5.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	5.000NA		20.00UA

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



MIL-PRF-38534 CLASS K DATAPACK

Pre Burn-In Test Results at 25°C



STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 1
DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

```

-----
IOH  TEST
VDD=      5
IOH >= -640.0E-06
VO =      4.600
-----

```

INST #	PIN	MEASURED	LT	GT
328	1	-1.190MA		-640.0UA
334	13	-1.200MA		-640.0UA
343	2	-1.300MA		-640.0UA
349	12	-1.310MA		-640.0UA

```

-----
IOH2 TEST
VDD=      5
IOH >= -2.000E-03
VO =      2.500
-----

```

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-2.000MA
379	13	-5.400MA		-2.000MA
388	2	-5.900MA		-2.000MA
394	12	-5.900MA		-2.000MA

```

-----
IOL  TEST
VDD=      5
IOL >= 640.0E-06
VO= 400.0E-03
-----

```

INST #	PIN	MEASURED	LT	GT
418	1	1.640MA	640.0UA	
424	13	1.660MA	640.0UA	
433	2	1.950MA	640.0UA	
439	12	1.970MA	640.0UA	

```

-----
FUNCTIONAL TEST
VDD= 10
VIH= 7      VIL= 3
-----

```

```

-----
VOH  TEST
VDD= 10
VOH >= 9.950
-----

```

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

```

-----
VOH  TEST
IOH= -1UA
VDD= 10
VIH= 7      VIL= 3
VOH >= 9
-----

```

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	
225	13	9.960 V	9 V	
232	2	9.960 V	9 V	
236	12	9.970 V	9 V	

```

-----
VOL TEST
VDD= 10
VOL >= 50MV
-----

INST # PIN MEASURED LT GT
254 1 20.02MV 50.00MV
258 13 20.02MV 50.00MV
265 2 20.02MV 50.00MV
269 12 20.02MV 50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9
-----

INST # PIN MEASURED LT GT
289 1 20.02MV 9 V
293 13 20.02MV 9 V
300 2 20.02MV 9 V
304 12 20.02MV 9 V

```

```

-----
IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500
-----

INST # PIN MEASURED LT GT
328 1 -2.650MA -1.600MA
334 13 -2.680MA -1.600MA
343 2 -2.880MA -1.600MA
349 12 -2.930MA -1.600MA

```

```

-----
IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03
-----

INST # PIN MEASURED LT GT
418 1 3.860MA 1.600MA
424 13 3.950MA 1.600MA
433 2 4.460MA 1.600MA
439 12 4.620MA 1.600MA

```

```

-----
FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4
-----

```

```

-----
VOH TEST
VDD= 15
VOH >= 14.95
-----

INST # PIN MEASURED LT GT
184 1 14.97 V 14.95 V
188 13 14.97 V 14.95 V
195 2 14.97 V 14.95 V
199 12 14.97 V 14.95 V

```

```

-----
VOH TEST
IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
-----

```

VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.95 V	13.50 V	
225	13	14.95 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	20.02MV		1.500 V
300	2	30.03MV		1.500 V
304	12	20.02MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.30MA		-4.200MA
334	13	-10.40MA		-4.200MA
343	2	-11.20MA		-4.200MA
349	12	-11.40MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	14.70MA	4.200MA	
424	13	15.20MA	4.200MA	
433	2	16.90MA	4.200MA	
439	12	17.50MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-9.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-7.000NA	-100.0NA	
508	9	-8.000NA	-100.0NA	
512	10	-8.000NA	-100.0NA	
516	11	-8.000NA	-100.0NA	

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    20.00E-06
      VIN =      20
-----

INST #  PIN  MEASURED      LT      GT
    611   14  -6.000NA              20.00UA

-----
      IDD  TEST
      VDD=      20
      IDD >    20.00E-06
      VIN =      0
-----

INST #  PIN  MEASURED      LT      GT
    627   14  -5.000NA              20.00UA

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

```

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 2

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	10.01MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.180MA		-640.0UA
334	13	-1.190MA		-640.0UA
343	2	-1.290MA		-640.0UA
349	12	-1.300MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.300MA		-2.000MA
379	13	-5.300MA		-2.000MA
388	2	-5.900MA		-2.000MA
394	12	-5.900MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.640MA	640.0UA	
424	13	1.650MA	640.0UA	
433	2	1.930MA	640.0UA	
439	12	1.970MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.640MA		-1.600MA
334	13	-2.660MA		-1.600MA
343	2	-2.860MA		-1.600MA
349	12	-2.910MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.830MA	1.600MA	
424	13	3.910MA	1.600MA	
433	2	4.440MA	1.600MA	
439	12	4.610MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.95 V	13.50 V	
225	13	14.96 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	30.03MV		1.500 V
300	2	30.03MV		1.500 V
304	12	20.02MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.30MA		-4.200MA
334	13	-10.40MA		-4.200MA
343	2	-11.10MA		-4.200MA
349	12	-11.30MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	14.60MA	4.200MA	
424	13	15.00MA	4.200MA	
433	2	16.80MA	4.200MA	
439	12	17.40MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-8.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	2.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	1.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 3

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	10.01MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.210MA		-640.0UA
334	13	-1.220MA		-640.0UA
343	2	-1.320MA		-640.0UA
349	12	-1.340MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-6.000MA		-2.000MA
394	12	-6.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.690MA	640.0UA	
424	13	1.700MA	640.0UA	
433	2	1.990MA	640.0UA	
439	12	2.020MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.970 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.670MA		-1.600MA
334	13	-2.720MA		-1.600MA
343	2	-2.910MA		-1.600MA
349	12	-2.990MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.950MA	1.600MA	
424	13	4.040MA	1.600MA	
433	2	4.530MA	1.600MA	
439	12	4.700MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.95 V      13.50 V
225   13    14.95 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    30.03MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    30.03MV      1.500 V
300    2    20.02MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.40MA      -4.200MA
334   13   -10.60MA      -4.200MA
343    2   -11.20MA      -4.200MA
349   12   -11.60MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    15.00MA      4.200MA
424   13    15.40MA      4.200MA
433    2    17.10MA      4.200MA
439   12    17.80MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -8.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	1.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 4

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.210MA		-640.0UA
334	13	-1.230MA		-640.0UA
343	2	-1.320MA		-640.0UA
349	12	-1.350MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-6.000MA		-2.000MA
394	12	-6.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.670MA	640.0UA	
424	13	1.690MA	640.0UA	
433	2	1.970MA	640.0UA	
439	12	2.010MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.680MA		-1.600MA
334	13	-2.730MA		-1.600MA
343	2	-2.920MA		-1.600MA
349	12	-3.000MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.890MA	1.600MA	
424	13	4.010MA	1.600MA	
433	2	4.510MA	1.600MA	
439	12	4.680MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.95 V      13.50 V
225   13    14.95 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    20.02MV      50.00MV
265    2    20.02MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    30.03MV      1.500 V
300    2    30.03MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.40MA      -4.200MA
334   13   -10.60MA      -4.200MA
343    2   -11.30MA      -4.200MA
349   12   -11.60MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   14.80MA      4.200MA
424   13   15.30MA      4.200MA
433    2   17.00MA      4.200MA
439   12   17.70MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -8.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	2.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	1.000NA		100.0NA
558	9	1.000NA		100.0NA
562	10	1.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-8.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```


INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

IDD TEST
VDD = 20
IDD > 20.00E-06
VIN = 20

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

IDD TEST
VDD= 20
IDD > 20.00E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 5

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.200MA		-640.0UA
334	13	-1.220MA		-640.0UA
343	2	-1.300MA		-640.0UA
349	12	-1.340MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-5.900MA		-2.000MA
394	12	-6.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.670MA	640.0UA	
424	13	1.690MA	640.0UA	
433	2	1.970MA	640.0UA	
439	12	2.020MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.660MA		-1.600MA
334	13	-2.720MA		-1.600MA
343	2	-2.880MA		-1.600MA
349	12	-2.980MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.920MA	1.600MA	
424	13	4.000MA	1.600MA	
433	2	4.520MA	1.600MA	
439	12	4.690MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.95 V      13.50 V
225   13    14.96 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.95 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    30.03MV      50.00MV
265    2    20.02MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    20.02MV      1.500 V
300    2    20.02MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.30MA      -4.200MA
334   13   -10.60MA      -4.200MA
343    2   -11.20MA      -4.200MA
349   12   -11.60MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    15.00MA      4.200MA
424   13    15.40MA      4.200MA
433    2    17.10MA      4.200MA
439   12    17.80MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -8.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	2.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	1.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 6

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.220MA		-640.0UA
334	13	-1.200MA		-640.0UA
343	2	-1.320MA		-640.0UA
349	12	-1.320MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.400MA		-2.000MA
388	2	-6.000MA		-2.000MA
394	12	-5.900MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.660MA	640.0UA	
424	13	1.680MA	640.0UA	
433	2	1.960MA	640.0UA	
439	12	2.000MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.690MA		-1.600MA
334	13	-2.680MA		-1.600MA
343	2	-2.920MA		-1.600MA
349	12	-2.940MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.910MA	1.600MA	
424	13	3.990MA	1.600MA	
433	2	4.500MA	1.600MA	
439	12	4.660MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.95 V      13.50 V
225   13    14.95 V      13.50 V
232    2    14.95 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    20.02MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    30.03MV      1.500 V
300    2    20.02MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.50MA      -4.200MA
334   13   -10.50MA      -4.200MA
343    2   -11.30MA      -4.200MA
349   12   -11.40MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    14.90MA      4.200MA
424   13    15.20MA      4.200MA
433    2    17.00MA      4.200MA
439   12    17.70MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -9.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -7.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		2.000UA

```

-----
      IDD TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

IDD TEST
VDD = 20
IDD > 20.00E-06
VIN = 20

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

IDD TEST
VDD= 20
IDD > 20.00E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 7

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.220MA		-640.0UA
334	13	-1.220MA		-640.0UA
343	2	-1.330MA		-640.0UA
349	12	-1.340MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-6.100MA		-2.000MA
394	12	-6.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.690MA	640.0UA	
424	13	1.720MA	640.0UA	
433	2	1.990MA	640.0UA	
439	12	2.040MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.970 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.680MA		-1.600MA
334	13	-2.710MA		-1.600MA
343	2	-2.910MA		-1.600MA
349	12	-2.980MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.970MA	1.600MA	
424	13	4.050MA	1.600MA	
433	2	4.560MA	1.600MA	
439	12	4.740MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.96 V	13.50 V	
225	13	14.95 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	20.02MV		1.500 V
300	2	20.02MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.40MA		-4.200MA
334	13	-10.50MA		-4.200MA
343	2	-11.30MA		-4.200MA
349	12	-11.60MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	15.10MA	4.200MA	
424	13	15.50MA	4.200MA	
433	2	17.20MA	4.200MA	
439	12	17.80MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-8.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	2.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	1.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	1.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

IDD TEST
VDD = 20
IDD > 20.00E-06
VIN = 20

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

IDD TEST
VDD= 20
IDD > 20.00E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 8

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.210MA		-640.0UA
334	13	-1.210MA		-640.0UA
343	2	-1.320MA		-640.0UA
349	12	-1.330MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-6.000MA		-2.000MA
394	12	-6.000MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.700MA	640.0UA	
424	13	1.720MA	640.0UA	
433	2	2.020MA	640.0UA	
439	12	2.050MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.690MA		-1.600MA
334	13	-2.710MA		-1.600MA
343	2	-2.900MA		-1.600MA
349	12	-2.970MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.980MA	1.600MA	
424	13	4.060MA	1.600MA	
433	2	4.600MA	1.600MA	
439	12	4.760MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.95 V      13.50 V
225   13    14.95 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    20.02MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    30.03MV      1.500 V
300    2    20.02MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.40MA      -4.200MA
334   13   -10.50MA      -4.200MA
343    2   -11.30MA      -4.200MA
349   12   -11.50MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   15.20MA      4.200MA
424   13   15.50MA      4.200MA
433    2   17.30MA      4.200MA
439   12   18.00MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -12.00NA     -100.0NA
504    8   -8.000NA     -100.0NA

```

```

508      9  -8.000NA    -100.0NA
512     10  -8.000NA    -100.0NA
516     11  -8.000NA    -100.0NA

```

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	2.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```


INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 9

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.170MA		-640.0UA
334	13	-1.180MA		-640.0UA
343	2	-1.280MA		-640.0UA
349	12	-1.300MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.300MA		-2.000MA
379	13	-5.300MA		-2.000MA
388	2	-5.800MA		-2.000MA
394	12	-5.800MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.640MA	640.0UA	
424	13	1.660MA	640.0UA	
433	2	1.930MA	640.0UA	
439	12	1.970MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.620MA		-1.600MA
334	13	-2.650MA		-1.600MA
343	2	-2.850MA		-1.600MA
349	12	-2.910MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.860MA	1.600MA	
424	13	3.940MA	1.600MA	
433	2	4.430MA	1.600MA	
439	12	4.590MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.96 V	13.50 V	
225	13	14.95 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	20.02MV		1.500 V
300	2	20.02MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.20MA		-4.200MA
334	13	-10.30MA		-4.200MA
343	2	-11.10MA		-4.200MA
349	12	-11.30MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	14.70MA	4.200MA	
424	13	15.00MA	4.200MA	
433	2	16.80MA	4.200MA	
439	12	17.40MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-8.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-7.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	2.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	1.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD >  1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >  1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >  2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >  2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >  4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >  4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 10

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.210MA		-640.0UA
334	13	-1.210MA		-640.0UA
343	2	-1.320MA		-640.0UA
349	12	-1.330MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.400MA		-2.000MA
388	2	-6.000MA		-2.000MA
394	12	-6.000MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.660MA	640.0UA	
424	13	1.670MA	640.0UA	
433	2	1.960MA	640.0UA	
439	12	1.990MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50mV

INST #	PIN	MEASURED	LT	GT
254	1	20.02mV		50.00mV
258	13	20.02mV		50.00mV
265	2	20.02mV		50.00mV
269	12	20.02mV		50.00mV

VOL TEST
IOL= 1uA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02mV		9 V
293	13	20.02mV		9 V
300	2	20.02mV		9 V
304	12	20.02mV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.680mA		-1.600mA
334	13	-2.690mA		-1.600mA
343	2	-2.910mA		-1.600mA
349	12	-2.960mA		-1.600mA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.890mA	1.600mA	
424	13	3.970mA	1.600mA	
433	2	4.480mA	1.600mA	
439	12	4.620mA	1.600mA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1   14.95 V      13.50 V
225   13   14.95 V      13.50 V
232    2   14.96 V      13.50 V
236   12   14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1   30.03MV      50.00MV
258   13   20.02MV      50.00MV
265    2   20.02MV      50.00MV
269   12   30.03MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1   20.02MV      1.500 V
293   13   20.02MV      1.500 V
300    2   20.02MV      1.500 V
304   12   20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1  -10.40MA      -4.200MA
334   13  -10.50MA      -4.200MA
343    2  -11.30MA      -4.200MA
349   12  -11.50MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   14.80MA      4.200MA
424   13   15.20MA      4.200MA
433    2   17.00MA      4.200MA
439   12   17.50MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -7.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	2.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-8.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 11

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.190MA		-640.0UA
334	13	-1.190MA		-640.0UA
343	2	-1.300MA		-640.0UA
349	12	-1.310MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-2.000MA
379	13	-5.400MA		-2.000MA
388	2	-5.900MA		-2.000MA
394	12	-5.900MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.690MA	640.0UA	
424	13	1.710MA	640.0UA	
433	2	2.010MA	640.0UA	
439	12	2.050MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.630MA		-1.600MA
334	13	-2.650MA		-1.600MA
343	2	-2.870MA		-1.600MA
349	12	-2.920MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.980MA	1.600MA	
424	13	4.040MA	1.600MA	
433	2	4.560MA	1.600MA	
439	12	4.740MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.95 V	13.50 V	
225	13	14.95 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.95 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	20.02MV		1.500 V
300	2	30.03MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.20MA		-4.200MA
334	13	-10.30MA		-4.200MA
343	2	-11.10MA		-4.200MA
349	12	-11.30MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	15.10MA	4.200MA	
424	13	15.50MA	4.200MA	
433	2	17.20MA	4.200MA	
439	12	17.90MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-8.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-7.000NA	-100.0NA

```

-----
      IIH TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	1.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		20.00UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 12

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.190MA		-640.0UA
334	13	-1.190MA		-640.0UA
343	2	-1.300MA		-640.0UA
349	12	-1.310MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-2.000MA
379	13	-5.400MA		-2.000MA
388	2	-5.900MA		-2.000MA
394	12	-5.900MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.650MA	640.0UA	
424	13	1.660MA	640.0UA	
433	2	1.930MA	640.0UA	
439	12	1.970MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.640MA		-1.600MA
334	13	-2.660MA		-1.600MA
343	2	-2.870MA		-1.600MA
349	12	-2.920MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.870MA	1.600MA	
424	13	3.940MA	1.600MA	
433	2	4.440MA	1.600MA	
439	12	4.610MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.96 V	13.50 V	
225	13	14.95 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	30.03MV		1.500 V
300	2	30.03MV		1.500 V
304	12	20.02MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.30MA		-4.200MA
334	13	-10.40MA		-4.200MA
343	2	-11.10MA		-4.200MA
349	12	-11.40MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	14.70MA	4.200MA	
424	13	15.10MA	4.200MA	
433	2	16.90MA	4.200MA	
439	12	17.50MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-7.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-7.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		100.0NA
542	4	3.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	2.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	1.000NA		100.0NA
566	11	1.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```


INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		20.00UA

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



MIL-PRF-38534 CLASS K DATAPACK

Pre Burn-In Test Results at +125°C



STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 1
DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

```

-----
IOH TEST
VDD=      5
IOH >= -360.0E-06
VO =      4.600
-----

```

INST #	PIN	MEASURED	LT	GT
328	1	-1.160MA		-360.0UA
334	13	-1.150MA		-360.0UA
343	2	-1.260MA		-360.0UA
349	12	-1.280MA		-360.0UA

```

-----
IOH2 TEST
VDD=      5
IOH >= -1.150E-03
VO =      2.500
-----

```

INST #	PIN	MEASURED	LT	GT
373	1	-5.200MA		-1.150MA
379	13	-5.200MA		-1.150MA
388	2	-5.800MA		-1.150MA
394	12	-5.800MA		-1.150MA

```

-----
IOL TEST
VDD=      5
IOL >= 360.0E-06
VO= 400.0E-03
-----

```

INST #	PIN	MEASURED	LT	GT
418	1	1.570MA	360.0UA	
424	13	1.580MA	360.0UA	
433	2	1.870MA	360.0UA	
439	12	1.920MA	360.0UA	

```

-----
FUNCTIONAL TEST
VDD=      10
VIH=      7      VIL=      3
-----

```

```

-----
VOH TEST
VDD=      10
VOH >= 9.950
-----

```

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

```

-----
VOH TEST
IOH= -1UA
VDD=      10
VIH=      7      VIL=      3
VOH >=      9
-----

```

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	
225	13	9.960 V	9 V	
232	2	9.970 V	9 V	
236	12	9.970 V	9 V	

```

-----
VOL TEST
VDD= 10
VOL >= 50MV
-----

INST # PIN MEASURED LT GT
254 1 20.02MV 50.00MV
258 13 20.02MV 50.00MV
265 2 20.02MV 50.00MV
269 12 30.03MV 50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9
-----

INST # PIN MEASURED LT GT
289 1 30.03MV 9 V
293 13 20.02MV 9 V
300 2 20.02MV 9 V
304 12 20.02MV 9 V

```

```

-----
IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500
-----

INST # PIN MEASURED LT GT
328 1 -2.550MA -900.0UA
334 13 -2.560MA -900.0UA
343 2 -2.790MA -900.0UA
349 12 -2.860MA -900.0UA

```

```

-----
IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03
-----

INST # PIN MEASURED LT GT
418 1 3.640MA 900.0UA
424 13 3.690MA 900.0UA
433 2 4.260MA 900.0UA
439 12 4.470MA 900.0UA

```

```

-----
FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4
-----

```

```

-----
VOH TEST
VDD= 15
VOH >= 14.95
-----

INST # PIN MEASURED LT GT
184 1 14.98 V 14.95 V
188 13 14.97 V 14.95 V
195 2 14.97 V 14.95 V
199 12 14.98 V 14.95 V

```

```

-----
VOH TEST
IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
-----

```

VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.96 V	13.50 V	
225	13	14.96 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	20.02MV		1.500 V
300	2	30.03MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -2.400E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-9.900MA		-2.400MA
334	13	-9.900MA		-2.400MA
343	2	-10.80MA		-2.400MA
349	12	-11.10MA		-2.400MA

IOL TEST
VDD= 15
IOL >= 2.400E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	13.90MA	2.400MA	
424	13	14.00MA	2.400MA	
433	2	16.10MA	2.400MA	
439	12	16.90MA	2.400MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-1.000UA	
492	4	-7.000NA	-1.000UA	
496	5	-7.000NA	-1.000UA	
500	6	-7.000NA	-1.000UA	
504	8	-6.000NA	-1.000UA	
508	9	-7.000NA	-1.000UA	
512	10	-7.000NA	-1.000UA	
516	11	-7.000NA	-1.000UA	

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	4.000NA		1.000UA
542	4	3.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	2.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	2.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	1.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD >    30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >    30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	0 A		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >    60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >    60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	0 A		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >   120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >   120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	0 A		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

INST #  PIN    MEASURED      LT      GT
    611   14   -4.000NA              600.0UA

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

INST #  PIN    MEASURED      LT      GT
    627   14    1.000NA              600.0UA

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

```


STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 2

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.170MA		-360.0UA
334	13	-1.170MA		-360.0UA
343	2	-1.280MA		-360.0UA
349	12	-1.290MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.300MA		-1.150MA
379	13	-5.300MA		-1.150MA
388	2	-5.800MA		-1.150MA
394	12	-5.800MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.590MA	360.0UA	
424	13	1.620MA	360.0UA	
433	2	1.890MA	360.0UA	
439	12	1.950MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.970 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	30.03MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.590MA		-900.0UA
334	13	-2.600MA		-900.0UA
343	2	-2.810MA		-900.0UA
349	12	-2.900MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.700MA	900.0UA	
424	13	3.750MA	900.0UA	
433	2	4.260MA	900.0UA	
439	12	4.540MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.95 V      13.50 V
225   13    14.96 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    30.03MV      50.00MV
265    2    30.03MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    20.02MV      1.500 V
300    2    30.03MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.00MA      -2.400MA
334   13   -10.00MA      -2.400MA
343    2   -10.90MA      -2.400MA
349   12  -11.30MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   14.00MA      2.400MA
424   13   14.00MA      2.400MA
433    2   16.20MA      2.400MA
439   12   17.20MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -1.000UA
492    4   -8.000NA     -1.000UA
496    5   -7.000NA     -1.000UA
500    6   -7.000NA     -1.000UA
504    8   -7.000NA     -1.000UA

```

508	9	-7.000NA	-1.000UA
512	10	-7.000NA	-1.000UA
516	11	-7.000NA	-1.000UA

```

-----
      IIH TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	4.000NA		1.000UA
542	4	3.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	2.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	2.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	1.000NA		1.000UA

```

-----
      IDD TEST
      VDD =      5
      IDD >    30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		30.00UA

```

-----
      IDD TEST
      VDD=      5
      IDD >    30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		30.00UA

```

-----
      IDD TEST
      VDD =     10
      IDD >    60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		60.00UA

```

-----
      IDD TEST
      VDD=     10
      IDD >    60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		60.00UA

```

-----
      IDD TEST
      VDD =     15
      IDD >   120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-2.000NA		120.0UA

```

-----
      IDD TEST
      VDD=     15
      IDD >   120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-2.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		600.0UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 3

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	30.03MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.170MA		-360.0UA
334	13	-1.170MA		-360.0UA
343	2	-1.290MA		-360.0UA
349	12	-1.320MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-1.150MA
379	13	-5.400MA		-1.150MA
388	2	-5.900MA		-1.150MA
394	12	-6.000MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.620MA	360.0UA	
424	13	1.620MA	360.0UA	
433	2	1.920MA	360.0UA	
439	12	1.970MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.570MA		-900.0UA
334	13	-2.590MA		-900.0UA
343	2	-2.830MA		-900.0UA
349	12	-2.930MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.730MA	900.0UA	
424	13	3.770MA	900.0UA	
433	2	4.340MA	900.0UA	
439	12	4.570MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.95 V	13.50 V	
225	13	14.96 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	20.02MV		1.500 V
300	2	30.03MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -2.400E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.00MA		-2.400MA
334	13	-10.10MA		-2.400MA
343	2	-10.90MA		-2.400MA
349	12	-11.40MA		-2.400MA

IOL TEST
VDD= 15
IOL >= 2.400E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	14.20MA	2.400MA	
424	13	14.30MA	2.400MA	
433	2	16.40MA	2.400MA	
439	12	17.30MA	2.400MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-1.000UA	
492	4	-7.000NA	-1.000UA	
496	5	-7.000NA	-1.000UA	
500	6	-7.000NA	-1.000UA	
504	8	-7.000NA	-1.000UA	

508	9	-7.000NA	-1.000UA
512	10	-7.000NA	-1.000UA
516	11	-7.000NA	-1.000UA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	4.000NA		1.000UA
542	4	3.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	2.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	2.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	1.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		600.0UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 4

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.180MA		-360.0UA
334	13	-1.190MA		-360.0UA
343	2	-1.290MA		-360.0UA
349	12	-1.320MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-1.150MA
379	13	-5.400MA		-1.150MA
388	2	-5.900MA		-1.150MA
394	12	-6.000MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.610MA	360.0UA	
424	13	1.630MA	360.0UA	
433	2	1.910MA	360.0UA	
439	12	1.970MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.970 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.600MA		-900.0UA
334	13	-2.640MA		-900.0UA
343	2	-2.840MA		-900.0UA
349	12	-2.940MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.720MA	900.0UA	
424	13	3.800MA	900.0UA	
433	2	4.320MA	900.0UA	
439	12	4.560MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.96 V      13.50 V
225   13    14.96 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.97 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    20.02MV      50.00MV
265    2    20.02MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    30.03MV      1.500 V
300    2    20.02MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.10MA      -2.400MA
334   13   -10.30MA      -2.400MA
343    2   -10.90MA      -2.400MA
349   12   -11.40MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   14.10MA      2.400MA
424   13   14.50MA      2.400MA
433    2   16.30MA      2.400MA
439   12   17.30MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -1.000UA
492    4   -8.000NA     -1.000UA
496    5   -8.000NA     -1.000UA
500    6   -7.000NA     -1.000UA
504    8   -7.000NA     -1.000UA

```


508	9	-7.000NA	-1.000UA
512	10	-7.000NA	-1.000UA
516	11	-7.000NA	-1.000UA

```

-----
      IIH TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	4.000NA		1.000UA
542	4	3.000NA		1.000UA
546	5	2.000NA		1.000UA
550	6	2.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	2.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	1.000NA		1.000UA

```

-----
      IDD TEST
      VDD =      5
      IDD >    30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		30.00UA

```

-----
      IDD TEST
      VDD=      5
      IDD >    30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		30.00UA

```

-----
      IDD TEST
      VDD =     10
      IDD >    60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		60.00UA

```

-----
      IDD TEST
      VDD=     10
      IDD >    60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		60.00UA

```

-----
      IDD TEST
      VDD =     15
      IDD >   120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		120.0UA

```

-----
      IDD TEST
      VDD=     15
      IDD >   120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		600.0UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 5

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.160MA		-360.0UA
334	13	-1.180MA		-360.0UA
343	2	-1.270MA		-360.0UA
349	12	-1.300MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.300MA		-1.150MA
379	13	-5.400MA		-1.150MA
388	2	-5.800MA		-1.150MA
394	12	-5.900MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.590MA	360.0UA	
424	13	1.610MA	360.0UA	
433	2	1.900MA	360.0UA	
439	12	1.960MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.560MA		-900.0UA
334	13	-2.610MA		-900.0UA
343	2	-2.780MA		-900.0UA
349	12	-2.910MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.710MA	900.0UA	
424	13	3.780MA	900.0UA	
433	2	4.310MA	900.0UA	
439	12	4.540MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.95 V      13.50 V
225   13    14.95 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    30.03MV      50.00MV
265    2    20.02MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    20.02MV      1.500 V
300    2    30.03MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.900MA      -2.400MA
334   13    -10.10MA      -2.400MA
343    2    -10.70MA      -2.400MA
349   12    -11.30MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    14.10MA      2.400MA
424   13    14.30MA      2.400MA
433    2    16.30MA      2.400MA
439   12    17.10MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -1.000UA
492    4    -8.000NA      -1.000UA
496    5    -8.000NA      -1.000UA
500    6    -8.000NA      -1.000UA
504    8    -7.000NA      -1.000UA

```

508	9	-7.000NA	-1.000UA
512	10	-7.000NA	-1.000UA
516	11	-7.000NA	-1.000UA

```

-----
      IIH TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	4.000NA		1.000UA
542	4	3.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	2.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	2.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD TEST
      VDD =      5
      IDD >    30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		30.00UA

```

-----
      IDD TEST
      VDD=      5
      IDD >    30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		30.00UA

```

-----
      IDD TEST
      VDD =     10
      IDD >    60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-2.000NA		60.00UA

```

-----
      IDD TEST
      VDD=     10
      IDD >    60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		60.00UA

```

-----
      IDD TEST
      VDD =     15
      IDD >   120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	0 A		120.0UA

```

-----
      IDD TEST
      VDD=     15
      IDD >   120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	0 A		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		600.0UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 6

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.170MA		-360.0UA
334	13	-1.160MA		-360.0UA
343	2	-1.280MA		-360.0UA
349	12	-1.280MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.300MA		-1.150MA
379	13	-5.300MA		-1.150MA
388	2	-5.900MA		-1.150MA
394	12	-5.800MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.600MA	360.0UA	
424	13	1.620MA	360.0UA	
433	2	1.890MA	360.0UA	
439	12	1.950MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.970 V	9 V
232	2	9.970 V	9 V
236	12	9.970 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.600MA		-900.0UA
334	13	-2.590MA		-900.0UA
343	2	-2.830MA		-900.0UA
349	12	-2.880MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.680MA	900.0UA	
424	13	3.770MA	900.0UA	
433	2	4.280MA	900.0UA	
439	12	4.520MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.95 V	13.50 V	
225	13	14.96 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	30.03MV		1.500 V
300	2	20.02MV		1.500 V
304	12	20.02MV		1.500 V

IOH TEST
VDD= 15
IOH >= -2.400E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.10MA		-2.400MA
334	13	-10.10MA		-2.400MA
343	2	-10.90MA		-2.400MA
349	12	-11.20MA		-2.400MA

IOL TEST
VDD= 15
IOL >= 2.400E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	14.00MA	2.400MA	
424	13	14.40MA	2.400MA	
433	2	16.20MA	2.400MA	
439	12	17.10MA	2.400MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-1.000UA	
492	4	-8.000NA	-1.000UA	
496	5	-8.000NA	-1.000UA	
500	6	-8.000NA	-1.000UA	
504	8	-7.000NA	-1.000UA	

508	9	-8.000NA	-1.000UA
512	10	-8.000NA	-1.000UA
516	11	-7.000NA	-1.000UA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		1.000UA
542	4	3.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	2.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	2.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		600.0UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 7

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-600.1MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.170MA		-360.0UA
334	13	-1.170MA		-360.0UA
343	2	-1.290MA		-360.0UA
349	12	-1.310MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-1.150MA
379	13	-5.400MA		-1.150MA
388	2	-5.900MA		-1.150MA
394	12	-5.900MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.620MA	360.0UA	
424	13	1.650MA	360.0UA	
433	2	1.920MA	360.0UA	
439	12	1.970MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.970 V	9 V
232	2	9.970 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		9 V
293	13	30.03MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.580MA		-900.0UA
334	13	-2.590MA		-900.0UA
343	2	-2.830MA		-900.0UA
349	12	-2.910MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.740MA	900.0UA	
424	13	3.810MA	900.0UA	
433	2	4.350MA	900.0UA	
439	12	4.570MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.96 V	13.50 V	
225	13	14.96 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	30.03MV		1.500 V
300	2	20.02MV		1.500 V
304	12	20.02MV		1.500 V

IOH TEST
VDD= 15
IOH >= -2.400E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.00MA		-2.400MA
334	13	-10.10MA		-2.400MA
343	2	-10.90MA		-2.400MA
349	12	-11.30MA		-2.400MA

IOL TEST
VDD= 15
IOL >= 2.400E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	14.20MA	2.400MA	
424	13	14.50MA	2.400MA	
433	2	16.30MA	2.400MA	
439	12	17.20MA	2.400MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-1.000UA	
492	4	-8.000NA	-1.000UA	
496	5	-8.000NA	-1.000UA	
500	6	-8.000NA	-1.000UA	
504	8	-7.000NA	-1.000UA	

508	9	-8.000NA	-1.000UA
512	10	-8.000NA	-1.000UA
516	11	-8.000NA	-1.000UA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		1.000UA
542	4	3.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	2.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	2.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-2.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-2.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		600.0UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 8

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-600.1MV	-1.500 V	-100.0MV
61	2	-600.1MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-600.1MV	-1.500 V	-100.0MV
61	13	-600.1MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	30.03MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.150MA		-360.0UA
334	13	-1.160MA		-360.0UA
343	2	-1.270MA		-360.0UA
349	12	-1.280MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.300MA		-1.150MA
379	13	-5.300MA		-1.150MA
388	2	-5.800MA		-1.150MA
394	12	-5.800MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.590MA	360.0UA	
424	13	1.620MA	360.0UA	
433	2	1.920MA	360.0UA	
439	12	1.960MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.530MA		-900.0UA
334	13	-2.580MA		-900.0UA
343	2	-2.810MA		-900.0UA
349	12	-2.860MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.660MA	900.0UA	
424	13	3.780MA	900.0UA	
433	2	4.380MA	900.0UA	
439	12	4.530MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.96 V      13.50 V
225   13    14.96 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    20.02MV      50.00MV
265    2    20.02MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    20.02MV      1.500 V
300    2    30.03MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.800MA      -2.400MA
334   13    -10.00MA      -2.400MA
343    2    -10.80MA      -2.400MA
349   12    -11.10MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    13.90MA      2.400MA
424   13    14.40MA      2.400MA
433    2    16.50MA      2.400MA
439   12    17.10MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -1.000UA
492    4    -8.000NA      -1.000UA
496    5    -7.000NA      -1.000UA
500    6    -14.00NA      -1.000UA
504    8    -7.000NA      -1.000UA

```


508	9	-7.000NA	-1.000UA
512	10	-7.000NA	-1.000UA
516	11	-7.000NA	-1.000UA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	4.000NA		1.000UA
542	4	3.000NA		1.000UA
546	5	2.000NA		1.000UA
550	6	2.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	2.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	1.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	3.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	3.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	4.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	4.000NA		600.0UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 9

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.120MA		-360.0UA
334	13	-1.140MA		-360.0UA
343	2	-1.240MA		-360.0UA
349	12	-1.250MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.100MA		-1.150MA
379	13	-5.100MA		-1.150MA
388	2	-5.600MA		-1.150MA
394	12	-5.600MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.550MA	360.0UA	
424	13	1.570MA	360.0UA	
433	2	1.850MA	360.0UA	
439	12	1.890MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.470MA		-900.0UA
334	13	-2.530MA		-900.0UA
343	2	-2.740MA		-900.0UA
349	12	-2.810MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.550MA	900.0UA	
424	13	3.690MA	900.0UA	
433	2	4.210MA	900.0UA	
439	12	4.380MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.96 V      13.50 V
225   13    14.96 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    20.02MV      50.00MV
265    2    30.03MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    30.03MV      1.500 V
300    2    20.02MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.500MA      -2.400MA
334   13    -9.800MA      -2.400MA
343    2    -10.60MA      -2.400MA
349   12    -10.90MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    13.40MA      2.400MA
424   13    14.00MA      2.400MA
433    2    15.80MA      2.400MA
439   12    16.60MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -1.000UA
492    4    -8.000NA      -1.000UA
496    5    -8.000NA      -1.000UA
500    6    -7.000NA      -1.000UA
504    8    -7.000NA      -1.000UA

```

508	9	-7.000NA	-1.000UA
512	10	-7.000NA	-1.000UA
516	11	-7.000NA	-1.000UA

```

-----
      IIH TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	4.000NA		1.000UA
542	4	3.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	2.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	2.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	1.000NA		1.000UA

```

-----
      IDD TEST
      VDD =      5
      IDD >    30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		30.00UA

```

-----
      IDD TEST
      VDD=      5
      IDD >    30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		30.00UA

```

-----
      IDD TEST
      VDD =     10
      IDD >    60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		60.00UA

```

-----
      IDD TEST
      VDD=     10
      IDD >    60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		60.00UA

```

-----
      IDD TEST
      VDD =     15
      IDD >   120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		120.0UA

```

-----
      IDD TEST
      VDD=     15
      IDD >   120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		600.0UA

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

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TEST PROGRAM 4013B S/N 10

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-600.1MV	-1.500 V	-100.0MV
61	2	-600.1MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-600.1MV	-1.500 V	-100.0MV
61	13	-600.1MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.100MA		-360.0UA
334	13	-1.110MA		-360.0UA
343	2	-1.220MA		-360.0UA
349	12	-1.230MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.100MA		-1.150MA
379	13	-5.000MA		-1.150MA
388	2	-5.600MA		-1.150MA
394	12	-5.600MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.490MA	360.0UA	
424	13	1.510MA	360.0UA	
433	2	1.780MA	360.0UA	
439	12	1.830MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.970 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.420MA		-900.0UA
334	13	-2.470MA		-900.0UA
343	2	-2.660MA		-900.0UA
349	12	-2.730MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.390MA	900.0UA	
424	13	3.520MA	900.0UA	
433	2	4.000MA	900.0UA	
439	12	4.190MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.96 V      13.50 V
225   13    14.96 V      13.50 V
232    2    14.96 V      13.50 V
236   12    14.96 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    30.03MV      50.00MV
265    2    20.02MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    30.03MV      1.500 V
300    2    20.02MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.300MA      -2.400MA
334   13    -9.600MA      -2.400MA
343    2    -10.30MA      -2.400MA
349   12    -10.60MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    12.80MA      2.400MA
424   13    13.40MA      2.400MA
433    2    15.10MA      2.400MA
439   12    15.80MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -1.000UA
492    4    -8.000NA      -1.000UA
496    5    -8.000NA      -1.000UA
500    6    -8.000NA      -1.000UA
504    8    -7.000NA      -1.000UA

```

508	9	-7.000NA	-1.000UA
512	10	-7.000NA	-1.000UA
516	11	-7.000NA	-1.000UA

```

-----
      IIH TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	4.000NA		1.000UA
542	4	3.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	2.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	2.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD TEST
      VDD =      5
      IDD >    30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		30.00UA

```

-----
      IDD TEST
      VDD=      5
      IDD >    30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		30.00UA

```

-----
      IDD TEST
      VDD =     10
      IDD >    60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		60.00UA

```

-----
      IDD TEST
      VDD=     10
      IDD >    60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		60.00UA

```

-----
      IDD TEST
      VDD =     15
      IDD >   120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		120.0UA

```

-----
      IDD TEST
      VDD=     15
      IDD >   120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		600.0UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 11

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-600.1MV	-1.500 V	-100.0MV
61	2	-600.1MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-600.1MV	-1.500 V	-100.0MV
61	13	-600.1MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.120MA		-360.0UA
334	13	-1.130MA		-360.0UA
343	2	-1.240MA		-360.0UA
349	12	-1.260MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.200MA		-1.150MA
379	13	-5.200MA		-1.150MA
388	2	-5.700MA		-1.150MA
394	12	-5.700MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.570MA	360.0UA	
424	13	1.620MA	360.0UA	
433	2	1.890MA	360.0UA	
439	12	1.940MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.460MA		-900.0UA
334	13	-2.510MA		-900.0UA
343	2	-2.700MA		-900.0UA
349	12	-2.800MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.600MA	900.0UA	
424	13	3.760MA	900.0UA	
433	2	4.210MA	900.0UA	
439	12	4.480MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.96 V	13.50 V	
225	13	14.95 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.97 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	30.03MV		1.500 V
300	2	20.02MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -2.400E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-9.500MA		-2.400MA
334	13	-9.800MA		-2.400MA
343	2	-10.50MA		-2.400MA
349	12	-10.80MA		-2.400MA

IOL TEST
VDD= 15
IOL >= 2.400E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	13.60MA	2.400MA	
424	13	14.20MA	2.400MA	
433	2	15.90MA	2.400MA	
439	12	16.90MA	2.400MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-1.000UA	
492	4	-8.000NA	-1.000UA	
496	5	-8.000NA	-1.000UA	
500	6	-7.000NA	-1.000UA	
504	8	-7.000NA	-1.000UA	

508	9	-7.000NA	-1.000UA
512	10	-7.000NA	-1.000UA
516	11	-7.000NA	-1.000UA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	4.000NA		1.000UA
542	4	3.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	2.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	2.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	1.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		600.0UA

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

STAT1 05/25/11 07:12
TEST PROGRAM 4013B S/N 12

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 12 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-600.1MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.140MA		-360.0UA
334	13	-1.150MA		-360.0UA
343	2	-1.260MA		-360.0UA
349	12	-1.270MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.200MA		-1.150MA
379	13	-5.200MA		-1.150MA
388	2	-5.700MA		-1.150MA
394	12	-5.700MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.550MA	360.0UA	
424	13	1.580MA	360.0UA	
433	2	1.880MA	360.0UA	
439	12	1.900MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	

225	13	9.960 V	9 V
232	2	9.970 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.510MA		-900.0UA
334	13	-2.550MA		-900.0UA
343	2	-2.800MA		-900.0UA
349	12	-2.830MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.550MA	900.0UA	
424	13	3.690MA	900.0UA	
433	2	4.300MA	900.0UA	
439	12	4.410MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.96 V	13.50 V	
225	13	14.96 V	13.50 V	
232	2	14.96 V	13.50 V	
236	12	14.96 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	30.03MV		1.500 V
300	2	30.03MV		1.500 V
304	12	20.02MV		1.500 V

IOH TEST
VDD= 15
IOH >= -2.400E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-9.700MA		-2.400MA
334	13	-9.900MA		-2.400MA
343	2	-10.80MA		-2.400MA
349	12	-11.00MA		-2.400MA

IOL TEST
VDD= 15
IOL >= 2.400E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	13.50MA	2.400MA	
424	13	14.00MA	2.400MA	
433	2	16.20MA	2.400MA	
439	12	16.70MA	2.400MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-1.000UA	
492	4	-8.000NA	-1.000UA	
496	5	-8.000NA	-1.000UA	
500	6	-7.000NA	-1.000UA	
504	8	-7.000NA	-1.000UA	

508	9	-7.000NA	-1.000UA
512	10	-7.000NA	-1.000UA
516	11	-7.000NA	-1.000UA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	5.000NA		1.000UA
542	4	3.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	2.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	2.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		600.0UA

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 4013B S/N 1
DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-679.9MV	-1.500 V	-100.0MV
61	13	-679.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

```

-----
IOH TEST
VDD=      5
IOH >= -640.0E-06
VO =      4.600
-----

```

INST #	PIN	MEASURED	LT	GT
328	1	-1.280MA		-640.0UA
334	13	-1.280MA		-640.0UA
343	2	-1.430MA		-640.0UA
349	12	-1.430MA		-640.0UA

```

-----
IOH2 TEST
VDD=      5
IOH >= -2.000E-03
VO =      2.500
-----

```

INST #	PIN	MEASURED	LT	GT
373	1	-5.800MA		-2.000MA
379	13	-5.800MA		-2.000MA
388	2	-6.400MA		-2.000MA
394	12	-6.400MA		-2.000MA

```

-----
IOL TEST
VDD=      5
IOL >= 640.0E-06
VO= 400.0E-03
-----

```

INST #	PIN	MEASURED	LT	GT
418	1	1.790MA	640.0UA	
424	13	1.810MA	640.0UA	
433	2	2.170MA	640.0UA	
439	12	2.200MA	640.0UA	

```

-----
FUNCTIONAL TEST
VDD= 10
VIH= 7      VIL= 3
-----

```

```

-----
VOH TEST
VDD= 10
VOH >= 9.950
-----

```

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.980 V	9.950 V	

```

-----
VOH TEST
IOH= -1UA
VDD= 10
VIH= 7      VIL= 3
VOH >= 9
-----

```

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	
225	13	9.950 V	9 V	
232	2	9.960 V	9 V	
236	12	9.960 V	9 V	

```

-----
VOL TEST
VDD= 10
VOL >= 50MV
-----

INST # PIN MEASURED LT GT
254 1 20.02MV 50.00MV
258 13 20.02MV 50.00MV
265 2 20.02MV 50.00MV
269 12 20.02MV 50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9
-----

INST # PIN MEASURED LT GT
289 1 30.03MV 9 V
293 13 30.03MV 9 V
300 2 30.03MV 9 V
304 12 20.02MV 9 V

```

```

-----
IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500
-----

INST # PIN MEASURED LT GT
328 1 -2.810MA -1.600MA
334 13 -2.810MA -1.600MA
343 2 -3.180MA -1.600MA
349 12 -3.200MA -1.600MA

```

```

-----
IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03
-----

INST # PIN MEASURED LT GT
418 1 4.270MA 1.600MA
424 13 4.320MA 1.600MA
433 2 5.170MA 1.600MA
439 12 5.270MA 1.600MA

```

```

-----
FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4
-----

```

```

-----
VOH TEST
VDD= 15
VOH >= 14.95
-----

INST # PIN MEASURED LT GT
184 1 14.98 V 14.95 V
188 13 14.97 V 14.95 V
195 2 14.98 V 14.95 V
199 12 14.98 V 14.95 V

```

```

-----
VOH TEST
IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
-----

```

VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.92 V	13.50 V	
225	13	14.92 V	13.50 V	
232	2	14.94 V	13.50 V	
236	12	14.94 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	30.03MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	20.02MV		1.500 V
300	2	30.03MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-11.00MA		-4.200MA
334	13	-11.00MA		-4.200MA
343	2	-12.40MA		-4.200MA
349	12	-12.50MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	16.50MA	4.200MA	
424	13	16.70MA	4.200MA	
433	2	19.90MA	4.200MA	
439	12	20.20MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-7.000NA	-100.0NA	
508	9	-8.000NA	-100.0NA	
512	10	-8.000NA	-100.0NA	
516	11	-8.000NA	-100.0NA	

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD >    1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >    1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >    2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >    2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >    4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >    4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA


```

-----
      IDD  TEST
      VDD =      20
      IDD >    20.00E-06
      VIN =      20
-----

INST #  PIN  MEASURED      LT      GT
    611   14  -6.000NA                20.00UA

-----
      IDD  TEST
      VDD=      20
      IDD >    20.00E-06
      VIN =      0
-----

INST #  PIN  MEASURED      LT      GT
    627   14  -4.000NA                20.00UA

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

```

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 2

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.220MA		-640.0UA
334	13	-1.220MA		-640.0UA
343	2	-1.360MA		-640.0UA
349	12	-1.360MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-6.100MA		-2.000MA
394	12	-6.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.710MA	640.0UA	
424	13	1.730MA	640.0UA	
433	2	2.080MA	640.0UA	
439	12	2.120MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.950 V	9 V
236	12	9.950 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.750MA		-1.600MA
334	13	-2.760MA		-1.600MA
343	2	-3.110MA		-1.600MA
349	12	-3.110MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.160MA	1.600MA	
424	13	4.230MA	1.600MA	
433	2	5.040MA	1.600MA	
439	12	5.160MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.92 V      13.50 V
225   13    14.93 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    30.03MV      50.00MV
265    2    30.03MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    30.03MV      1.500 V
300    2    20.02MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.90MA      -4.200MA
334   13   -11.00MA      -4.200MA
343    2   -12.30MA      -4.200MA
349   12   -12.50MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   16.40MA      4.200MA
424   13   16.70MA      4.200MA
433    2   19.80MA      4.200MA
439   12   20.30MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -7.000NA     -100.0NA

```

508	9	-18.00NA	-100.0NA
512	10	-19.00NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	3.000NA		100.0NA
558	9	17.00NA		100.0NA
562	10	17.00NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	21.00NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	20.00NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	20.00NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	20.00NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 3

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	30.03MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.210MA		-640.0UA
334	13	-1.230MA		-640.0UA
343	2	-1.350MA		-640.0UA
349	12	-1.370MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.600MA		-2.000MA
379	13	-5.600MA		-2.000MA
388	2	-6.200MA		-2.000MA
394	12	-6.200MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.720MA	640.0UA	
424	13	1.730MA	640.0UA	
433	2	2.080MA	640.0UA	
439	12	2.100MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.980 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.680MA		-1.600MA
334	13	-2.720MA		-1.600MA
343	2	-3.040MA		-1.600MA
349	12	-3.090MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.120MA	1.600MA	
424	13	4.180MA	1.600MA	
433	2	4.960MA	1.600MA	
439	12	5.050MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.93 V	13.50 V	
225	13	14.92 V	13.50 V	
232	2	14.94 V	13.50 V	
236	12	14.94 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	30.03MV		1.500 V
300	2	20.02MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.60MA		-4.200MA
334	13	-10.80MA		-4.200MA
343	2	-12.00MA		-4.200MA
349	12	-12.30MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	16.20MA	4.200MA	
424	13	16.40MA	4.200MA	
433	2	19.30MA	4.200MA	
439	12	19.60MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-8.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-7.000NA	-100.0NA
516	11	-7.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	3.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	46.00NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	44.00NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	45.00NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	47.00NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 4

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.250MA		-640.0UA
334	13	-1.260MA		-640.0UA
343	2	-1.390MA		-640.0UA
349	12	-1.400MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.700MA		-2.000MA
379	13	-5.700MA		-2.000MA
388	2	-6.300MA		-2.000MA
394	12	-6.400MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.750MA	640.0UA	
424	13	1.770MA	640.0UA	
433	2	2.120MA	640.0UA	
439	12	2.150MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.980 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.950 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.810MA		-1.600MA
334	13	-2.830MA		-1.600MA
343	2	-3.170MA		-1.600MA
349	12	-3.210MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.270MA	1.600MA	
424	13	4.350MA	1.600MA	
433	2	5.160MA	1.600MA	
439	12	5.250MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.92 V      13.50 V
225   13    14.92 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    20.02MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    20.02MV      1.500 V
300    2    30.03MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -11.20MA      -4.200MA
334   13   -11.30MA      -4.200MA
343    2   -12.60MA      -4.200MA
349   12   -12.80MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   16.80MA      4.200MA
424   13   17.10MA      4.200MA
433    2   20.20MA      4.200MA
439   12   20.60MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -8.000NA     -100.0NA

```

508	9	-12.00NA	-100.0NA
512	10	-12.00NA	-100.0NA
516	11	-13.00NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	4.000NA		100.0NA
558	9	8.000NA		100.0NA
562	10	9.000NA		100.0NA
566	11	3.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	80.00NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	71.00NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	68.00NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	65.00NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 5

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.210MA		-640.0UA
334	13	-1.230MA		-640.0UA
343	2	-1.340MA		-640.0UA
349	12	-1.360MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.600MA		-2.000MA
388	2	-6.000MA		-2.000MA
394	12	-6.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.700MA	640.0UA	
424	13	1.700MA	640.0UA	
433	2	2.040MA	640.0UA	
439	12	2.070MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.950 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.590MA		-1.600MA
334	13	-2.630MA		-1.600MA
343	2	-2.910MA		-1.600MA
349	12	-2.960MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.940MA	1.600MA	
424	13	3.980MA	1.600MA	
433	2	4.740MA	1.600MA	
439	12	4.800MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.93 V	13.50 V	
225	13	14.93 V	13.50 V	
232	2	14.94 V	13.50 V	
236	12	14.93 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	30.03MV		1.500 V
300	2	30.03MV		1.500 V
304	12	20.02MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.00MA		-4.200MA
334	13	-10.20MA		-4.200MA
343	2	-11.20MA		-4.200MA
349	12	-11.40MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	15.00MA	4.200MA	
424	13	15.20MA	4.200MA	
433	2	17.90MA	4.200MA	
439	12	18.10MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-7.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		1.000UA

```

-----
      IDD TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	3.000NA		1.000UA

```

-----
      IDD TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	5.000NA		2.000UA

```

-----
      IDD TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```


INST #	PIN	MEASURED	LT	GT
627	14	5.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	6.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 6

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.240MA		-640.0UA
334	13	-1.220MA		-640.0UA
343	2	-1.370MA		-640.0UA
349	12	-1.360MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.600MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-6.200MA		-2.000MA
394	12	-6.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.710MA	640.0UA	
424	13	1.720MA	640.0UA	
433	2	2.050MA	640.0UA	
439	12	2.080MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	30.03MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.660MA		-1.600MA
334	13	-2.630MA		-1.600MA
343	2	-2.990MA		-1.600MA
349	12	-2.960MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.980MA	1.600MA	
424	13	4.020MA	1.600MA	
433	2	4.770MA	1.600MA	
439	12	4.840MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.93 V      13.50 V
225   13    14.92 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    20.02MV      50.00MV
265    2    20.02MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    30.03MV      1.500 V
300    2    30.03MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.30MA      -4.200MA
334   13   -10.20MA      -4.200MA
343    2   -11.60MA      -4.200MA
349   12   -11.50MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   15.10MA      4.200MA
424   13   15.30MA      4.200MA
433    2   18.10MA      4.200MA
439   12   18.30MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8  -35.00NA     -100.0NA

```

508	9	-36.00NA	-100.0NA
512	10	-13.00NA	-100.0NA
516	11	-11.00NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	32.00NA		100.0NA
558	9	38.00NA		100.0NA
562	10	13.00NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	78.00NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	77.00NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	77.00NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	77.00NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 7

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.270MA		-640.0UA
334	13	-1.270MA		-640.0UA
343	2	-1.420MA		-640.0UA
349	12	-1.420MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.800MA		-2.000MA
379	13	-5.800MA		-2.000MA
388	2	-6.500MA		-2.000MA
394	12	-6.500MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.790MA	640.0UA	
424	13	1.830MA	640.0UA	
433	2	2.170MA	640.0UA	
439	12	2.200MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	30.03MV		9 V
300	2	30.03MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.790MA		-1.600MA
334	13	-2.800MA		-1.600MA
343	2	-3.140MA		-1.600MA
349	12	-3.170MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.280MA	1.600MA	
424	13	4.350MA	1.600MA	
433	2	5.150MA	1.600MA	
439	12	5.230MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.93 V      13.50 V
225   13    14.92 V      13.50 V
232    2    14.93 V      13.50 V
236   12    14.93 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    20.02MV      50.00MV
265    2    20.02MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    20.02MV      1.500 V
300    2    20.02MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.90MA      -4.200MA
334   13   -11.00MA      -4.200MA
343    2   -12.30MA      -4.200MA
349   12   -12.40MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   16.50MA      4.200MA
424   13   16.90MA      4.200MA
433    2   19.80MA      4.200MA
439   12   20.20MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -7.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-7.000NA	-100.0NA
516	11	-7.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	0 A		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	4.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	7.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 8

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-679.9MV	-1.500 V	-100.0MV
61	13	-679.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.320MA		-640.0UA
334	13	-1.320MA		-640.0UA
343	2	-1.470MA		-640.0UA
349	12	-1.470MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-6.000MA		-2.000MA
379	13	-6.000MA		-2.000MA
388	2	-6.700MA		-2.000MA
394	12	-6.700MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.870MA	640.0UA	
424	13	1.880MA	640.0UA	
433	2	2.290MA	640.0UA	
439	12	2.300MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.920MA		-1.600MA
334	13	-2.900MA		-1.600MA
343	2	-3.300MA		-1.600MA
349	12	-3.310MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.520MA	1.600MA	
424	13	4.540MA	1.600MA	
433	2	5.470MA	1.600MA	
439	12	5.540MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.92 V      13.50 V
225   13    14.92 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.93 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    30.03MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    20.02MV      1.500 V
300    2    30.03MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -11.40MA      -4.200MA
334   13   -11.40MA      -4.200MA
343    2   -12.90MA      -4.200MA
349   12   -13.00MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   17.50MA      4.200MA
424   13   17.70MA      4.200MA
433    2   21.10MA      4.200MA
439   12   21.40MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -8.000NA     -100.0NA

```

508	9	-21.00NA	-100.0NA
512	10	-23.00NA	-100.0NA
516	11	-15.00NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	4.000NA		100.0NA
558	9	20.00NA		100.0NA
562	10	21.00NA		100.0NA
566	11	5.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD >  1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >  1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	74.00NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >  2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >  2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	69.00NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >  4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >  4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	67.00NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	65.00NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 9

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-679.9MV	-1.500 V	-100.0MV
61	13	-679.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.250MA		-640.0UA
334	13	-1.250MA		-640.0UA
343	2	-1.400MA		-640.0UA
349	12	-1.410MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.600MA		-2.000MA
379	13	-5.600MA		-2.000MA
388	2	-6.300MA		-2.000MA
394	12	-6.300MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.780MA	640.0UA	
424	13	1.790MA	640.0UA	
433	2	2.140MA	640.0UA	
439	12	2.180MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.980 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.790MA		-1.600MA
334	13	-2.810MA		-1.600MA
343	2	-3.140MA		-1.600MA
349	12	-3.180MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.280MA	1.600MA	
424	13	4.330MA	1.600MA	
433	2	5.120MA	1.600MA	
439	12	5.230MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.92 V      13.50 V
225   13    14.92 V      13.50 V
232    2    14.93 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    20.02MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    20.02MV      1.500 V
300    2    30.03MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -11.00MA      -4.200MA
334   13   -11.10MA      -4.200MA
343    2   -12.40MA      -4.200MA
349   12   -12.50MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   16.70MA      4.200MA
424   13   16.90MA      4.200MA
433    2   19.90MA      4.200MA
439   12   20.30MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -8.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-7.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

IIH TEST
VDD = 18
IIH < 0.1UA @ 25C & -55C
IIH < 1.0UA @ 125C

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	3.000NA		100.0NA
558	9	3.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

IDD TEST
VDD = 5
IDD > 1.000E-06
VIN = 5

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		1.000UA

IDD TEST
VDD= 5
IDD > 1.000E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	47.00NA		1.000UA

IDD TEST
VDD = 10
IDD > 2.000E-06
VIN = 10

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

IDD TEST
VDD= 10
IDD > 2.000E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	47.00NA		2.000UA

IDD TEST
VDD = 15
IDD > 4.000E-06
VIN = 15

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

IDD TEST
VDD= 15
IDD > 4.000E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	48.00NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	48.00NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 10

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	30.03MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.210MA		-640.0UA
334	13	-1.210MA		-640.0UA
343	2	-1.340MA		-640.0UA
349	12	-1.330MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.400MA		-2.000MA
388	2	-6.000MA		-2.000MA
394	12	-6.000MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.660MA	640.0UA	
424	13	1.680MA	640.0UA	
433	2	2.010MA	640.0UA	
439	12	2.010MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.950 V	9 V
236	12	9.950 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	30.03MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.580MA		-1.600MA
334	13	-2.610MA		-1.600MA
343	2	-2.890MA		-1.600MA
349	12	-2.890MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.870MA	1.600MA	
424	13	3.970MA	1.600MA	
433	2	4.630MA	1.600MA	
439	12	4.660MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.93 V      13.50 V
225   13    14.92 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    30.03MV      50.00MV
265    2    20.02MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    20.02MV      1.500 V
300    2    30.03MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.00MA      -4.200MA
334   13   -10.20MA      -4.200MA
343    2   -11.20MA      -4.200MA
349   12   -11.20MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   14.70MA      4.200MA
424   13   15.10MA      4.200MA
433    2   17.50MA      4.200MA
439   12   17.60MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -7.000NA     -100.0NA

```

508	9	-7.000NA	-100.0NA
512	10	-7.000NA	-100.0NA
516	11	-7.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD >  1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >  1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >  2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >  2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >  4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >  4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 11

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.240MA		-640.0UA
334	13	-1.240MA		-640.0UA
343	2	-1.380MA		-640.0UA
349	12	-1.380MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.600MA		-2.000MA
379	13	-5.600MA		-2.000MA
388	2	-6.300MA		-2.000MA
394	12	-6.300MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.790MA	640.0UA	
424	13	1.810MA	640.0UA	
433	2	2.170MA	640.0UA	
439	12	2.190MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.980 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.980 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.950 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.710MA		-1.600MA
334	13	-2.730MA		-1.600MA
343	2	-3.060MA		-1.600MA
349	12	-3.060MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.270MA	1.600MA	
424	13	4.380MA	1.600MA	
433	2	5.110MA	1.600MA	
439	12	5.200MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.92 V      13.50 V
225   13    14.92 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.93 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    30.03MV      50.00MV
265    2    20.02MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    30.03MV      1.500 V
300    2    20.02MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.60MA      -4.200MA
334   13   -10.80MA      -4.200MA
343    2   -12.00MA      -4.200MA
349   12   -12.00MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   16.50MA      4.200MA
424   13   17.00MA      4.200MA
433    2   19.70MA      4.200MA
439   12   19.90MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -7.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-7.000NA	-100.0NA
516	11	-7.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD >  1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >  1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >  2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >  2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >  4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >  4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 12

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ -55C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.210MA		-640.0UA
334	13	-1.200MA		-640.0UA
343	2	-1.340MA		-640.0UA
349	12	-1.340MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-6.100MA		-2.000MA
394	12	-6.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.700MA	640.0UA	
424	13	1.710MA	640.0UA	
433	2	2.050MA	640.0UA	
439	12	2.070MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.980 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.950 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	30.03MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.700MA		-1.600MA
334	13	-2.690MA		-1.600MA
343	2	-3.020MA		-1.600MA
349	12	-3.040MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	4.120MA	1.600MA	
424	13	4.150MA	1.600MA	
433	2	4.930MA	1.600MA	
439	12	5.000MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.92 V	13.50 V	
225	13	14.92 V	13.50 V	
232	2	14.93 V	13.50 V	
236	12	14.93 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	30.03MV		1.500 V
300	2	20.02MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.70MA		-4.200MA
334	13	-10.70MA		-4.200MA
343	2	-11.90MA		-4.200MA
349	12	-12.00MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	16.10MA	4.200MA	
424	13	16.20MA	4.200MA	
433	2	19.20MA	4.200MA	
439	12	19.50MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-7.000NA	-100.0NA	

508	9	-13.00NA	-100.0NA
512	10	-14.00NA	-100.0NA
516	11	-16.00NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	13.00NA		100.0NA
562	10	14.00NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	204.0NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	199.0NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	195.0NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	193.0NA		20.00UA

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 4013B S/N 1
DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		500.0MV
293	13	20.02MV		500.0MV
300	2	30.03MV		500.0MV
304	12	20.02MV		500.0MV

```

-----
IOH TEST
VDD=      5
IOH >= -640.0E-06
VO =      4.600
-----

```

INST #	PIN	MEASURED	LT	GT
328	1	-1.190MA		-640.0UA
334	13	-1.200MA		-640.0UA
343	2	-1.310MA		-640.0UA
349	12	-1.320MA		-640.0UA

```

-----
IOH2 TEST
VDD=      5
IOH >= -2.000E-03
VO =      2.500
-----

```

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-2.000MA
379	13	-5.400MA		-2.000MA
388	2	-5.900MA		-2.000MA
394	12	-5.900MA		-2.000MA

```

-----
IOL TEST
VDD=      5
IOL >= 640.0E-06
VO= 400.0E-03
-----

```

INST #	PIN	MEASURED	LT	GT
418	1	1.650MA	640.0UA	
424	13	1.670MA	640.0UA	
433	2	1.970MA	640.0UA	
439	12	2.010MA	640.0UA	

```

-----
FUNCTIONAL TEST
VDD= 10
VIH= 7      VIL= 3
-----

```

```

-----
VOH TEST
VDD= 10
VOH >= 9.950
-----

```

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

```

-----
VOH TEST
IOH= -1UA
VDD= 10
VIH= 7      VIL= 3
VOH >= 9
-----

```

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	
225	13	9.950 V	9 V	
232	2	9.960 V	9 V	
236	12	9.960 V	9 V	

```

-----
VOL TEST
VDD= 10
VOL >= 50MV
-----

INST # PIN MEASURED LT GT
254 1 20.02MV 50.00MV
258 13 20.02MV 50.00MV
265 2 20.02MV 50.00MV
269 12 20.02MV 50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9
-----

INST # PIN MEASURED LT GT
289 1 20.02MV 9 V
293 13 20.02MV 9 V
300 2 20.02MV 9 V
304 12 20.02MV 9 V

```

```

-----
IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500
-----

INST # PIN MEASURED LT GT
328 1 -2.550MA -1.600MA
334 13 -2.570MA -1.600MA
343 2 -2.830MA -1.600MA
349 12 -2.870MA -1.600MA

```

```

-----
IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03
-----

INST # PIN MEASURED LT GT
418 1 3.830MA 1.600MA
424 13 3.910MA 1.600MA
433 2 4.560MA 1.600MA
439 12 4.660MA 1.600MA

```

```

-----
FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4
-----

```

```

-----
VOH TEST
VDD= 15
VOH >= 14.95
-----

INST # PIN MEASURED LT GT
184 1 14.98 V 14.95 V
188 13 14.98 V 14.95 V
195 2 14.97 V 14.95 V
199 12 14.98 V 14.95 V

```

```

-----
VOH TEST
IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
-----

```

VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.92 V	13.50 V	
225	13	14.92 V	13.50 V	
232	2	14.94 V	13.50 V	
236	12	14.94 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	20.02MV		1.500 V
300	2	30.03MV		1.500 V
304	12	20.02MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-9.900MA		-4.200MA
334	13	-10.00MA		-4.200MA
343	2	-10.90MA		-4.200MA
349	12	-11.10MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	14.50MA	4.200MA	
424	13	15.00MA	4.200MA	
433	2	17.20MA	4.200MA	
439	12	17.60MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-7.000NA	-100.0NA	
508	9	-8.000NA	-100.0NA	
512	10	-8.000NA	-100.0NA	
516	11	-8.000NA	-100.0NA	


```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	3.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD >    1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >    1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >    2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >    2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >    4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >    4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    20.00E-06
      VIN =      20
-----

INST #  PIN    MEASURED      LT      GT
    611   14   -6.000NA              20.00UA

-----
      IDD  TEST
      VDD=      20
      IDD >    20.00E-06
      VIN =      0
-----

INST #  PIN    MEASURED      LT      GT
    627   14   -4.000NA              20.00UA

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

```

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 2

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.190MA		-640.0UA
334	13	-1.200MA		-640.0UA
343	2	-1.310MA		-640.0UA
349	12	-1.310MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-2.000MA
379	13	-5.300MA		-2.000MA
388	2	-5.900MA		-2.000MA
394	12	-5.900MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.640MA	640.0UA	
424	13	1.670MA	640.0UA	
433	2	1.960MA	640.0UA	
439	12	1.990MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.980 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.560MA		-1.600MA
334	13	-2.600MA		-1.600MA
343	2	-2.850MA		-1.600MA
349	12	-2.870MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.810MA	1.600MA	
424	13	3.950MA	1.600MA	
433	2	4.540MA	1.600MA	
439	12	4.650MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.93 V      13.50 V
225   13    14.93 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    20.02MV      50.00MV
265    2    30.03MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    30.03MV      1.500 V
300    2    20.02MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.900MA      -4.200MA
334   13   -10.10MA      -4.200MA
343    2   -11.00MA      -4.200MA
349   12   -11.10MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    14.50MA      4.200MA
424   13    15.10MA      4.200MA
433    2    17.20MA      4.200MA
439   12    17.60MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA     -100.0NA
492    4    -8.000NA     -100.0NA
496    5    -8.000NA     -100.0NA
500    6    -8.000NA     -100.0NA
504    8    -7.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	4.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 3

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.190MA		-640.0UA
334	13	-1.210MA		-640.0UA
343	2	-1.320MA		-640.0UA
349	12	-1.340MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-6.000MA		-2.000MA
394	12	-6.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.660MA	640.0UA	
424	13	1.690MA	640.0UA	
433	2	1.990MA	640.0UA	
439	12	2.020MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.980 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.550MA		-1.600MA
334	13	-2.600MA		-1.600MA
343	2	-2.850MA		-1.600MA
349	12	-2.900MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.860MA	1.600MA	
424	13	3.960MA	1.600MA	
433	2	4.580MA	1.600MA	
439	12	4.680MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.93 V      13.50 V
225   13    14.93 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    30.03MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    20.02MV      1.500 V
300    2    30.03MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.900MA      -4.200MA
334   13    -10.10MA      -4.200MA
343    2    -11.00MA      -4.200MA
349   12    -11.20MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    14.60MA      4.200MA
424   13    15.10MA      4.200MA
433    2    17.30MA      4.200MA
439   12    17.70MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -100.0NA
492    4    -8.000NA      -100.0NA
496    5    -8.000NA      -100.0NA
500    6    -8.000NA      -100.0NA
504    8    -7.000NA      -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	3.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

IDD TEST
VDD = 20
IDD > 20.00E-06
VIN = 20

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

IDD TEST
VDD= 20
IDD > 20.00E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 4

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.210MA		-640.0UA
334	13	-1.220MA		-640.0UA
343	2	-1.340MA		-640.0UA
349	12	-1.350MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-6.100MA		-2.000MA
394	12	-6.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.660MA	640.0UA	
424	13	1.690MA	640.0UA	
433	2	1.990MA	640.0UA	
439	12	2.030MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.590MA		-1.600MA
334	13	-2.630MA		-1.600MA
343	2	-2.870MA		-1.600MA
349	12	-2.930MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.860MA	1.600MA	
424	13	3.970MA	1.600MA	
433	2	4.590MA	1.600MA	
439	12	4.700MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.93 V      13.50 V
225   13    14.93 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    30.03MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    20.02MV      1.500 V
300    2    30.03MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1   -10.00MA      -4.200MA
334   13   -10.20MA      -4.200MA
343    2   -11.10MA      -4.200MA
349   12   -11.30MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   14.60MA      4.200MA
424   13   15.10MA      4.200MA
433    2   17.30MA      4.200MA
439   12   17.80MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3   -8.000NA     -100.0NA
492    4   -8.000NA     -100.0NA
496    5   -8.000NA     -100.0NA
500    6   -8.000NA     -100.0NA
504    8   -8.000NA     -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	3.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 5
DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	30.03MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.180MA		-640.0UA
334	13	-1.210MA		-640.0UA
343	2	-1.310MA		-640.0UA
349	12	-1.340MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-5.900MA		-2.000MA
394	12	-6.000MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.640MA	640.0UA	
424	13	1.680MA	640.0UA	
433	2	1.990MA	640.0UA	
439	12	2.030MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.950 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.530MA		-1.600MA
334	13	-2.610MA		-1.600MA
343	2	-2.830MA		-1.600MA
349	12	-2.900MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.810MA	1.600MA	
424	13	3.930MA	1.600MA	
433	2	4.580MA	1.600MA	
439	12	4.690MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.93 V      13.50 V
225   13    14.93 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    20.02MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    20.02MV      1.500 V
300    2    20.02MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.700MA      -4.200MA
334   13   -10.10MA      -4.200MA
343    2   -10.90MA      -4.200MA
349   12   -11.20MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    14.40MA      4.200MA
424   13    15.00MA      4.200MA
433    2    17.30MA      4.200MA
439   12    17.70MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA     -100.0NA
492    4    -8.000NA     -100.0NA
496    5    -8.000NA     -100.0NA
500    6    -8.000NA     -100.0NA
504    8    -7.000NA     -100.0NA

```


508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	4.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	3.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 6

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	30.03MV		500.0MV
304	12	30.03MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.210MA		-640.0UA
334	13	-1.190MA		-640.0UA
343	2	-1.330MA		-640.0UA
349	12	-1.320MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.400MA		-2.000MA
388	2	-6.000MA		-2.000MA
394	12	-5.900MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.660MA	640.0UA	
424	13	1.670MA	640.0UA	
433	2	1.990MA	640.0UA	
439	12	2.020MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.580MA		-1.600MA
334	13	-2.560MA		-1.600MA
343	2	-2.880MA		-1.600MA
349	12	-2.880MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.840MA	1.600MA	
424	13	3.900MA	1.600MA	
433	2	4.570MA	1.600MA	
439	12	4.670MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.93 V	13.50 V	
225	13	14.93 V	13.50 V	
232	2	14.94 V	13.50 V	
236	12	14.94 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	30.03MV		1.500 V
300	2	20.02MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-10.00MA		-4.200MA
334	13	-10.00MA		-4.200MA
343	2	-11.10MA		-4.200MA
349	12	-11.10MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	14.60MA	4.200MA	
424	13	14.80MA	4.200MA	
433	2	17.20MA	4.200MA	
439	12	17.60MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-8.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

IDD TEST
VDD = 20
IDD > 20.00E-06
VIN = 20

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

IDD TEST
VDD= 20
IDD > 20.00E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 7

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.210MA		-640.0UA
334	13	-1.210MA		-640.0UA
343	2	-1.330MA		-640.0UA
349	12	-1.350MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-6.100MA		-2.000MA
394	12	-6.100MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.680MA	640.0UA	
424	13	1.700MA	640.0UA	
433	2	2.020MA	640.0UA	
439	12	2.050MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	30.03MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.570MA		-1.600MA
334	13	-2.580MA		-1.600MA
343	2	-2.880MA		-1.600MA
349	12	-2.910MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.900MA	1.600MA	
424	13	3.970MA	1.600MA	
433	2	4.630MA	1.600MA	
439	12	4.740MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.92 V      13.50 V
225   13    14.93 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    30.03MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    30.03MV      1.500 V
300    2    20.02MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.900MA      -4.200MA
334   13   -10.00MA      -4.200MA
343    2   -11.10MA      -4.200MA
349   12   -11.30MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    14.80MA      4.200MA
424   13    15.10MA      4.200MA
433    2    17.40MA      4.200MA
439   12    17.90MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -100.0NA
492    4    -8.000NA      -100.0NA
496    5    -8.000NA      -100.0NA
500    6    -8.000NA      -100.0NA
504    8    -7.000NA      -100.0NA

```

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	4.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	2.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

IDD TEST
VDD = 20
IDD > 20.00E-06
VIN = 20

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

IDD TEST
VDD= 20
IDD > 20.00E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 8

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.200MA		-640.0UA
334	13	-1.210MA		-640.0UA
343	2	-1.330MA		-640.0UA
349	12	-1.340MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.500MA		-2.000MA
388	2	-6.100MA		-2.000MA
394	12	-6.000MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.680MA	640.0UA	
424	13	1.690MA	640.0UA	
433	2	2.040MA	640.0UA	
439	12	2.060MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.980 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.560MA		-1.600MA
334	13	-2.580MA		-1.600MA
343	2	-2.860MA		-1.600MA
349	12	-2.890MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.880MA	1.600MA	
424	13	3.970MA	1.600MA	
433	2	4.670MA	1.600MA	
439	12	4.770MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.93 V	13.50 V	
225	13	14.93 V	13.50 V	
232	2	14.94 V	13.50 V	
236	12	14.94 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	30.03MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	30.03MV		1.500 V
300	2	30.03MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-9.900MA		-4.200MA
334	13	-10.00MA		-4.200MA
343	2	-11.10MA		-4.200MA
349	12	-11.20MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	14.70MA	4.200MA	
424	13	15.10MA	4.200MA	
433	2	17.60MA	4.200MA	
439	12	18.00MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-10.00NA	-100.0NA	
504	8	-7.000NA	-100.0NA	

```

508    9  -8.000NA    -100.0NA
512   10  -8.000NA    -100.0NA
516   11  -8.000NA    -100.0NA

```

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	4.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	3.000NA		100.0NA
562	10	3.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 9

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.170MA		-640.0UA
334	13	-1.170MA		-640.0UA
343	2	-1.290MA		-640.0UA
349	12	-1.300MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.300MA		-2.000MA
379	13	-5.200MA		-2.000MA
388	2	-5.800MA		-2.000MA
394	12	-5.800MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.620MA	640.0UA	
424	13	1.640MA	640.0UA	
433	2	1.950MA	640.0UA	
439	12	1.980MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.980 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.510MA		-1.600MA
334	13	-2.540MA		-1.600MA
343	2	-2.800MA		-1.600MA
349	12	-2.850MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.780MA	1.600MA	
424	13	3.850MA	1.600MA	
433	2	4.500MA	1.600MA	
439	12	4.610MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.93 V      13.50 V
225   13    14.93 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    20.02MV      50.00MV
265    2    20.02MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    20.02MV      1.500 V
300    2    30.03MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.700MA      -4.200MA
334   13    -9.900MA      -4.200MA
343    2   -10.80MA      -4.200MA
349   12   -11.00MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    14.40MA      4.200MA
424   13    14.70MA      4.200MA
433    2    17.00MA      4.200MA
439   12    17.50MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -100.0NA
492    4    -8.000NA      -100.0NA
496    5    -8.000NA      -100.0NA
500    6    -8.000NA      -100.0NA
504    8    -7.000NA      -100.0NA

```


508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	3.000NA		100.0NA
562	10	3.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 10

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.190MA		-640.0UA
334	13	-1.200MA		-640.0UA
343	2	-1.330MA		-640.0UA
349	12	-1.330MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.500MA		-2.000MA
379	13	-5.400MA		-2.000MA
388	2	-6.000MA		-2.000MA
394	12	-6.000MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.630MA	640.0UA	
424	13	1.670MA	640.0UA	
433	2	1.980MA	640.0UA	
439	12	2.000MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.950 V	9 V
236	12	9.950 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	30.03MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.560MA		-1.600MA
334	13	-2.580MA		-1.600MA
343	2	-2.870MA		-1.600MA
349	12	-2.900MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.790MA	1.600MA	
424	13	3.880MA	1.600MA	
433	2	4.560MA	1.600MA	
439	12	4.640MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.93 V	13.50 V	
225	13	14.93 V	13.50 V	
232	2	14.94 V	13.50 V	
236	12	14.94 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	30.03MV		1.500 V
300	2	30.03MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-9.900MA		-4.200MA
334	13	-10.00MA		-4.200MA
343	2	-11.10MA		-4.200MA
349	12	-11.20MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	14.40MA	4.200MA	
424	13	14.80MA	4.200MA	
433	2	17.20MA	4.200MA	
439	12	17.60MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-8.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	3.000NA		100.0NA
562	10	3.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 11

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.180MA		-640.0UA
334	13	-1.190MA		-640.0UA
343	2	-1.310MA		-640.0UA
349	12	-1.320MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-2.000MA
379	13	-5.400MA		-2.000MA
388	2	-5.900MA		-2.000MA
394	12	-5.900MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.670MA	640.0UA	
424	13	1.700MA	640.0UA	
433	2	2.020MA	640.0UA	
439	12	2.060MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	30.03MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.510MA		-1.600MA
334	13	-2.530MA		-1.600MA
343	2	-2.820MA		-1.600MA
349	12	-2.840MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.880MA	1.600MA	
424	13	3.960MA	1.600MA	
433	2	4.640MA	1.600MA	
439	12	4.750MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.93 V      13.50 V
225   13    14.92 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    30.03MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    20.02MV      1.500 V
300    2    30.03MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -4.200E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.700MA      -4.200MA
334   13    -9.800MA      -4.200MA
343    2    -10.90MA      -4.200MA
349   12    -11.00MA      -4.200MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  4.200E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    14.70MA      4.200MA
424   13    15.10MA      4.200MA
433    2    17.40MA      4.200MA
439   12    17.90MA      4.200MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -100.0NA
492    4    -8.000NA      -100.0NA
496    5    -8.000NA      -100.0NA
500    6    -8.000NA      -100.0NA
504    8    -7.000NA      -100.0NA

```

```

508    9  -8.000NA    -100.0NA
512   10  -8.000NA    -100.0NA
516   11  -8.000NA    -100.0NA

```

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	4.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	3.000NA		100.0NA
562	10	2.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD  TEST
      VDD =      5
      IDD >  1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		1.000UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >  1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >  2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >  2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		2.000UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >  4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >  4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

IDD TEST
VDD = 20
IDD > 20.00E-06
VIN = 20

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

IDD TEST
VDD= 20
IDD > 20.00E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		20.00UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 12

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +25C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -640.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.180MA		-640.0UA
334	13	-1.180MA		-640.0UA
343	2	-1.310MA		-640.0UA
349	12	-1.310MA		-640.0UA

IOH2 TEST
VDD= 5
IOH >= -2.000E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-2.000MA
379	13	-5.400MA		-2.000MA
388	2	-5.900MA		-2.000MA
394	12	-5.900MA		-2.000MA

IOL TEST
VDD= 5
IOL >= 640.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.640MA	640.0UA	
424	13	1.650MA	640.0UA	
433	2	1.970MA	640.0UA	
439	12	2.000MA	640.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.980 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.950 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -1.600E-03
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.530MA		-1.600MA
334	13	-2.550MA		-1.600MA
343	2	-2.830MA		-1.600MA
349	12	-2.860MA		-1.600MA

IOL TEST
VDD= 10
IOL >= 1.600E-03
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.810MA	1.600MA	
424	13	3.860MA	1.600MA	
433	2	4.540MA	1.600MA	
439	12	4.630MA	1.600MA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.93 V	13.50 V	
225	13	14.93 V	13.50 V	
232	2	14.94 V	13.50 V	
236	12	14.93 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	30.03MV		1.500 V
300	2	20.02MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -4.200E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-9.800MA		-4.200MA
334	13	-9.900MA		-4.200MA
343	2	-10.90MA		-4.200MA
349	12	-11.10MA		-4.200MA

IOL TEST
VDD= 15
IOL >= 4.200E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	14.40MA	4.200MA	
424	13	14.70MA	4.200MA	
433	2	17.10MA	4.200MA	
439	12	17.50MA	4.200MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-100.0NA	
492	4	-8.000NA	-100.0NA	
496	5	-8.000NA	-100.0NA	
500	6	-8.000NA	-100.0NA	
504	8	-7.000NA	-100.0NA	

508	9	-8.000NA	-100.0NA
512	10	-8.000NA	-100.0NA
516	11	-8.000NA	-100.0NA

```

-----
      IIH TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		100.0NA
542	4	4.000NA		100.0NA
546	5	3.000NA		100.0NA
550	6	3.000NA		100.0NA
554	8	2.000NA		100.0NA
558	9	3.000NA		100.0NA
562	10	3.000NA		100.0NA
566	11	2.000NA		100.0NA

```

-----
      IDD TEST
      VDD =      5
      IDD > 1.000E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		1.000UA

```

-----
      IDD TEST
      VDD=      5
      IDD > 1.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		1.000UA

```

-----
      IDD TEST
      VDD =     10
      IDD > 2.000E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		2.000UA

```

-----
      IDD TEST
      VDD=     10
      IDD > 2.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-5.000NA		2.000UA

```

-----
      IDD TEST
      VDD =     15
      IDD > 4.000E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		4.000UA

```

-----
      IDD TEST
      VDD=     15
      IDD > 4.000E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		4.000UA

```

-----
      IDD  TEST
      VDD =      20
      IDD > 20.00E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		20.00UA

```

-----
      IDD  TEST
      VDD=      20
      IDD > 20.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		20.00UA

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 4013B S/N 1
DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-600.1MV	-1.500 V	-100.0MV
61	2	-600.1MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-600.1MV	-1.500 V	-100.0MV
61	5	-600.1MV	-1.500 V	-100.0MV
61	6	-600.1MV	-1.500 V	-100.0MV
61	8	-600.1MV	-1.500 V	-100.0MV
61	9	-600.1MV	-1.500 V	-100.0MV
61	10	-600.1MV	-1.500 V	-100.0MV
61	11	-600.1MV	-1.500 V	-100.0MV
61	12	-560.1MV	-1.500 V	-100.0MV
61	13	-560.1MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	30.03MV		500.0MV

```

-----
IOH TEST
VDD=      5
IOH >= -360.0E-06
VO =      4.600
-----

```

INST #	PIN	MEASURED	LT	GT
328	1	-1.040MA		-360.0UA
334	13	-1.030MA		-360.0UA
343	2	-1.130MA		-360.0UA
349	12	-1.130MA		-360.0UA

```

-----
IOH2 TEST
VDD=      5
IOH >= -1.150E-03
VO =      2.500
-----

```

INST #	PIN	MEASURED	LT	GT
373	1	-4.700MA		-1.150MA
379	13	-4.700MA		-1.150MA
388	2	-5.100MA		-1.150MA
394	12	-5.100MA		-1.150MA

```

-----
IOL TEST
VDD=      5
IOL >= 360.0E-06
VO= 400.0E-03
-----

```

INST #	PIN	MEASURED	LT	GT
418	1	1.410MA	360.0UA	
424	13	1.400MA	360.0UA	
433	2	1.690MA	360.0UA	
439	12	1.690MA	360.0UA	

```

-----
FUNCTIONAL TEST
VDD= 10
VIH= 7      VIL= 3
-----

```

```

-----
VOH TEST
VDD= 10
VOH >= 9.950
-----

```

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.980 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

```

-----
VOH TEST
IOH= -1UA
VDD= 10
VIH= 7      VIL= 3
VOH >= 9
-----

```

INST #	PIN	MEASURED	LT	GT
221	1	9.960 V	9 V	
225	13	9.950 V	9 V	
232	2	9.960 V	9 V	
236	12	9.950 V	9 V	

```

-----
VOL TEST
VDD= 10
VOL >= 50MV
-----

INST # PIN MEASURED LT GT
254 1 20.02MV 50.00MV
258 13 20.02MV 50.00MV
265 2 20.02MV 50.00MV
269 12 20.02MV 50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9
-----

INST # PIN MEASURED LT GT
289 1 20.02MV 9 V
293 13 20.02MV 9 V
300 2 20.02MV 9 V
304 12 30.03MV 9 V

```

```

-----
IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500
-----

INST # PIN MEASURED LT GT
328 1 -2.200MA -900.0UA
334 13 -2.190MA -900.0UA
343 2 -2.420MA -900.0UA
349 12 -2.420MA -900.0UA

```

```

-----
IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03
-----

INST # PIN MEASURED LT GT
418 1 3.200MA 900.0UA
424 13 3.210MA 900.0UA
433 2 3.810MA 900.0UA
439 12 3.820MA 900.0UA

```

```

-----
FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4
-----

```

```

-----
VOH TEST
VDD= 15
VOH >= 14.95
-----

INST # PIN MEASURED LT GT
184 1 14.98 V 14.95 V
188 13 14.97 V 14.95 V
195 2 14.98 V 14.95 V
199 12 14.98 V 14.95 V

```

```

-----
VOH TEST
IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
-----

```


VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.93 V	13.50 V	
225	13	14.93 V	13.50 V	
232	2	14.94 V	13.50 V	
236	12	14.94 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	30.03MV		1.500 V
300	2	20.02MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -2.400E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-8.500MA		-2.400MA
334	13	-8.500MA		-2.400MA
343	2	-9.300MA		-2.400MA
349	12	-9.400MA		-2.400MA

IOL TEST
VDD= 15
IOL >= 2.400E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	12.00MA	2.400MA	
424	13	12.00MA	2.400MA	
433	2	14.20MA	2.400MA	
439	12	14.20MA	2.400MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-1.000UA	
492	4	-8.000NA	-1.000UA	
496	5	-8.000NA	-1.000UA	
500	6	-8.000NA	-1.000UA	
504	8	-8.000NA	-1.000UA	
508	9	-8.000NA	-1.000UA	
512	10	-8.000NA	-1.000UA	
516	11	-8.000NA	-1.000UA	

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		1.000UA
542	4	4.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	3.000NA		1.000UA
554	8	3.000NA		1.000UA
558	9	3.000NA		1.000UA
562	10	3.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD >    30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD >    30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD >    60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-5.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD >    60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-2.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD >   120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD >   120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	0 A		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

INST #  PIN    MEASURED      LT      GT
    611   14   -4.000NA      LT      600.0UA

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

INST #  PIN    MEASURED      LT      GT
    627   14      0 A      LT      600.0UA

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

```

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 2

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-600.1MV	-1.500 V	-100.0MV
61	2	-600.1MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-600.1MV	-1.500 V	-100.0MV
61	13	-600.1MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.100MA		-360.0UA
334	13	-1.090MA		-360.0UA
343	2	-1.210MA		-360.0UA
349	12	-1.200MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.000MA		-1.150MA
379	13	-4.900MA		-1.150MA
388	2	-5.400MA		-1.150MA
394	12	-5.400MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.510MA	360.0UA	
424	13	1.510MA	360.0UA	
433	2	1.810MA	360.0UA	
439	12	1.800MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.950 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	30.03MV		9 V
300	2	30.03MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.330MA		-900.0UA
334	13	-2.330MA		-900.0UA
343	2	-2.590MA		-900.0UA
349	12	-2.580MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.440MA	900.0UA	
424	13	3.470MA	900.0UA	
433	2	4.090MA	900.0UA	
439	12	4.120MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.97 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.93 V	13.50 V	
225	13	14.93 V	13.50 V	
232	2	14.94 V	13.50 V	
236	12	14.94 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	20.02MV		1.500 V
300	2	20.02MV		1.500 V
304	12	20.02MV		1.500 V

IOH TEST
VDD= 15
IOH >= -2.400E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-9.000MA		-2.400MA
334	13	-9.000MA		-2.400MA
343	2	-10.00MA		-2.400MA
349	12	-10.00MA		-2.400MA

IOL TEST
VDD= 15
IOL >= 2.400E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	12.90MA	2.400MA	
424	13	13.00MA	2.400MA	
433	2	15.30MA	2.400MA	
439	12	15.40MA	2.400MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-1.000UA	
492	4	-8.000NA	-1.000UA	
496	5	-8.000NA	-1.000UA	
500	6	-8.000NA	-1.000UA	
504	8	-7.000NA	-1.000UA	

508	9	-8.000NA	-1.000UA
512	10	-8.000NA	-1.000UA
516	11	-8.000NA	-1.000UA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		1.000UA
542	4	4.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	3.000NA		1.000UA
554	8	3.000NA		1.000UA
558	9	3.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```


INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		120.0UA

IDD TEST
VDD = 20
IDD > 600.0E-06
VIN = 20

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		600.0UA

IDD TEST
VDD= 20
IDD > 600.0E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		600.0UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 3

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-600.1MV	-1.500 V	-100.0MV
61	2	-600.1MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-600.1MV	-1.500 V	-100.0MV
61	13	-600.1MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.070MA		-360.0UA
334	13	-1.080MA		-360.0UA
343	2	-1.180MA		-360.0UA
349	12	-1.190MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-4.900MA		-1.150MA
379	13	-4.900MA		-1.150MA
388	2	-5.300MA		-1.150MA
394	12	-5.400MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.460MA	360.0UA	
424	13	1.470MA	360.0UA	
433	2	1.750MA	360.0UA	
439	12	1.760MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.950 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	30.03MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		9 V
293	13	20.02MV		9 V
300	2	30.03MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.230MA		-900.0UA
334	13	-2.260MA		-900.0UA
343	2	-2.480MA		-900.0UA
349	12	-2.510MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.310MA	900.0UA	
424	13	3.360MA	900.0UA	
433	2	3.930MA	900.0UA	
439	12	3.950MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.97 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.93 V      13.50 V
225   13    14.93 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    20.02MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    20.02MV      1.500 V
300    2    20.02MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -8.600MA      -2.400MA
334   13    -8.700MA      -2.400MA
343    2    -9.500MA      -2.400MA
349   12    -9.600MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    12.30MA      2.400MA
424   13    12.60MA      2.400MA
433    2    14.50MA      2.400MA
439   12    14.70MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -1.000UA
492    4    -8.000NA      -1.000UA
496    5    -8.000NA      -1.000UA
500    6    -8.000NA      -1.000UA
504    8    -8.000NA      -1.000UA

```

```

508    9  -8.000NA    -1.000UA
512   10  -8.000NA    -1.000UA
516   11  -8.000NA    -1.000UA

```

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		1.000UA
542	4	4.000NA		1.000UA
546	5	4.000NA		1.000UA
550	6	4.000NA		1.000UA
554	8	3.000NA		1.000UA
558	9	3.000NA		1.000UA
562	10	3.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-5.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-2.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-5.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-2.000NA		600.0UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 4

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-679.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.200MA		-360.0UA
334	13	-1.210MA		-360.0UA
343	2	-1.310MA		-360.0UA
349	12	-1.330MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.400MA		-1.150MA
379	13	-5.400MA		-1.150MA
388	2	-6.000MA		-1.150MA
394	12	-6.000MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.640MA	360.0UA	
424	13	1.660MA	360.0UA	
433	2	1.970MA	360.0UA	
439	12	1.990MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.980 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.950 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.550MA		-900.0UA
334	13	-2.570MA		-900.0UA
343	2	-2.820MA		-900.0UA
349	12	-2.850MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.790MA	900.0UA	
424	13	3.870MA	900.0UA	
433	2	4.520MA	900.0UA	
439	12	4.580MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.92 V      13.50 V
225   13    14.92 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    30.03MV      50.00MV
265    2    20.02MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    30.03MV      1.500 V
300    2    20.02MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.800MA      -2.400MA
334   13    -9.900MA      -2.400MA
343    2    -10.90MA      -2.400MA
349   12    -11.00MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    14.30MA      2.400MA
424   13    14.70MA      2.400MA
433    2    17.00MA      2.400MA
439   12    17.20MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -1.000UA
492    4    -8.000NA      -1.000UA
496    5    -8.000NA      -1.000UA
500    6    -8.000NA      -1.000UA
504    8    -7.000NA      -1.000UA

```

```

508    9  -8.000NA    -1.000UA
512   10  -8.000NA    -1.000UA
516   11  -8.000NA    -1.000UA

```

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		1.000UA
542	4	4.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	3.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	3.000NA		1.000UA
562	10	2.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		600.0UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 5

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-679.9MV	-1.500 V	-100.0MV
61	4	-679.9MV	-1.500 V	-100.0MV
61	5	-679.9MV	-1.500 V	-100.0MV
61	6	-679.9MV	-1.500 V	-100.0MV
61	8	-679.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-679.9MV	-1.500 V	-100.0MV
61	11	-679.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.180MA		-360.0UA
334	13	-1.200MA		-360.0UA
343	2	-1.290MA		-360.0UA
349	12	-1.320MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.300MA		-1.150MA
379	13	-5.400MA		-1.150MA
388	2	-5.800MA		-1.150MA
394	12	-5.900MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.640MA	360.0UA	
424	13	1.650MA	360.0UA	
433	2	1.970MA	360.0UA	
439	12	1.990MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.950 V	9 V
236	12	9.950 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	30.03MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.500MA		-900.0UA
334	13	-2.560MA		-900.0UA
343	2	-2.780MA		-900.0UA
349	12	-2.840MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.800MA	900.0UA	
424	13	3.860MA	900.0UA	
433	2	4.540MA	900.0UA	
439	12	4.580MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.92 V      13.50 V
225   13    14.93 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >=  50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    20.02MV      50.00MV
265    2    30.03MV      50.00MV
269   12    20.02MV      50.00MV

```

```

-----
VOL TEST
IOL=  1UA
VDD=      15
VIH=      11      VIL=      4
VOH >=  1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    20.02MV      1.500 V
300    2    20.02MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.700MA      -2.400MA
334   13    -9.900MA      -2.400MA
343    2    -10.70MA      -2.400MA
349   12    -11.00MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >=  2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    14.40MA      2.400MA
424   13    14.70MA      2.400MA
433    2    17.10MA      2.400MA
439   12    17.30MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -1.000UA
492    4    -8.000NA      -1.000UA
496    5    -8.000NA      -1.000UA
500    6    -8.000NA      -1.000UA
504    8    -8.000NA      -1.000UA

```

508	9	-8.000NA	-1.000UA
512	10	-8.000NA	-1.000UA
516	11	-8.000NA	-1.000UA

```

-----
      IIH TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		1.000UA
542	4	4.000NA		1.000UA
546	5	3.000NA		1.000UA
550	6	3.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	3.000NA		1.000UA
562	10	3.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD TEST
      VDD =      5
      IDD >    30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		30.00UA

```

-----
      IDD TEST
      VDD=      5
      IDD >    30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		30.00UA

```

-----
      IDD TEST
      VDD =     10
      IDD >    60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		60.00UA

```

-----
      IDD TEST
      VDD=     10
      IDD >    60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		60.00UA

```

-----
      IDD TEST
      VDD =     15
      IDD >   120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		120.0UA

```

-----
      IDD TEST
      VDD=     15
      IDD >   120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		120.0UA

IDD TEST
VDD = 20
IDD > 600.0E-06
VIN = 20

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		600.0UA

IDD TEST
VDD= 20
IDD > 600.0E-06
VIN = 0

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		600.0UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 6

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-600.1MV	-1.500 V	-100.0MV
61	13	-600.1MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.110MA		-360.0UA
334	13	-1.100MA		-360.0UA
343	2	-1.220MA		-360.0UA
349	12	-1.200MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.000MA		-1.150MA
379	13	-4.900MA		-1.150MA
388	2	-5.500MA		-1.150MA
394	12	-5.400MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.500MA	360.0UA	
424	13	1.500MA	360.0UA	
433	2	1.790MA	360.0UA	
439	12	1.800MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	30.03MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.310MA		-900.0UA
334	13	-2.280MA		-900.0UA
343	2	-2.550MA		-900.0UA
349	12	-2.520MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.370MA	900.0UA	
424	13	3.410MA	900.0UA	
433	2	3.990MA	900.0UA	
439	12	4.010MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.93 V	13.50 V	
225	13	14.93 V	13.50 V	
232	2	14.94 V	13.50 V	
236	12	14.94 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		1.500 V
293	13	30.03MV		1.500 V
300	2	30.03MV		1.500 V
304	12	20.02MV		1.500 V

IOH TEST
VDD= 15
IOH >= -2.400E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-8.800MA		-2.400MA
334	13	-8.800MA		-2.400MA
343	2	-9.700MA		-2.400MA
349	12	-9.700MA		-2.400MA

IOL TEST
VDD= 15
IOL >= 2.400E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	12.50MA	2.400MA	
424	13	12.60MA	2.400MA	
433	2	14.70MA	2.400MA	
439	12	14.80MA	2.400MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-1.000UA	
492	4	-8.000NA	-1.000UA	
496	5	-8.000NA	-1.000UA	
500	6	-8.000NA	-1.000UA	
504	8	-8.000NA	-1.000UA	

508	9	-8.000NA	-1.000UA
512	10	-8.000NA	-1.000UA
516	11	-8.000NA	-1.000UA

```

-----
      IIH TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		1.000UA
542	4	4.000NA		1.000UA
546	5	4.000NA		1.000UA
550	6	3.000NA		1.000UA
554	8	3.000NA		1.000UA
558	9	3.000NA		1.000UA
562	10	3.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		30.00UA

```

-----
      IDD TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		30.00UA

```

-----
      IDD TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		60.00UA

```

-----
      IDD TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		60.00UA

```

-----
      IDD TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-5.000NA		120.0UA

```

-----
      IDD TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```


INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-5.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		600.0UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 7

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-600.1MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-600.1MV	-1.500 V	-100.0MV
61	13	-600.1MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.980 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.110MA		-360.0UA
334	13	-1.110MA		-360.0UA
343	2	-1.220MA		-360.0UA
349	12	-1.220MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.000MA		-1.150MA
379	13	-5.000MA		-1.150MA
388	2	-5.500MA		-1.150MA
394	12	-5.500MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.520MA	360.0UA	
424	13	1.530MA	360.0UA	
433	2	1.820MA	360.0UA	
439	12	1.830MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.300MA		-900.0UA
334	13	-2.310MA		-900.0UA
343	2	-2.550MA		-900.0UA
349	12	-2.560MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.420MA	900.0UA	
424	13	3.470MA	900.0UA	
433	2	4.050MA	900.0UA	
439	12	4.070MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.97 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1   14.93 V      13.50 V
225   13   14.93 V      13.50 V
232    2   14.94 V      13.50 V
236   12   14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1   20.02MV      50.00MV
258   13   30.03MV      50.00MV
265    2   20.02MV      50.00MV
269   12   20.02MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1   30.03MV      1.500 V
293   13   30.03MV      1.500 V
300    2   30.03MV      1.500 V
304   12   30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1  -8.800MA      -2.400MA
334   13  -8.900MA      -2.400MA
343    2  -9.700MA      -2.400MA
349   12  -9.800MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1   12.70MA      2.400MA
424   13   13.00MA      2.400MA
433    2   15.00MA      2.400MA
439   12   15.10MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3  -8.000NA      -1.000UA
492    4  -8.000NA      -1.000UA
496    5  -8.000NA      -1.000UA
500    6  -8.000NA      -1.000UA
504    8  -8.000NA      -1.000UA

```

508	9	-8.000NA	-1.000UA
512	10	-8.000NA	-1.000UA
516	11	-8.000NA	-1.000UA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		1.000UA
542	4	4.000NA		1.000UA
546	5	4.000NA		1.000UA
550	6	3.000NA		1.000UA
554	8	3.000NA		1.000UA
558	9	3.000NA		1.000UA
562	10	3.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-5.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-5.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-3.000NA		600.0UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 8

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-600.1MV	-1.500 V	-100.0MV
61	2	-600.1MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-600.1MV	-1.500 V	-100.0MV
61	13	-600.1MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.080MA		-360.0UA
334	13	-1.080MA		-360.0UA
343	2	-1.180MA		-360.0UA
349	12	-1.180MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-4.900MA		-1.150MA
379	13	-4.900MA		-1.150MA
388	2	-5.400MA		-1.150MA
394	12	-5.300MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.470MA	360.0UA	
424	13	1.480MA	360.0UA	
433	2	1.780MA	360.0UA	
439	12	1.780MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.950 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.230MA		-900.0UA
334	13	-2.240MA		-900.0UA
343	2	-2.470MA		-900.0UA
349	12	-2.470MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.320MA	900.0UA	
424	13	3.350MA	900.0UA	
433	2	3.940MA	900.0UA	
439	12	3.970MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.93 V      13.50 V
225   13    14.93 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    30.03MV      50.00MV
258   13    20.02MV      50.00MV
265    2    20.02MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    20.02MV      1.500 V
300    2    20.02MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -8.600MA      -2.400MA
334   13    -8.600MA      -2.400MA
343    2    -9.400MA      -2.400MA
349   12    -9.500MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    12.30MA      2.400MA
424   13    12.40MA      2.400MA
433    2    14.50MA      2.400MA
439   12    14.60MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -1.000UA
492    4    -8.000NA      -1.000UA
496    5    -8.000NA      -1.000UA
500    6    -32.00NA      -1.000UA
504    8    -8.000NA      -1.000UA

```

508	9	-8.000NA	-1.000UA
512	10	-8.000NA	-1.000UA
516	11	-8.000NA	-1.000UA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		1.000UA
542	4	4.000NA		1.000UA
546	5	4.000NA		1.000UA
550	6	4.000NA		1.000UA
554	8	3.000NA		1.000UA
558	9	3.000NA		1.000UA
562	10	3.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-5.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	13.00NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	14.00NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	15.00NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	15.00NA		600.0UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 9

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-600.1MV	-1.500 V	-100.0MV
61	2	-600.1MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-600.1MV	-1.500 V	-100.0MV
61	13	-600.1MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.970 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	30.03MV		500.0MV
293	13	30.03MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.090MA		-360.0UA
334	13	-1.100MA		-360.0UA
343	2	-1.200MA		-360.0UA
349	12	-1.200MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-4.900MA		-1.150MA
379	13	-4.900MA		-1.150MA
388	2	-5.400MA		-1.150MA
394	12	-5.400MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.500MA	360.0UA	
424	13	1.520MA	360.0UA	
433	2	1.800MA	360.0UA	
439	12	1.820MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.950 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.320MA		-900.0UA
334	13	-2.330MA		-900.0UA
343	2	-2.570MA		-900.0UA
349	12	-2.590MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.450MA	900.0UA	
424	13	3.510MA	900.0UA	
433	2	4.100MA	900.0UA	
439	12	4.130MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221     1   14.93 V      13.50 V
225    13   14.93 V      13.50 V
232     2   14.94 V      13.50 V
236    12   14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254     1   30.03MV      50.00MV
258    13   30.03MV      50.00MV
265     2   20.02MV      50.00MV
269    12   20.02MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289     1   20.02MV      1.500 V
293    13   20.02MV      1.500 V
300     2   30.03MV      1.500 V
304    12   20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328     1   -9.000MA      -2.400MA
334    13   -9.100MA      -2.400MA
343     2   -9.900MA      -2.400MA
349    12  -10.00MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418     1   13.00MA      2.400MA
424    13   13.20MA      2.400MA
433     2   15.30MA      2.400MA
439    12   15.50MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488     3   -8.000NA      -1.000UA
492     4   -8.000NA      -1.000UA
496     5   -8.000NA      -1.000UA
500     6   -8.000NA      -1.000UA
504     8   -8.000NA      -1.000UA

```

```

508    9  -8.000NA    -1.000UA
512   10  -8.000NA    -1.000UA
516   11  -8.000NA    -1.000UA

```

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		1.000UA
542	4	4.000NA		1.000UA
546	5	4.000NA		1.000UA
550	6	3.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	3.000NA		1.000UA
562	10	3.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		600.0UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 10

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-600.1MV	-1.500 V	-100.0MV
61	2	-600.1MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-600.1MV	-1.500 V	-100.0MV
61	13	-600.1MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.970 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.060MA		-360.0UA
334	13	-1.060MA		-360.0UA
343	2	-1.160MA		-360.0UA
349	12	-1.160MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-4.800MA		-1.150MA
379	13	-4.800MA		-1.150MA
388	2	-5.200MA		-1.150MA
394	12	-5.200MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.410MA	360.0UA	
424	13	1.420MA	360.0UA	
433	2	1.690MA	360.0UA	
439	12	1.690MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.960 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.190MA		-900.0UA
334	13	-2.200MA		-900.0UA
343	2	-2.420MA		-900.0UA
349	12	-2.420MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.150MA	900.0UA	
424	13	3.190MA	900.0UA	
433	2	3.740MA	900.0UA	
439	12	3.750MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.97 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.93 V      13.50 V
225   13    14.93 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    30.03MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    20.02MV      1.500 V
293   13    20.02MV      1.500 V
300    2    20.02MV      1.500 V
304   12    30.03MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -8.400MA      -2.400MA
334   13    -8.400MA      -2.400MA
343    2    -9.200MA      -2.400MA
349   12    -9.200MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    11.60MA      2.400MA
424   13    11.90MA      2.400MA
433    2    13.70MA      2.400MA
439   12    13.80MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -1.000UA
492    4    -8.000NA      -1.000UA
496    5    -8.000NA      -1.000UA
500    6    -8.000NA      -1.000UA
504    8    -8.000NA      -1.000UA

```

508	9	-8.000NA	-1.000UA
512	10	-8.000NA	-1.000UA
516	11	-8.000NA	-1.000UA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		1.000UA
542	4	4.000NA		1.000UA
546	5	4.000NA		1.000UA
550	6	4.000NA		1.000UA
554	8	3.000NA		1.000UA
558	9	3.000NA		1.000UA
562	10	3.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-4.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	1.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```


INST #	PIN	MEASURED	LT	GT
627	14	2.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-3.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	3.000NA		600.0UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 11

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-600.1MV	-1.500 V	-100.0MV
61	2	-600.1MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-600.1MV	-1.500 V	-100.0MV
61	13	-600.1MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.970 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.980 V	4.950 V	
199	12	4.970 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.970 V	4.500 V	
232	2	4.970 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.130MA		-360.0UA
334	13	-1.130MA		-360.0UA
343	2	-1.250MA		-360.0UA
349	12	-1.240MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.100MA		-1.150MA
379	13	-5.100MA		-1.150MA
388	2	-5.600MA		-1.150MA
394	12	-5.600MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.600MA	360.0UA	
424	13	1.620MA	360.0UA	
433	2	1.920MA	360.0UA	
439	12	1.940MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.980 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.950 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	20.02MV		9 V
300	2	20.02MV		9 V
304	12	20.02MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.390MA		-900.0UA
334	13	-2.410MA		-900.0UA
343	2	-2.680MA		-900.0UA
349	12	-2.670MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.680MA	900.0UA	
424	13	3.770MA	900.0UA	
433	2	4.390MA	900.0UA	
439	12	4.430MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

```

IOH= -1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
221    1    14.92 V      13.50 V
225   13    14.93 V      13.50 V
232    2    14.94 V      13.50 V
236   12    14.94 V      13.50 V

```

```

-----
VOL TEST
VDD=      15
VOL >= 50MV

```

```

-----
INST #  PIN  MEASURED      LT      GT
254    1    20.02MV      50.00MV
258   13    30.03MV      50.00MV
265    2    30.03MV      50.00MV
269   12    30.03MV      50.00MV

```

```

-----
VOL TEST
IOL= 1UA
VDD=      15
VIH=      11      VIL=      4
VOH >= 1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
289    1    30.03MV      1.500 V
293   13    30.03MV      1.500 V
300    2    30.03MV      1.500 V
304   12    20.02MV      1.500 V

```

```

-----
IOH TEST
VDD=      15
IOH >= -2.400E-03
VO =      13.50

```

```

-----
INST #  PIN  MEASURED      LT      GT
328    1    -9.300MA      -2.400MA
334   13    -9.400MA      -2.400MA
343    2    -10.30MA      -2.400MA
349   12    -10.40MA      -2.400MA

```

```

-----
IOL TEST
VDD=      15
IOL >= 2.400E-03
VO=      1.500

```

```

-----
INST #  PIN  MEASURED      LT      GT
418    1    13.90MA      2.400MA
424   13    14.30MA      2.400MA
433    2    16.40MA      2.400MA
439   12    16.60MA      2.400MA

```

```

-----
IIL TEST
VDD=      18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

```

```

-----
INST #  PIN  MEASURED      LT      GT
488    3    -8.000NA      -1.000UA
492    4    -8.000NA      -1.000UA
496    5    -8.000NA      -1.000UA
500    6    -8.000NA      -1.000UA
504    8    -7.000NA      -1.000UA

```

508	9	-8.000NA	-1.000UA
512	10	-8.000NA	-1.000UA
516	11	-8.000NA	-1.000UA

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		1.000UA
542	4	4.000NA		1.000UA
546	5	4.000NA		1.000UA
550	6	4.000NA		1.000UA
554	8	3.000NA		1.000UA
558	9	3.000NA		1.000UA
562	10	3.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		600.0UA

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

STAT1 06/11/11 06:49
TEST PROGRAM 4013B S/N 12

DDS-101-02-A PN CD4013B ELECTRICAL TEST SEQ 14 +125C

CONTINUITY TEST

INST #	PIN	MEASURED	LT	GT
61	1	-639.9MV	-1.500 V	-100.0MV
61	2	-639.9MV	-1.500 V	-100.0MV
61	3	-639.9MV	-1.500 V	-100.0MV
61	4	-639.9MV	-1.500 V	-100.0MV
61	5	-639.9MV	-1.500 V	-100.0MV
61	6	-639.9MV	-1.500 V	-100.0MV
61	8	-639.9MV	-1.500 V	-100.0MV
61	9	-639.9MV	-1.500 V	-100.0MV
61	10	-639.9MV	-1.500 V	-100.0MV
61	11	-639.9MV	-1.500 V	-100.0MV
61	12	-639.9MV	-1.500 V	-100.0MV
61	13	-639.9MV	-1.500 V	-100.0MV

FUNCTIONAL TEST
VDD= 5
VIH= 3.500 VIL= 1.500

VOH TEST
VDD= 5
VOH >= 4.950

INST #	PIN	MEASURED	LT	GT
184	1	4.980 V	4.950 V	
188	13	4.980 V	4.950 V	
195	2	4.970 V	4.950 V	
199	12	4.980 V	4.950 V	

VOH TEST
IOH= -1UA
VDD= 5
VIH= 3.500 VIL= 1.500
VOH >= 4.500

INST #	PIN	MEASURED	LT	GT
221	1	4.980 V	4.500 V	
225	13	4.980 V	4.500 V	
232	2	4.980 V	4.500 V	
236	12	4.970 V	4.500 V	

VOL TEST
VDD= 5
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 5
VIH= 3.500 VIL= 1.500

VOH >= 500.0E-03

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		500.0MV
293	13	20.02MV		500.0MV
300	2	20.02MV		500.0MV
304	12	20.02MV		500.0MV

IOH TEST
VDD= 5
IOH >= -360.0E-06
VO = 4.600

INST #	PIN	MEASURED	LT	GT
328	1	-1.150MA		-360.0UA
334	13	-1.150MA		-360.0UA
343	2	-1.260MA		-360.0UA
349	12	-1.270MA		-360.0UA

IOH2 TEST
VDD= 5
IOH >= -1.150E-03
VO = 2.500

INST #	PIN	MEASURED	LT	GT
373	1	-5.200MA		-1.150MA
379	13	-5.200MA		-1.150MA
388	2	-5.700MA		-1.150MA
394	12	-5.700MA		-1.150MA

IOL TEST
VDD= 5
IOL >= 360.0E-06
VO= 400.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	1.580MA	360.0UA	
424	13	1.600MA	360.0UA	
433	2	1.900MA	360.0UA	
439	12	1.910MA	360.0UA	

FUNCTIONAL TEST
VDD= 10
VIH= 7 VIL= 3

VOH TEST
VDD= 10
VOH >= 9.950

INST #	PIN	MEASURED	LT	GT
184	1	9.970 V	9.950 V	
188	13	9.970 V	9.950 V	
195	2	9.970 V	9.950 V	
199	12	9.970 V	9.950 V	

VOH TEST
IOH= -1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
221	1	9.950 V	9 V	

225	13	9.950 V	9 V
232	2	9.960 V	9 V
236	12	9.950 V	9 V

VOL TEST
VDD= 10
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	20.02MV		50.00MV
265	2	30.03MV		50.00MV
269	12	30.03MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 10
VIH= 7 VIL= 3
VOH >= 9

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		9 V
293	13	30.03MV		9 V
300	2	20.02MV		9 V
304	12	30.03MV		9 V

IOH TEST
VDD= 10
IOH >= -900.0E-06
VO = 9.500

INST #	PIN	MEASURED	LT	GT
328	1	-2.450MA		-900.0UA
334	13	-2.480MA		-900.0UA
343	2	-2.730MA		-900.0UA
349	12	-2.740MA		-900.0UA

IOL TEST
VDD= 10
IOL >= 900.0E-06
VO= 500.0E-03

INST #	PIN	MEASURED	LT	GT
418	1	3.670MA	900.0UA	
424	13	3.750MA	900.0UA	
433	2	4.370MA	900.0UA	
439	12	4.420MA	900.0UA	

FUNCTIONAL TEST
VDD= 15
VIH= 11 VIL= 4

VOH TEST
VDD= 15
VOH >= 14.95

INST #	PIN	MEASURED	LT	GT
184	1	14.98 V	14.95 V	
188	13	14.98 V	14.95 V	
195	2	14.98 V	14.95 V	
199	12	14.98 V	14.95 V	

VOH TEST

IOH= -1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 13.50

INST #	PIN	MEASURED	LT	GT
221	1	14.93 V	13.50 V	
225	13	14.92 V	13.50 V	
232	2	14.94 V	13.50 V	
236	12	14.94 V	13.50 V	

VOL TEST
VDD= 15
VOL >= 50MV

INST #	PIN	MEASURED	LT	GT
254	1	20.02MV		50.00MV
258	13	30.03MV		50.00MV
265	2	20.02MV		50.00MV
269	12	20.02MV		50.00MV

VOL TEST
IOL= 1UA
VDD= 15
VIH= 11 VIL= 4
VOH >= 1.500

INST #	PIN	MEASURED	LT	GT
289	1	20.02MV		1.500 V
293	13	20.02MV		1.500 V
300	2	20.02MV		1.500 V
304	12	30.03MV		1.500 V

IOH TEST
VDD= 15
IOH >= -2.400E-03
VO = 13.50

INST #	PIN	MEASURED	LT	GT
328	1	-9.500MA		-2.400MA
334	13	-9.600MA		-2.400MA
343	2	-10.60MA		-2.400MA
349	12	-10.60MA		-2.400MA

IOL TEST
VDD= 15
IOL >= 2.400E-03
VO= 1.500

INST #	PIN	MEASURED	LT	GT
418	1	13.90MA	2.400MA	
424	13	14.20MA	2.400MA	
433	2	16.50MA	2.400MA	
439	12	16.70MA	2.400MA	

IIL TEST
VDD= 18
IIL > -0.1UA @25C & -55C
IIL > -1.0UA @ +125C

INST #	PIN	MEASURED	LT	GT
488	3	-8.000NA	-1.000UA	
492	4	-8.000NA	-1.000UA	
496	5	-8.000NA	-1.000UA	
500	6	-8.000NA	-1.000UA	
504	8	-7.000NA	-1.000UA	

```

508    9  -8.000NA    -1.000UA
512   10  -8.000NA    -1.000UA
516   11  -8.000NA    -1.000UA

```

```

-----
      IIH  TEST
      VDD =      18
      IIH < 0.1UA @ 25C & -55C
      IIH < 1.0UA @ 125C
-----

```

INST #	PIN	MEASURED	LT	GT
538	3	6.000NA		1.000UA
542	4	4.000NA		1.000UA
546	5	4.000NA		1.000UA
550	6	3.000NA		1.000UA
554	8	2.000NA		1.000UA
558	9	3.000NA		1.000UA
562	10	3.000NA		1.000UA
566	11	2.000NA		1.000UA

```

-----
      IDD  TEST
      VDD =      5
      IDD > 30.00E-06
      VIN =      5
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-7.000NA		30.00UA

```

-----
      IDD  TEST
      VDD=      5
      IDD > 30.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		30.00UA

```

-----
      IDD  TEST
      VDD =     10
      IDD > 60.00E-06
      VIN =     10
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		60.00UA

```

-----
      IDD  TEST
      VDD=     10
      IDD > 60.00E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		60.00UA

```

-----
      IDD  TEST
      VDD =     15
      IDD > 120.0E-06
      VIN =     15
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		120.0UA

```

-----
      IDD  TEST
      VDD=     15
      IDD > 120.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		120.0UA

```

-----
      IDD  TEST
      VDD =      20
      IDD >    600.0E-06
      VIN =      20
-----

```

INST #	PIN	MEASURED	LT	GT
611	14	-6.000NA		600.0UA

```

-----
      IDD  TEST
      VDD=      20
      IDD >    600.0E-06
      VIN =      0
-----

```

INST #	PIN	MEASURED	LT	GT
627	14	-4.000NA		600.0UA

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



MIL-PRF-38534 CLASS K DATAPACK

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-101-02-W

Date: April 25, 2018

Part Number: CD4013B

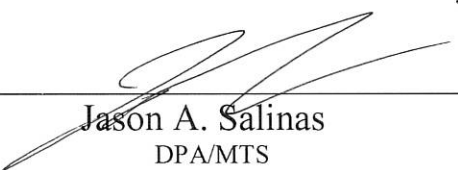
Part Type: CMOS LOGIC MICROCIRCUIT

Lot: Lot# 60273 D/C: 1810 WFR# 39

Quantity: Eight (8)

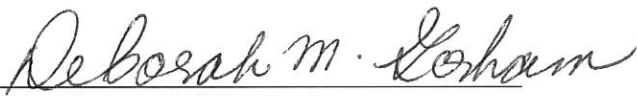
Purchase Order: SS139

Submitted by: _____


Jason A. Salinas

DPA/MTS

Approved by: _____


Deborah M. Gorham

Quality Assurance

TANDEX TEST LABS TTL Job # DDS-101-02-W

Summary

Eight (8) CMOS Logic Microcircuit P/N: CD4013B 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 Tetrafluoride 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-101-02-W
SEM EXAMINATION

TTL Job No. DDS-101-02-W	Part Number CD4013B	Part Type CMOS Logic Microcircuit	Date April 19, 2018
Lot Date Code: WFR# 39 Lot# 60273 D/C: 1810	Sample Qty. 8	Serial Numbers 1 - 8	Test Specifications Mil-Std-883 Method 2018.6
Misc. ID No.	Qty . Accept 8	Qty. Reject 0	Qty. Suspect 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-101-02-W

Photodocumentation

TANDEX TEST LABS TTL Job # DDS-101-02-W

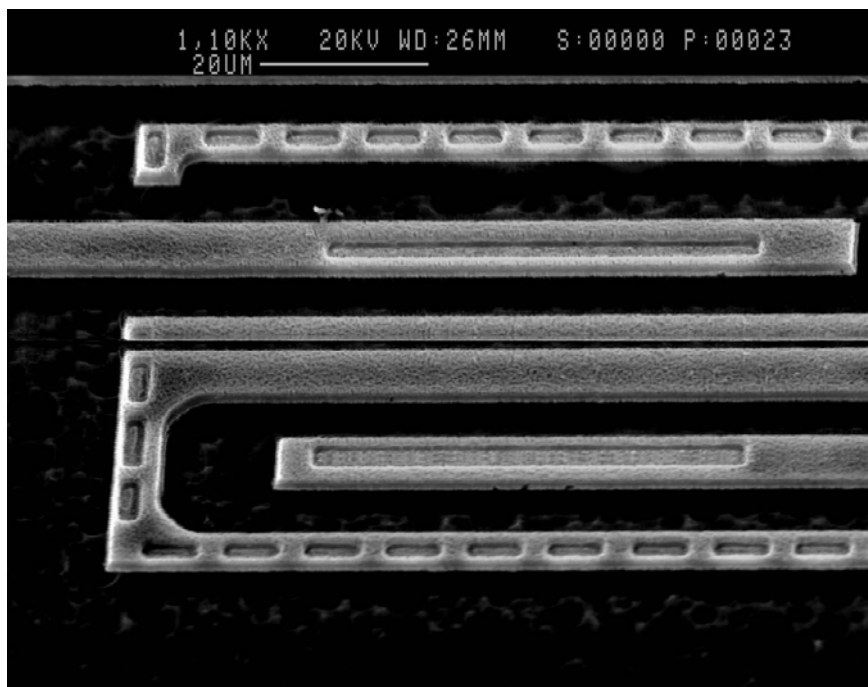


Fig: 1

Mag: 1,100X

S/N: 3

Description: SEM photograph of general metallization.

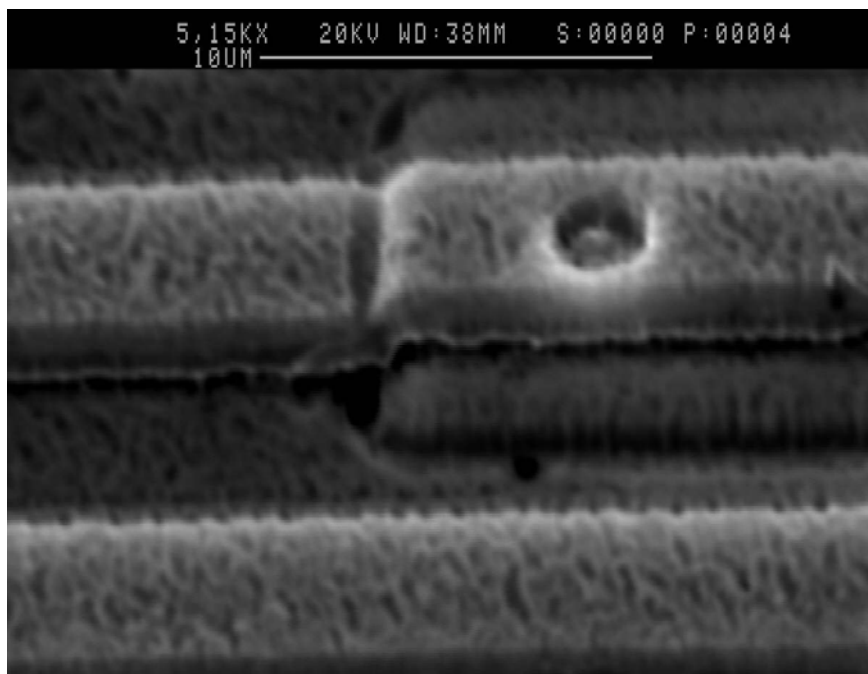


Fig: 2

Mag: 5,150X

S/N: 3

Description: SEM photograph of metallization typical step.

TANDEX TEST LABS TTL Job # DDS-101-02-W

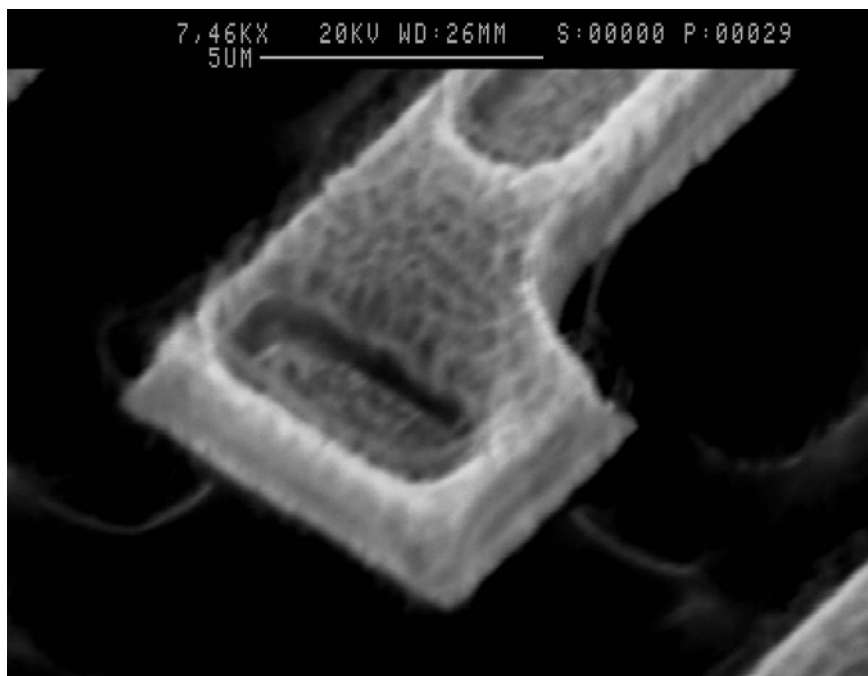


Fig: 3

Mag: 7,460X

S/N: 3

Description: SEM photograph of typical contact window device rotated 90°.

TANDEX TEST LABS, INC.

15849 Business Center Dr., Irwindale CA. 91706

Phone: (626)962-7166 FAX: (626)960-6896

<http://www.tandexlabs.com>

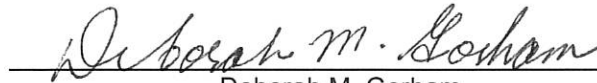
e-mail: via web site

Certificate of Conformance

CUSTOMER:	Silicon Supplies Limited 47 Wherry Road Norwich, NR1, 1WS United Kingdom Vat GB# 114 3513 56	DATE: April 25, 2018
TEST REPORT:	DDS-101-02-W	QUANTITY REQUIRED: 8
P.O. NUMBER:	SS139	QUANTITY PROCESSED: 8
DESCRIPTION:	CMOS LOGIC MICROCIRCUIT	QUANTITY PASSED: 8
PART NUMBER(S):	CD4013B	QUANTITY FAILED: 0
MFG PART NUMBER	CD4013B	QUANTITY SHIPPING: 8
LOT / DATE CODE:	LOT# 60273 WFR# 39 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

