



# Reliability Report – LM117

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Linear Voltage Regulator - Positive Adjustable 1.5A output

## MIL-PRF-38534 CLASS K QUALIFICATION DATAPACK

Performed by Tandex Test Labs



# TANDEX

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

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

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

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- Post Burn-In Electrical Test Results at -55°C, 25°C, 125°C
- Scanning Electron Microscopy (SEM) analysis.





# MIL-PRF-38534 CLASS K DATAPACK

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## 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

<b>CUSTOMER:</b>	<b>SILICON SUPPLIES LIMITED</b>	<b>DATE:</b> AUGUST 29, 2018
	47 WHERRY ROAD NORWICH, NR1, 1WS UNITED KINGDOM VAT GB#114 3513 56	
<b>TEST REPORT:</b>	<b>DDS-101-18-A</b>	<b>QUANTITY RECEIVED:</b> 30 DIE
<b>P.O. NUMBER:</b>	<b>SS139</b>	<b>QUANTITY REQUIRED:</b> 10/5/8
<b>DESCRIPTION:</b>	<b>VOLTAGE REGULATOR MICROCIRCUIT</b>	<b>QUANTITY PROCESSED:</b> 16
<b>PART NUMBER(S):</b>	<b>LM117</b>	<b>QUANTITY PASSED:</b> 16
<b>P/N: AS RECEIVED / MFG. PART NUMBER:</b>	<b>LM117</b>	<b>QUANTITY FAILED:</b> 0
<b>LOT / DATE CODE:</b>	<b>1810 LOT# 7464 WF41</b>	
<b>MANUFACTURE: CAGE CODE:</b>	<b>SILICON SUPPLIES</b>	<b>QUANTITY SHIPPING:</b> 16*
		INCLUDES: 10 PROCESS ACCEPT 5 BOND PULL DEVICES 1 SPARE
<b>TANDEX CAGE CODE:</b>	<b>1FE65</b>	*8 DIE TRANSFERRED TO DDS-101-18-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

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Process Flow Chart + Mechanical Test Results



# TANDEX TEST LABS INC.

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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-101-18-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139  
 PART NUMBER: LM117 P/N AS RECEIVED: LM117  
 PART TYPE: VOLTAGE REGULATOR MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883  
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-18-A  
 LDC AS RECEIVED: 1810 LOT# 7464 WF41 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>3/29/18</u> CONTRACTUAL AGREEMENT REVIEW Y N NOT SPECIFIED <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Q-CLAUSES <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> DPAS <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> DFAR <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> ITAR <input type="checkbox"/> <input type="checkbox"/> OTHER SPECIFIED						
02	QCI		TANDEX QUALITY CONTROL INSPECTION. FLOW APPROVED BY: <u>JMI</u> ON: <u>3/29/18</u>						
03	RCV	P-1070	VERIFY PART NUMBER. ENTER INTO INCOMING LOG. <u>X</u> CUSTOMER COUNT	30			3/29/18		
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	6/1/18	TTL 4	
ESD MAT DUE DATE: <u>6/27/18</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: <u>* 1 spare utilized for B.Paffer screening</u> SCREENING EUTETIC BOND PULL Lot#: <u>149555</u> Exp. Date: <u>N/A</u> SEM * Package Type: <u>3 PIN DIP</u> TRANSFER TO DDS-101-18-W MIL-STD-883 METHOD 2018 <u>6/5/18 TO-5</u>	10+2 5 8	0 0 0	10+2 5 8	6/5/18 6/5/18 6/1/18	TTL 27 TTL 27 TTL 4	
ESD MAT DUE DATE: <u>6/27/18</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>903011960</u> Exp. Date: <u>3/16/2020</u>	17	0	17	6/6/18	TTL 30	

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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-101-18-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139  
 PART NUMBER: LM117 P/N AS RECEIVED: LM117  
 PART TYPE: VOLTAGE REGULATOR MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883  
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-18-A  
 LDC AS RECEIVED: 1810 LOT# 7464 WF41 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>Baush-Lomb</u> ASSET #: <u>30772</u>	17	0	17	6/06/18	TTL 27
			ESD MAT DUE DATE: <u>6/27/18</u>					
07	SEAL		SEAL DEVICES VACUUM BAKE: Pre Seal Bake Time: Temp: <u>125°C</u> Time: <u>24hrs</u> Actual time in: <u>9:25 AM 6/06/18</u> Actual time out: <u>11:10 am 6/07/18</u> FURNACE LDC STAMP Actual temp: <u>125°C</u>	10+2	0	10+2	6/07/18	TTL 30
			ESD MAT DUE DATE: <u>6/27/18</u>					
08	ELEC		PERFORM 100% ELECTRICAL VERIFICATION TEST PER MFG DATA SHEET AND MIL-PRF-38534 @ AMBIENT OPERATING TEMPERATURE GO / NO GO  EQUIPMENT USED: <u>LIS 2020</u> ASSET #: <u>20013</u> +25°C TEST FIXTURE: <u># 17</u> SOFTWARE ID: <u>\$LM117</u> REV <u>N/A</u>	10+2	0	10+2	6/8/18	TTL 13
			ESD MAT DUE DATE: <u>6/27/18</u>					
09	TEMP		PERFORM TEMPERATURE CYCLING PER MIL-STD-883 METHOD 1010 CONDITION C & MIL-PRF-38534 C.3.3.3.  TEN (10) CYCLES DATE IN TIME IN TA = -65°C +0-10 to +150°C +15-0 10 MINUTES AT EXTREMES DATE OUT TIME OUT	10+2	0	10+2	6/8/18 11:37 AM	TTL 48
			EQUIPMENT USED: <u>TENNEY</u> ASSET #: <u>30369</u> EQUIPMENT USED: <u>OMEGA HH309A</u> ASSET #: <u>31662</u>	10+2	0	10+2	6/11/18 5:05 AM	TTL 48
			ESD MAT DUE DATE: <u>6/27/18</u>					
10	ACCE		PERFORM CONSTANT ACCELERATION PER MIL-PRF-38534 MIL-STD-883 METHOD 2001.  Y1 DIRECTION ONLY @ 3000 G's (min)	6+2	0	10+2	6/12/18	TTL 52
			EQUIPMENT USED: <u>TRIO Tech</u> ASSET #: <u>30260</u>					
			ESD MAT DUE DATE: <u>6/27/18</u>					
11	SER		SERIALIZE  01-12 Jhr 6/12/18 S/N: <u>01-10</u>	10+2	0	10+2	6/14/18	TTL 49
			ESD MAT DUE DATE: <u>6/27/18</u>					

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## PROCESS FLOW CHART

FLOW NUMBER: DDS-101-18-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139  
 PART NUMBER: LM117 P/N AS RECEIVED: LM117  
 PART TYPE: VOLTAGE REGULATOR MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883  
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-18-A  
 LDC AS RECEIVED: 1810 LOT# 7464 WF41 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 -55°C +125°C  EQUIPMENT USED: <u>LTS200</u> ASSET#: <u>20017</u> TEST FIXTURE: <u>14</u> SOFTWARE ID: <u>\$LM117K</u> REV <u>N/A</u> TEMPERATURE SOAK <u>10</u> SEC.	12 12 12	0 0 0	12 12 12	6/19/18 6-19-18 6-19-18	TTL 13 TTL 25 TTL 25
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) T = 240 HRS (min)  BURN-IN BOARD # / DESC: <u>31276</u> BURN-IN OVEN #: <u>21</u>	12 12	0 0	12 12	6/21/18 11:00 AM 7/2/18 5:30 AM	TTL 13 TTL 13
14	ELEC		PERFORM POST BURN IN ELECTRICAL VERIFICATION PER MFG DATA SHEET AND MIL-PRF-38534 C.3.3.4.3 @ AMBIENT, HIGH AND LOW OPERATING TEMPERATURES. READ AND RECORD.  STATIC AND FUNCTIONAL TESTS +25°C -55°C +125°C  TEST +25°C WITHIN 96 HOURS  EQUIPMENT USED: <u>LTS200</u> ASSET#: <u>20017</u> TEST FIXTURE: <u>14</u> SOFTWARE ID: <u>\$LM117K</u> REV <u>N/A</u> TEMPERATURE SOAK <u>10</u> SEC.	12 12 12	0 0 0	12 12 12	7/03/18 7/03/18 7/03/18	TTL 27 TTL 27 TTL 27
15	ER		PER PO REQUIREMENTS: REVIEW AT POST 240 HR. BURN-IN  EMAIL: <u>ben.white@diodevices.com</u> POST 240 HR BURN-IN ELECTRICAL TEST DATA. HOLD FOR APPROVAL TO PROCEED  DATE SENT: <u>07/03/18</u>					QA TANDEX 7

ESD MAT DUE DATE:  
6/27/18

ESD MAT DUE DATE:  
7/27/18

ESD MAT DUE DATE:  
7/27/18

TANDEX TEST LABS  
 BURN - IN MONITOR SHEET

JOB NUMBER DDS-101-18-A

TEMPERATURE TA = +125°C Min

PART NUMBER LM117

TEMP. METER # 31368

DATE CODE 1810 Lot # 7464 WFL

VOLTAGE V<sub>IN</sub> = +36.5 VDC

BURN-IN TIME 240hrs Min

VOLT METER# 31223

ΘJC = N/A

POWER SUPPLY# 30802

BOARD# 31276

OVEN# Z1

DATE	TIME	VOLTAGE	CURRENT	TEMP.	INITIAL	COMMENTS
6/21/18	11:00AM	V <sub>IN</sub> = +36.5V	I <sub>IN</sub> = .06A	127.1°C	CM	
6/22/18	9:20AM	V <sub>IN</sub> = +36.5V	I <sub>IN</sub> = .06A	127.3°C	CM	
6/25/18	6:00AM	V <sub>IN</sub> = +36.5V	I <sub>IN</sub> = .06A	126.5°C	CM	
6/26/18	7:30AM	V <sub>IN</sub> = +36.5V	I <sub>IN</sub> = .06A	126.9°C	CM	
6/27/18	7:15AM	V <sub>IN</sub> = +36.5V	I <sub>IN</sub> = .06A	126.4°C	CM	
6/28/18	8:55AM	V <sub>IN</sub> = +36.5V	I <sub>IN</sub> = .06A	124.6°C	CM	
6/29/18	6:00AM	V <sub>IN</sub> = +36.5V	I <sub>IN</sub> = .06A	127.7°C	CM	
7/2/18	5:30AM	V <sub>IN</sub> = +36.5V	I <sub>IN</sub> = .06A	127.7°C	CM	



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## PROCESS FLOW CHART

FLOW NUMBER: DDS-101-18-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139  
 PART NUMBER: LM117 P/N AS RECEIVED: LM117  
 PART TYPE: VOLTAGE REGULATOR MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883  
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-18-A  
 LDC AS RECEIVED: 1810 LOT# 7464 WF41 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.
16	SSL		PERFORM STEADY STATE LIFE TEST PER MIL-PRF-38534 AND MIL-STD 883 METHOD 1005.  TA = 125°C (min) DATE IN: 7/9/18 T = 1000 HRS (min) TIME IN: 7:00 AM  DATE OUT: 8/20/18 TIME OUT: 5:15 PM  BURN-IN BOARD # / DESC: 31276 BURN-IN OVEN #: 21	12	0	12		TTL 13
ESD MAT DUE DATE: 8/27/18								
17	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 0 12 8/20/18 -55°C 12 0 12 8/20/18 +125°C 12 0 12 8/20/18  TEST +25°C WITHIN 96 HOURS  EQUIPMENT USED: LTS2020 ASSET#: 20013 TEST FIXTURE: 14 SOFTWARE ID: LM117K REV N/A	12	0	12		TTL 53
ESD MAT DUE DATE: 8/27/18								
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* *Used extra sample for B.P. after screening. EQUIPMENT USED: DAGE ASSET #: 30785	5	0	5	8/21/18	#4
19	SEM		PULLED 8 DEVICES AT SEQ. 05 AND TRANSFERRED TO:  DDS-101-18-W	8	0	8	6/1/18	OP INDEX 7

OP INDEX 7

TANDEX TEST LABS  
 BURN - IN MONITOR SHEET

JOB NUMBER DDS-101-18-A

TEMPERATURE TA = +125°C Min

PART NUMBER LM117

TEMP. METER # 31368

DATE CODE 1810 LOT# 7464 WF41

VOLTAGE V<sub>IN</sub> = +36.5 mV

BURN-IN TIME 1000hrs Min

VOLT METER# 31223

ΘJC = N/A

POWER SUPPLY# 30802

BOARD# 31276

OVEN# 21

DATE	TIME	VOLTAGE	CURRENT	TEMP.	INITIAL	COMMENTS
7/9/18	7:00AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	127.8°C	CM	
7/10/18	6:10AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	128.5°C	CM	
7/11/18	10:00AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	127.7°C	CM	
7/12/18	7:20AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	127.5°C	CM	
7/13/18	6:05AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	127.9°C	CM	
7/16/18	6:00AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	127.6°C	CM	
7/17/18	6:15AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	128.0°C	CM	
7/18/18	6:00AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	128.2°C	CM	
7/19/18	NO	DATA	TAKEN			
7/20/18	NO	DATA	TAKEN			

TANDEX TEST LABS  
 BURN - IN MONITOR SHEET

JOB NUMBER DDS-101-18-A

TEMPERATURE TA = +125°C Min

PART NUMBER LM117

TEMP. METER # 31368

DATE CODE 1610 LOT# 7464 WF41

VOLTAGE V<sub>IN</sub> = +36.5 mV

BURN-IN TIME 1000hrs Min

VOLT METER# 31223

θJC = N/A

POWER SUPPLY# 30802

BOARD# 31276

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	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	126.1°C	CM	
7/26/18	6:00AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	126.4°C	CM	
7/27/18	7:25 AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	126.6°C	CM	
7/30/18	10:50AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	127.8°C	CM	
7/31/18	6:55 AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	127.6°C	CM	
8/1/18	6:20AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	128.8°C	CM	
8/2/18	11:10AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	127.3°C	CM	
8/3/18	6:45 AM	V <sub>IN</sub> = +36.5 mV	I <sub>IN</sub> = .06A	127.3°C	CM	

TANDEX TEST LABS  
 BURN - IN MONITOR SHEET

JOB NUMBER DDS-101-18-A

TEMPERATURE TA = +125°C Min

PART NUMBER LM117

TEMP. METER# 31368

DATE CODE 1810 LOT# 7464 WF41

VOLTAGE V<sub>IN</sub> = +36.5 mV

BURN-IN TIME 1000hrs Min

VOLT METER# 31223

ΘJC = N/A

POWER SUPPLY# 30802

BOARD# 31276

OVEN# 21

DATE	TIME	VOLTAGE	CURRENT	TEMP.	INITIAL	COMMENTS
8/6/18	6:00AM	V <sub>IN</sub> = +36.5mV	I <sub>IN</sub> = .06A	126.1°C	CM	
8/7/18	8:35AM	V <sub>IN</sub> = +36.5mV	I <sub>IN</sub> = .06A	125.5°C	CM	
8/8/18	6:00AM	V <sub>IN</sub> = +36.5mV	I <sub>IN</sub> = .06A	126.2°C	CM	
8/9/18	6:30AM	V <sub>IN</sub> = +36.5mV	I <sub>IN</sub> = .06A	126.0°C	CM	
8/10/18	6:45AM	V <sub>IN</sub> = +36.5mV	I <sub>IN</sub> = .06A	125.7°C	CM	
8/13/18	5:40AM	V <sub>IN</sub> = +36.5mV	I <sub>IN</sub> = .06A	125.6°C	CM	
8/14/18	NO	DATA	TAKEN			
8/15/18	NO	DATA	TAKEN			
8/16/18	6:05AM	V <sub>IN</sub> = +36.5mV	I <sub>CC</sub> = .06A	126.1°C	CM	

TANDEX TEST LABS  
 BURN - IN MONITOR SHEET

JOB NUMBER DDS-101-18-A

TEMPERATURE TA = +125°C Min

PART NUMBER LM117

TEMP. METER# 31368

DATE CODE 1810 LOT# 7464 WF41

VOLTAGE V<sub>IN</sub> = +36.5VDC

BURN-IN TIME 1000hrs Min

VOLT METER# 31223

ΘJC = N/A

POWER SUPPLY# 30802

BOARD# 31276

OVEN# 21

DATE	TIME	VOLTAGE	CURRENT	TEMP.	INITIAL	COMMENTS
8/17/18	9:35 AM	V <sub>IN</sub> = +36.5VDC	I <sub>IN</sub> = .06A	126.1°C	CM	
8/20/18	5:45 AM	V <sub>IN</sub> = +36.5VDC	I <sub>IN</sub> = .06A	126.1°C	CM	

**BOND PULL**

**BOND STRENGTH TESTING**

TTL Job No. DDS-101-18-A	Part Number LM117	Part Type VOLTAGE REGULATOR MICROCIRCUIT	Date August 27, 2018
Lot Date Code LOT# 7464 W# 41 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	10.0	G	1	7.5	H	1	5.0	G	1	7.5	G	1	8.5	G	1		
2	5.0	G	2	9.0	G	2	6.0	G	2	8.5	G	2	7.0	G	2		
3			3			3			3			3			3		
4			4			4			4			4			4		
5			5			5			5			5			5		

CODE INDEX

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



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

# TANDEX TEST LABS INC.

QMF22B

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

## PROCESS FLOW CHART

FLOW NUMBER: DDS-101-18-A REV. 0

CUSTOMER: DIE DEVICES P.O. NUMBER: SS139  
 PART NUMBER: LM117 P/N AS RECEIVED: LM117  
 PART TYPE: VOLTAGE REGULATOR MICROCIRCUIT DRAWING: MIL-PRF-38534 CL K, MIL-STD-883  
 DUE DATE: 7/12/18 JOB NUMBER: DDS-101-18-A  
 LDC AS RECEIVED: 1810 LOT# 7464 WF41 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	10/5	0	10/5	8/29/18	QA TANDEX 7
21	PKG		USE ORIGINAL OR TANDEX PACKAGING.	10/5	0	10/5	8/29/18	QA TANDEX 7
22	QAR	P-1213	TANDEX QUALITY ASSURANCE REVIEW.  SHIP VIA: <u>- Includes:</u> 10 process accept 5 Bond Full. 1 spare  SHIP / BILL TO: DIE DEVICES 47 WHERRY ROAD NORWICH, NRI, IWS UNITED KINGDOM VAT GB#114 3513 56	<del>10/5</del> 10+1/5			8/29/18	QA TANDEX 7  QA TANDEX 5



# MIL-PRF-38534 CLASS K DATAPACK

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Pre Burn-In Test Results at -55°C





JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 1 TESTING	\$LM117K @ -55C	06/19/18 06:46:23
T# 1	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.249 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.039 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	11.39 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	2.40 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	-6.41 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	103.80 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	.0026 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.821 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 2 TESTING	\$LM117K @ -55C	06/19/18 06:47:18
T# 1	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.046 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	3.72 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	3.61 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	.40 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	91.68 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	.0006 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.831 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 3 TESTING	\$LM117K @ -55C	06/19/18 06:47:47
T# 1	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.256 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.048 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-.29 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.41 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	2.40 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	93.01 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0009 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.793 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 4 TESTING	\$LM117K @ -55C	06/19/18 06:48:22
T# 1	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.240 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.048 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	1.15 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.81 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	2.40 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	86.50 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0011 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0002 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.824 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 5 TESTING	\$LM117K @ -55C	06/19/18 06:48:55
T# 1	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.250 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.257 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.256 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.048 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	1.09 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.41 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	2.40 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	85.65 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0010 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.744 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 6 TESTING	\$LM117K @ -55C	06/19/18 06:49:26
T# 1	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.241 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.050 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.06 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.01 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	2.40 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	85.36 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0016 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0003 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.793 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 7 TESTING	\$LM117K @ -55C	06/19/18 06:49:52
T# 1	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.240 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.050 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.52 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.41 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	3.21 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	83.33 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0016 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.828 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 8 TESTING	\$LM117K @ -55C	06/19/18 06:50:20
T# 1	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.240 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.048 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-.23 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.01 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	2.40 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	92.55 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0016 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.793 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 9 TESTING	\$LM117K @ -55C	06/19/18 06:50:44
T# 1	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.046 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	2.63 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.81 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	2.00 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	89.77 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0006 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.712 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 10 TESTING	\$LM117K @ -55C	06/19/18 06:51:15
T# 1	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.249 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.257 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.256 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.051 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.58 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.41 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	2.81 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	85.07 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0019 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0002 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.793 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 11 TESTING	\$LM117K @ -55C	06/19/18 06:51:36
T# 1	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.257 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.256 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.048 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.35 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	2.81 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	.80 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	83.19 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0008 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.740 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 12 TESTING	\$LM117K @ -55C	06/19/18 06:52:01
T# 1	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.241 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.249 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.048 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-.11 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	3.61 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	1.60 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	91.16 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0013 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0003 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.849 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



# MIL-PRF-38534 CLASS K DATAPACK

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Pre Burn-In Test Results at 25°C



JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 1 TESTING	\$LM117K @ 25C	06/19/18 06:39:10
T# 1	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.249 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.049 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.44 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.93 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.57 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	101.24 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0003 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.660 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.859 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 2 TESTING	\$LM117K @ 25C	06/19/18 06:39:39
T# 1	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.049 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.69 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.85 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.49 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	100.77 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.723 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.849 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 3 TESTING	\$LM117K @ 25C	06/19/18 06:40:02
T# 1	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.249 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.256 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.051 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.75 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.69 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.57 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	97.33 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0006 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.681 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.849 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 4 TESTING	\$LM117K @ 25C	06/19/18 06:40:19
T# 1	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.239 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.049 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.32 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.85 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.24 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	101.70 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0004 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.723 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.849 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 5 TESTING	\$LM117K @ 25C	06/19/18 06:41:03
T# 1	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.257 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.257 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.049 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.53 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.53 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.65 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	101.93 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.849 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.845 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 6 TESTING	\$LM117K @ 25C	06/19/18 06:41:19
T# 1	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.241 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.049 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.63 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	2.40 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	1.44 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	100.66 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0002 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.695 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.849 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 7 TESTING	\$LM117K @ 25C	06/19/18 06:41:36
T# 1	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.240 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.051 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.53 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.69 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.32 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	95.53 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0002 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.695 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.856 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 8 TESTING	\$LM117K @ 25C	06/19/18 06:41:51
T# 1	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.240 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.051 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.49 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.61 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.57 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	101.35 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0002 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0003 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.667 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.859 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 9 TESTING	\$LM117K @ 25C	06/19/18 06:42:09
T# 1	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.249 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.256 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.049 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.73 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.85 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.65 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	100.54 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0002 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.821 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.824 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 10 TESTING	\$LM117K @ 25C	06/19/18 06:42:25
T# 1	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.049 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.57 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.77 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.73 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	100.54 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0006 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.793 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.845 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 11 TESTING	\$LM117K @ 25C	06/19/18 06:42:42
T# 1	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.249 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.256 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.256 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.049 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.71 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	4.17 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	3.13 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	100.54 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0007 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.702 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.845 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 12 TESTING	\$LM117K @ 25C	06/19/18 06:43:03
T# 1	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.240 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.051 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.46 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.61 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.49 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	99.39 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0002 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.716 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.852 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



# MIL-PRF-38534 CLASS K DATAPACK

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Pre Burn-In Test Results at +125°C



JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 1 TESTING	\$LM117K @ 125C	06/19/18 06:56:18
T# 1	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.241 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.250 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.250 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.055 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.78 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	5.61 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	5.21 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	75.82 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.694 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 2 TESTING	\$LM117K @ 125C	06/19/18 06:57:05
T# 1	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.050 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.81 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	6.41 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	5.61 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	82.96 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0001 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.694 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 3 TESTING	\$LM117K @ 125C	06/19/18 06:57:39
T# 1	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.052 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.86 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	7.21 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	6.41 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	81.54 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.681 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 4 TESTING	\$LM117K @ 125C	06/19/18 06:58:09
T# 1	1.241 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.234 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.242 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.052 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.15 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	6.41 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	6.01 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	85.59 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0003 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.681 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 5 TESTING	\$LM117K @ 125C	06/19/18 06:58:36
T# 1	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.257 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.256 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.050 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.63 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	7.21 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	6.01 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	80.45 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0006 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.667 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 6 TESTING	\$LM117K @ 125C	06/19/18 06:59:01
T# 1	1.242 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.235 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.052 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.58 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	6.81 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	6.01 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	84.99 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0003 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.667 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 7 TESTING	\$LM117K @ 125C	06/19/18 06:59:30
T# 1	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.237 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.052 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.58 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	6.41 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	5.21 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	85.09 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0006 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.694 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 8 TESTING	\$LM117K @ 125C	06/19/18 06:59:56
T# 1	1.242 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.238 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.052 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.40 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.81 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	3.61 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	85.34 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.667 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 9 TESTING	\$LM117K @ 125C	06/19/18 07:00:33
T# 1	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.052 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.75 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	6.81 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	5.61 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	84.19 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0007 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.667 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 10 TESTING	\$LM117K @ 125C	06/19/18 07:01:02
T# 1	1.250 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.053 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.86 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	8.42 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	7.21 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	83.98 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0007 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.681 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 11 TESTING	\$LM117K @ 125C	06/19/18 07:01:30
T# 1	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.053 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.63 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	6.01 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	5.21 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	87.48 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0002 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.660 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: PRE BURN-IN ELECTRICAL VERIFICATION SEQ.#: 12

DEVICE 12 TESTING	\$LM117K @ 125C	06/19/18 07:01:56
T# 1	1.242 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.236 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.052 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.81 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	6.01 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	4.81 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	82.56 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0006 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.653 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



# MIL-PRF-38534 CLASS K DATAPACK

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Post Burn-In Test Results at -55°C



JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 1 TESTING	\$LM117K @ -55C	07/03/18 05:58:16
T# 1	1.250 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.249 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.041 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	9.44 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	.80 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	-6.41 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	68.87 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	.0015 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.656 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 2 TESTING	\$LM117K @ -55C	07/03/18 05:59:30
T# 1	1.250 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.043 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	8.82 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	2.80 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	-4.81 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	68.74 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	.0018 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.667 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 3 TESTING	\$LM117K @ -55C	07/03/18 06:00:27
T# 1	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.249 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.045 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	4.46 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.01 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	.80 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	69.43 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0022 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0002 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.653 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 4 TESTING	\$LM117K @ -55C	07/03/18 06:01:26
T# 1	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.239 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.242 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.048 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	3.84 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.01 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	1.20 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	69.50 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0049 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.653 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 5 TESTING	\$LM117K @ -55C	07/03/18 06:02:24
T# 1	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.041 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	9.85 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	2.40 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	-6.81 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	69.43 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	.0016 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0002 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.653 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 6 TESTING	\$LM117K @ -55C	07/03/18 06:03:24
T# 1	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.241 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.241 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.045 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	5.32 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	2.40 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	-1.20 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	72.39 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0019 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.632 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.800 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 7 TESTING	\$LM117K @ -55C	07/03/18 06:04:24
T# 1	1.242 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.239 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.238 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.045 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	6.30 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	2.00 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	-2.40 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	71.07 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0029 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0004 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.639 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 8 TESTING	\$LM117K @ -55C	07/03/18 06:05:26
T# 1	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.241 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.240 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.045 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	6.53 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	2.00 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	-2.40 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	71.71 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	.0001 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.625 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 9 TESTING	\$LM117K @ -55C	07/03/18 06:06:23
T# 1	1.250 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.043 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	7.56 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	1.60 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	-4.81 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	71.48 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0006 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.625 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 10 TESTING	\$LM117K @ -55C	07/03/18 06:07:19
T# 1	1.250 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.249 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.046 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	6.24 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	.40 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	-3.61 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	77.14 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0046 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.625 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 11 TESTING	\$LM117K @ -55C	07/03/18 06:09:32
T# 1	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.250 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.249 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.045 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	5.84 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	.80 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	-4.01 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	88.86 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0042 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.611 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 12 TESTING	\$LM117K @ -55C	07/03/18 06:10:51
T# 1	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.240 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.233 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.039 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	12.31 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	1.60 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	-8.82 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	71.48 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	.0022 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0004 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.632 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



# MIL-PRF-38534 CLASS K DATAPACK

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Post Burn-In Test Results at 25°C



JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 1 TESTING	\$LM117K @ 25C	07/03/18 05:43:43
T# 1	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.250 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	-.015 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.51 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	1.60 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	.80 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	88.41 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0003 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0003 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.569 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.859 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 2 TESTING	\$LM117K @ 25C	07/03/18 05:44:58
T# 1	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	-.015 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.83 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.85 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	3.05 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	90.36 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0006 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.593 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.852 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 3 TESTING	\$LM117K @ 25C	07/03/18 05:45:33
T# 1	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.256 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	-.015 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.53 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.85 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	3.05 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	85.60 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.597 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.845 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 4 TESTING	\$LM117K @ 25C	07/03/18 05:46:04
T# 1	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.240 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	-.015 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.21 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	2.97 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	1.36 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	86.99 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0002 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0003 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.600 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.852 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 5 TESTING	\$LM117K @ 25C	07/03/18 05:46:32
T# 1	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.257 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.257 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	-.015 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.37 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	2.24 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	1.04 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	86.99 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0006 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0002 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.607 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.852 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 6 TESTING	\$LM117K @ 25C	07/03/18 05:47:17
T# 1	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.241 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	-.015 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.43 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.13 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	1.84 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	84.72 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0007 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0003 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.600 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.856 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 7 TESTING	\$LM117K @ 25C	07/03/18 05:48:00
T# 1	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.238 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	-.015 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.53 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	5.53 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	3.93 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	84.35 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.611 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.852 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 8 TESTING	\$LM117K @ 25C	07/03/18 05:48:30
T# 1	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.240 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	-.015 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.27 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	3.61 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.64 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	84.79 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0003 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.597 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.849 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 9 TESTING	\$LM117K @ 25C	07/03/18 05:49:00
T# 1	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	-.015 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.53 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	4.33 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.89 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	84.06 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0001 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0003 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.586 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.852 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 10 TESTING	\$LM117K @ 25C	07/03/18 05:49:28
T# 1	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	-.015 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.85 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	4.17 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	2.81 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	86.55 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0002 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0003 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.597 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.852 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 11 TESTING	\$LM117K @ 25C	07/03/18 05:49:57
T# 1	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.256 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	-.015 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.81 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	5.13 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	3.77 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	84.65 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0002 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.593 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.852 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 12 TESTING	\$LM117K @ 25C	07/03/18 05:50:29
T# 1	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.240 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	-.015 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-2.56 MV	LINE REGULATION [ -9.75 TO 9.75 MV ]
T# 7	4.17 MV	LOAD REGULATION [ -25 TO 25 MV ]
T# 8	3.29 MV	LOAD REGULATION [ -30 TO 30 MV ]
T# 9	85.23 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.597 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	1.856 A	SHORT CKT CURRENT [ 0.3 TO 3 A ]
T# 14	2.000 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1





# MIL-PRF-38534 CLASS K DATAPACK

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Post Burn-In Test Results at +125°C



JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 1 TESTING	\$LM117K @ 125C	07/03/18 06:15:08
T# 1	1.247 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.242 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.054 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-4.30 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	5.21 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	5.21 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	155.14 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0006 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.544 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.200 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 2 TESTING	\$LM117K @ 125C	07/03/18 06:15:50
T# 1	1.249 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.242 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.054 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-4.41 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	7.22 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	6.01 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	153.75 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0006 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.576 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.200 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 3 TESTING	\$LM117K @ 125C	07/03/18 06:16:33
T# 1	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.054 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-4.24 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	7.62 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	6.81 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	152.51 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0001 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.576 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.200 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 4 TESTING	\$LM117K @ 125C	07/03/18 06:17:13
T# 1	1.240 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.234 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.054 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.78 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	7.22 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	6.41 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	150.20 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0002 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.569 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.200 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 5 TESTING	\$LM117K @ 125C	07/03/18 06:18:02
T# 1	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.248 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.258 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.257 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.054 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-4.01 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	6.41 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	5.61 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	154.22 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	.0002 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.548 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.200 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 6 TESTING	\$LM117K @ 125C	07/03/18 06:18:31
T# 1	1.242 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.238 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.054 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.84 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.81 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	4.41 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	153.46 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0003 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0003 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.548 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.200 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 7 TESTING	\$LM117K @ 125C	07/03/18 06:19:01
T# 1	1.241 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.235 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.056 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-4.01 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	6.01 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	5.21 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	152.71 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.569 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.200 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 8 TESTING	\$LM117K @ 125C	07/03/18 06:19:31
T# 1	1.241 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.236 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.243 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.054 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.67 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	4.41 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	4.01 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	151.65 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0003 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.555 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.200 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 9 TESTING	\$LM117K @ 125C	07/03/18 06:20:26
T# 1	1.252 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.054 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.84 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	6.01 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	5.21 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	151.21 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0003 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.548 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.200 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 10 TESTING	\$LM117K @ 125C	07/03/18 06:20:58
T# 1	1.250 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.254 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.253 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.056 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-4.35 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	5.61 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	4.41 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	150.21 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0004 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	0.0000 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.520 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.200 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A TEST POINT: POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 11 TESTING	\$LM117K @ 125C	07/03/18 06:21:38
T# 1	1.251 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.246 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.255 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.054 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-3.84 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	5.21 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	4.81 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	150.71 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0002 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0001 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.544 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.200 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1

JOB NUMBER: DDS-101-18-A      TEST POINT:    POST BURN-IN ELECTRICAL VERIFICATION SEQ.#: 14

DEVICE 12 TESTING	\$LM117K @ 125C	07/03/18 06:22:08
T# 1	1.241 V	VOUT [ 1.2 TO 1.3 V ]
T# 2	1.235 V	VOUT [ 1.2 TO 1.3 V ]
T# 3	1.245 V	VOUT [ 1.2 TO 1.3 V ]
T# 4	1.244 V	VOUT [ 1.2 TO 1.3 V ]
T# 5	.056 MA	BIAS CURRENT [ -0.1 TO 0.1 MA ]
T# 6	-4.07 MV	LINE REGULATION [ -18.45 TO 18.45 MV ]
T# 7	6.41 MV	LOAD REGULATION [ -70 TO 70 MV ]
T# 8	6.01 MV	LOAD REGULATION [ -100 TO 100 MV ]
T# 9	154.62 DB	RIPPLE REJECTION [ 66 TO 200 DB ]
T# 10	-.0002 MA	I BIAS CHANGE (VS) [ -0.005 TO 0.005 MA ]
T# 11	-.0003 MA	I BIAS CHANGE (LOAD) [ -0.005 TO 0.005 MA ]
T# 12	1.541 A	SHORT CKT CURRENT [ 1.5 TO 3.4 A ]
T# 13	2.200 MA	MIN LOAD CURRENT [ 0.5 TO 5 MA ]

PASS BIN 1



# MIL-PRF-38534 CLASS K DATAPACK

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Scanning Electron Microscopy (SEM) analysis



# TANDEX TEST LABS, INC.

15849 Business Ctr. Dr. Irwindale CA. 91706

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

## SCANNING ELECTRON MICROSCOPE ANALYSIS

### DIE DEVICES

TTL Job # DDS-101-18-W

Date: July 09, 2018

Part Number: LM117

Part Type: VOLTAGE REGULATOR MICROCIRCUIT

Lot: Lot# 7464 D/C: 1810 WFR# 41

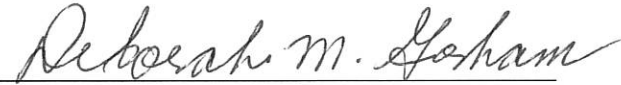
Quantity: Eight (8)

Purchase Order: SS139

Submitted by: \_\_\_\_\_

  
Jason A. Salinas  
DPA/MTS

Approved by: \_\_\_\_\_

  
Deborah M. Gorham  
Quality Assurance

## TANDEX TEST LABS TTL Job # DDS-101-18-W

Summary

Eight (8) Voltage Regulator Microcircuit P/N: LM117 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-101-18-W  
SEM EXAMINATION

TTL Job No. DDS-101-18-W	Part Number LM117	Part Type Voltage Regulator Microcircuit	Date July 5, 2018
Lot Date Code: WFR# 41 Lot# 7464 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:  No:  Devices constructed with expanded Metallization Yes:  No:

Sample Glassivated Yes:  No:  Dual Level Metallization Yes:  No:

Glassivation Removed Using: PLASMA ETCHING

Beam accelerating voltage 10kV to 20kV Viewing angle 45 deg



**Technician Stamp:**

TANDEX TEST LABS TTL Job # DDS-101-18-W

## Photodocumentation

TANDEX TEST LABS TTL Job # DDS-101-18-W

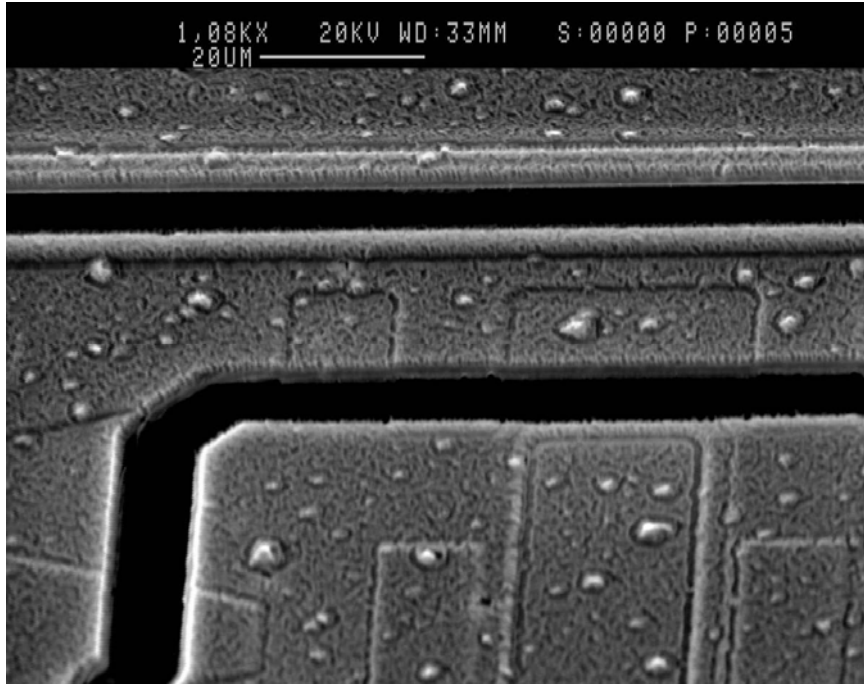


Fig: 1

Mag: 1,080X

S/N: 6

Description: SEM photograph of general metallization.

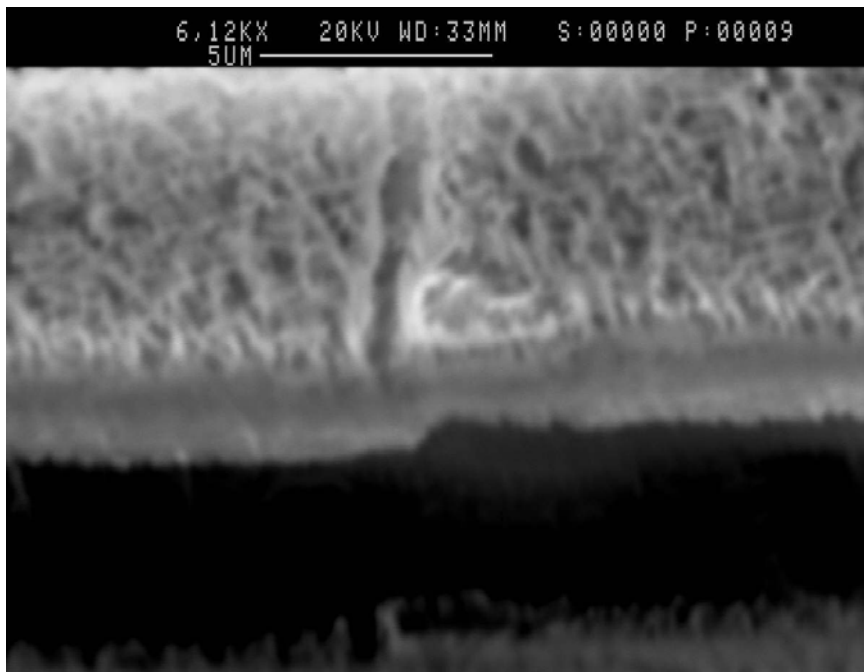


Fig: 2

Mag: 6,120X

S/N: 6

Description: SEM photograph of metallization typical step.

# TANDEX TEST LABS TTL Job # DDS-101-18-W

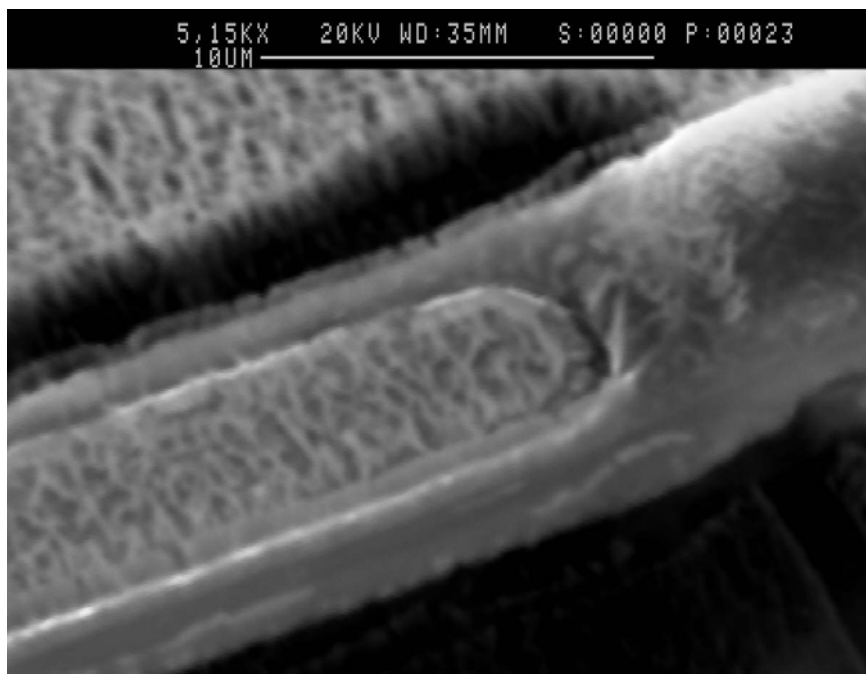


Fig: 3

Mag: 5,150X

S/N: 6

Description: SEM photograph of typical contact window device.

# TANDEX TEST LABS, INC.

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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: July 09, 2018
TEST REPORT:	DDS-101-18-W	QUANTITY REQUIRED: 8
P.O. NUMBER:	SS139	QUANTITY PROCESSED: 8
DESCRIPTION:	VOLTAGE REGULATOR MICROCIRCUIT	QUANTITY PASSED: 8
PART NUMBER(S):	LM117	QUANTITY FAILED: 0
MFG PART NUMBER	LM117	QUANTITY SHIPPING: 8
LOT / DATE CODE:	LOT# 7464 WFR# 41 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

