

RELIABILITY MONITOR REPORT
FOR

LQFP Package

Dallas Semiconductor

4401 South Beltwood Parkway
Dallas, TX 75244-3292

This Report was prepared by
Dallas Semiconductor Reliability Engineering

Summary:

The data in the tables that follow was generated as the result of an on-going Package Reliability Monitor. The assemblies covered by this package monitor are:

ASSY SITE	PINS	PACKAGE		
ATK (Amkor, K)	100	LQFP	ATK (Amkor, K)	128 LQFP
ATK (Amkor, K)	144	LQFP	ATK (Amkor, K)	48 LQFP
ATK (Amkor, K)	64	LQFP	ATK (Amkor, K)	100 LQFP (Pb-Free)
ATK (Amkor, K)	128	LQFP (Pb-Free)	ATK (Amkor, K)	144 LQFP (Pb-Free)
ATK (Amkor, K)	48	LQFP (Pb-Free)	ATK (Amkor, K)	64 LQFP (Pb-Free)
ATK (Amkor, K)	144	LQFP Exposed Pad (Pb-Free)	ATK (Amkor, K)	48 LQFP Exposed Pad (Pb-Free)
ATP (Amkor, PI)	100	LQFP	ATP (Amkor, PI)	128 LQFP
ATP (Amkor, PI)	100	LQFP (Pb-Free)	SCS (Stats Chippac S)	100 LQFP
SCS (Stats Chippac S)	128	LQFP	SCS (Stats Chippac S)	48 LQFP
SCS (Stats Chippac S)	64	LQFP	SCS (Stats Chippac S)	100 LQFP (Pb-Free)
SCS (Stats Chippac S)	128	LQFP (Pb-Free)		

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 64207 FITS: 1.8

The parameters used to calculate this failure rate are as follows:

Cf: 60% Ea: 0.7 B: 0 Tu: 25 °C Vu: 5.5 Volts

The reliability data follows. A the start of this data is a description of the assembly vehicle used to generate this reliability data. The next section is the detailed reliability data for each stress. The reliability data section includes the latest data available. This report covers data between 7/1/2005 and 6/30/2006 .

Assembly Information:

Package Type: LQFP 14x14x1.4
 Flammability: UL 94-V0
 Moisture Sensitivity Level 4
 (JEDEC J-STD20A)
 Date Code Range: 0447 to 0618

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0447	DS2154	125C, 5.0 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0517	DS21352	125C, 3.3 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0518	DS21352	125C, 3.3 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0523	DS2154	125C, 5.0 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0525	DS2155	125C, 3.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0532	DS2155	125C, 3.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0541	DS21352	125C, 3.3 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0550	DS2155	125C, 3.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0607	DS2155	125C, 3.5 VOLTS	1000 HRS	77	1	30048301
HIGH TEMP OP LIFE	0617	DS2155	125C, 3.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0618	DS2155	125C, 3.5 VOLTS	1000 HRS	77	0	
Total:						1	

PACKAGE TESTS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
DROP	0447	DS2154	25 C	36	CYS	250	0
ULTRASOUND	0447	DS2154	J-STD-020			4	0
DROP	0517	DS21352	25 C	36	CYS	250	0
DROP	0518	DS21352	25 C	36	CYS	250	
DROP	0523	DS2154	25 C	36	CYS	250	
ULTRASOUND	0523	DS2154	J-STD-020			4	0
					Total:		0

PRECONDITIONING LEVEL 3

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0447	DS2154	125C	24	HRS	241	
MOISTURE SOAK			30C/60% R.H.	192	HRS	241	
CONVECTION REFLOW			235C +5/-0C	3	PASS	241	0
PRECONDITION U/S	0447	DS2154	J-STD-020			4	0
ULTRASOUND	0517	DS21352	J-STD-020			4	0
STORAGE LIFE	0517	DS21352	125C	24	HRS	241	
MOISTURE SOAK			30C/60% R.H.	192	HRS	241	
CONVECTION REFLOW			235C +5/-0C	3	PASS	241	0
PRECONDITION U/S	0517	DS21352	J-STD-020			4	0
STORAGE LIFE	0518	DS21352	125C	24	HRS	241	
MOISTURE SOAK			30C/60% R.H.	192	HRS	241	
CONVECTION REFLOW			235C +5/-0C	3	PASS	241	0
PRECONDITION U/S	0518	DS21352	J-STD-020			4	0
STORAGE LIFE	0523	DS2154	125C	24	HRS	241	
MOISTURE SOAK			30C/60% R.H.	192	HRS	241	
CONVECTION REFLOW			235C +5/-0C	3	PASS	241	0
PRECONDITION U/S	0523	DS2154	J-STD-020			4	0
ULTRASOUND	0541	DS21352	J-STD-020			4	0
STORAGE LIFE	0541	DS21352	125C	24	HRS	241	
MOISTURE SOAK			30C/60% R.H.	192	HRS	241	
CONVECTION REFLOW			235C +5/-0C	3	PASS	241	0
PRECONDITION U/S	0541	DS21352	J-STD-020			4	0
STORAGE LIFE	0617	DS2155	125C	24	HRS	199	
MOISTURE SOAK			30C/60% R.H.	192	HRS	199	
CONVECTION REFLOW			235C +5/-0C	3	PASS	199	0
					Total:		0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0447	DS2154	-55C TO 125C	1000	CYS	80	0
TEMP CYCLE	0517	DS21352	-55C TO 125C	1000	CYS	80	0

TEMP CYCLE	0518	DS21352	-55C TO 125C	1000	CYS	80	0
TEMP CYCLE	0523	DS2154	-55C TO 125C	1000	CYS	80	0
TEMP CYCLE	0532	DS2155	-55C TO 125C	1000	CYS	77	0
TEMP CYCLE	0541	DS21352	-55C TO 125C	1000	CYS	80	0
TEMP CYCLE	0550	DS2155	-55C TO 125C	1000	CYS	77	0
TEMP CYCLE	0607	DS2155	-55C TO 125C	1000	CYS	77	0
TEMP CYCLE	0617	DS2155	-55C TO 125C	1000	CYS	77	0
Total:						0	0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST	0532	DS2155	130C, 85%R.H.,3.5V	96	HRS	45	0
HAST	0550	DS2155	130C, 85%R.H.,3.5V	96	HRS	45	0
HAST	0607	DS2155	130C, 85%R.H.,3.5V	96	HRS	45	0
HAST	0617	DS2155	130C, 85%R.H.,3.5V	96	HRS	45	0
Total:						0	0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST, NO BIAS	0447	DS2154	130C, 85% R.H.	100	HRS	80	0
HAST, NO BIAS	0517	DS21352	130C, 85% R.H.	100	HRS	80	0
HAST, NO BIAS	0518	DS21352	130C, 85% R.H.	100	HRS	77	0
HAST, NO BIAS	0523	DS2154	130C, 85% R.H.	100	HRS	77	0
HAST, NO BIAS	0532	DS2155	130C, 85% R.H.	200	HRS	77	0
HAST, NO BIAS	0541	DS21352	130C, 85% R.H.	100	HRS	79	0
HAST, NO BIAS	0550	DS2155	130C, 85% R.H.	200	HRS	77	0
HAST, NO BIAS	0607	DS2155	130C, 85% R.H.	200	HRS	77	0
HAST, NO BIAS	0617	DS2155	130C, 85% R.H.	200	HRS	75	0
Total:						0	0

Assembly Information:

Package Type: LQFP (Pb-Free) 10x10x1.4
 Flammability: UL 94-V0
 Moisture Sensitivity (JEDEC J-STD20A) Level 3
 Date Code Range: 0520 to 0520

MOISTURE SENSITIVITY LEVEL 3

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
ULTRASOUND	0520	DS26504	J-STD-020			8	0
STORAGE LIFE			125C	24	HRS	8	
MOISTURE SOAK			30C/60% R.H.	192	HRS	8	
CONVECTION REFLOW			260C +/-5C	3	PASS	8	0
EXTERNAL VISUAL			J-STD-020, 6.1a			8	0

PRECONDITION U/S	0520	DS26504	J-STD-020			8	0
						Total:	0

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0520	DS26504	125C, 3.5 VOLTS	1000 HRS	44	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
						Total:	0

PACKAGE TESTS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
SOLDERABILITY (Sn/Pb)	0520	DS26504	JESD22-B102, COND C		3	0	
SOLDERABILITY (Pb-Free)			JESD22-B102, COND C		3	0	
X-RAY	0520	DS26504	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS			JESD22-B100		6	0	
MARK PERMANENCY			JESD22-B107		6	0	
LEAD INTEGRITY			JESD22-B105, COND B		6	0	
EXTERNAL VISUAL			JESD22-B101		6	0	
EDX			25 C		6	0	
						Total:	0

PRECONDITIONING LEVEL 3

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0520	DS26504	125C	24 HRS	321		
MOISTURE SOAK			30C/60% R.H.	192 HRS	321		
CONVECTION REFLOW			260C +/-5C	3 PASS	321	0	
						Total:	0

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0520	DS26504	150C	1000 HRS	76	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
						Total:	0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0520	DS26504	-55C TO 125C	1000 CYS	76	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
						Total:	0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST	0520	DS26504	130C, 85%R.H.,3.5V	96 HRS	45	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
						Total:	0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST, NO BIAS	0520	DS26504	130C, 85% R.H.	200 HRS	76	0	

VISUAL INSPECTION	0520	DS26504	WHISKERS < 50uM			3	0
						Total:	0

Assembly Information:

Package Type: LQFP (Pb-Free) 14x14x1.4
 Flammability: UL 94-V0
 Moisture Sensitivity (JEDEC J-STD20A) Level 4
 Date Code Range: 0621 to 0622

MOISTURE SENSITIVITY LEVEL 3

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
ULTRASOUND	0621	DS21Q50	J-STD-020		22	0	
STORAGE LIFE			125C	24 HRS	22		
MOISTURE SOAK			30C/60% R.H.	192 HRS	22		
CONVECTION REFLOW			260C +/-5C	3 PASS	22	0	
EXTERNAL VISUAL			J-STD-020, 6.1a		22	0	
PRECONDITION U/S			J-STD-020		22	0	
ULTRASOUND	0621	DS21Q50	J-STD-020		22	0	
STORAGE LIFE			125C	24 HRS	22		
MOISTURE SOAK			30C/60% R.H.	192 HRS	22		
CONVECTION REFLOW			260C +/-5C	3 PASS	22	0	
EXTERNAL VISUAL			J-STD-020, 6.1a		22	0	
PRECONDITION U/S			J-STD-020		22	0	
ULTRASOUND	0622	DS21Q50	J-STD-020		22	0	
STORAGE LIFE			125C	24 HRS	22		
MOISTURE SOAK			30C/60% R.H.	192 HRS	22		
CONVECTION REFLOW			260C +/-5C	3 PASS	22	0	
EXTERNAL VISUAL			J-STD-020, 6.1a		22	0	
PRECONDITION U/S			J-STD-020		22	0	
						Total:	0

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0621	DS21Q50	125C, 3.5 VOLTS	1000 HRS	45	0	
HIGH TEMP OP LIFE	0621	DS21Q50	125C, 3.5 VOLTS	1000 HRS	45	0	
HIGH TEMP OP LIFE	0622	DS21Q50	125C, 3.5 VOLTS	1000 HRS	45	0	
						Total:	0

PACKAGE TESTS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
SOLDERABILITY (Sn/Pb)	0621	DS21Q50	JESD22-B102, COND C		3	0	
SOLDERABILITY (Pb-Free)			JESD22-B102, COND C		3	0	
X-RAY	0621	DS21Q50	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS			JESD22-B100		6	0	
MARK PERMANENCY			JESD22-B107		6	0	
LEAD INTEGRITY			JESD22-B105, COND B		6	0	
EXTERNAL VISUAL			JESD22-B101		6	0	
EDX			25 C		6	0	

SOLDERABILITY (Sn/Pb)	0621	DS21Q50	JESD22-B102, COND C	3	0
SOLDERABILITY (Pb-Free)			JESD22-B102, COND C	3	0
X-RAY	0621	DS21Q50	MIL-STD-883-2012 : TOP & SIDE VIEW	6	0
PHYSICAL DIMENSIONS			JESD22-B100	6	0
MARK PERMANENCY			JESD22-B107	6	0
LEAD INTEGRITY			JESD22-B105, COND B	6	0
EXTERNAL VISUAL			JESD22-B101	6	0
EDX			25 C	6	0
SOLDERABILITY (Sn/Pb)	0622	DS21Q50	JESD22-B102, COND C	3	0
SOLDERABILITY (Pb-Free)			JESD22-B102, COND C	3	0
X-RAY	0622	DS21Q50	MIL-STD-883-2012 : TOP & SIDE VIEW	6	0
PHYSICAL DIMENSIONS			JESD22-B100	6	0
MARK PERMANENCY			JESD22-B107	6	0
LEAD INTEGRITY			JESD22-B105, COND B	6	0
EXTERNAL VISUAL			JESD22-B101	6	0
EDX			25 C	6	0
Total:				0	0

PRECONDITIONING LEVEL 3

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0621	DS21Q50	125C	24 HRS	276		
MOISTURE SOAK			30C/60% R.H.	192 HRS	276		
CONVECTION REFLOW			260C +/-5C	3 PASS	276	0	
STORAGE LIFE	0621	DS21Q50	125C	24 HRS	276		
MOISTURE SOAK			30C/60% R.H.	192 HRS	276		
CONVECTION REFLOW			260C +/-5C	3 PASS	276	0	
STORAGE LIFE	0622	DS21Q50	125C	24 HRS	276		
MOISTURE SOAK			30C/60% R.H.	192 HRS	276		
CONVECTION REFLOW			260C +/-5C	3 PASS	276	0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0621	DS21Q50	150C	1000 HRS	77	0	
STORAGE LIFE	0621	DS21Q50	150C	1000 HRS	77	0	
STORAGE LIFE	0622	DS21Q50	150C	1000 HRS	77	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0621	DS21Q50	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0621	DS21Q50	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0622	DS21Q50	-55C TO 125C	1000 CYS	77	0	
Total:						0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
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HAST, NO BIAS	0621	DS21Q50	130C, 85% R.H.	200	HRS	77	0
HAST, NO BIAS	0621	DS21Q50	130C, 85% R.H.	200	HRS	77	0
HAST, NO BIAS	0622	DS21Q50	130C, 85% R.H.	200	HRS	77	0
Total:						0	0

Assembly Information:

Package Type: LQFP (Pb-Free) 14x20x1.4
 Flammability: UL 94-V0
 Moisture Sensitivity (JEDEC J-STD20A) Level 4
 Date Code Range: 0609 to 0609

MOISTURE SENSITIVITY LEVEL 4

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
ULTRASOUND	0609	DS21448	J-STD-020		8	0	
STORAGE LIFE			125C	24 HRS	8		
MOISTURE SOAK			30C/60% R.H.	96 HRS	8		
CONVECTION REFLOW			260C +/-5C	3 PASS	8	0	
EXTERNAL VISUAL			J-STD-020, 6.1a		8	0	
PRECONDITION U/S			J-STD-020		8	0	
ULTRASOUND	0609	DS21448	J-STD-020		8	0	
STORAGE LIFE			125C	24 HRS	8		
MOISTURE SOAK			30C/60% R.H.	96 HRS	8		
CONVECTION REFLOW			260C +/-5C	3 PASS	8	0	
EXTERNAL VISUAL			J-STD-020, 6.1a		8	0	
PRECONDITION U/S			J-STD-020		8	0	
Total:						0	0

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0609	DS21448	125C, 3.5 VOLTS	1000 HRS	45	0	
HIGH TEMP OP LIFE	0609	DS21448	125C, 3.5 VOLTS	1000 HRS	45	0	
Total:						0	0

PACKAGE TESTS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
SOLDERABILITY (Sn/Pb)	0609	DS21448	JESD22-B102, COND C		3	0	
SOLDERABILITY (Pb-Free)			JESD22-B102, COND C		3	0	
X-RAY	0609	DS21448	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS			JESD22-B100		6	0	
MARK PERMANENCY			JESD22-B107		6	0	
LEAD INTEGRITY			JESD22-B105, COND B		6	0	
EXTERNAL VISUAL			JESD22-B101		6	0	
EDX			25 C		6	0	
SOLDERABILITY (Sn/Pb)	0609	DS21448	JESD22-B102, COND C		3	0	
SOLDERABILITY (Pb-Free)			JESD22-B102, COND C		3	0	
X-RAY	0609	DS21448	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS			JESD22-B100		6	0	

MARK PERMANENCY	0609	DS21448	JESD22-B107	6	0
LEAD INTEGRITY			JESD22-B105, COND B	6	0
EXTERNAL VISUAL			JESD22-B101	6	0
EDX			25 C	6	0
Total:				6	0

PRECONDITIONING LEVEL 4

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0609	DS21448	125C	24 HRS	321		
MOISTURE SOAK			30C/60% R.H.	96 HRS	321		
CONVECTION REFLOW			260C +0/-5C	3 PASS	321	0	
STORAGE LIFE	0609	DS21448	125C	24 HRS	321		
MOISTURE SOAK			30C/60% R.H.	96 HRS	321		
CONVECTION REFLOW			260C +0/-5C	3 PASS	321	0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0609	DS21448	150C	1000 HRS	76	0	
STORAGE LIFE	0609	DS21448	150C	1000 HRS	76	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0609	DS21448	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0609	DS21448	-55C TO 125C	1000 CYS	76	0	
Total:						0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
BIASED MOISTURE	0609	DS21448	85/85, 3.5 VOLTS	1000 HRS	45	0	
BIASED MOISTURE	0609	DS21448	85/85, 3.5 VOLTS	1000 HRS	45	0	
Total:						0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST, NO BIAS	0609	DS21448	130C, 85% R.H.	200 HRS	76	0	
HAST, NO BIAS	0609	DS21448	130C, 85% R.H.	200 HRS	76	0	
Total:						0	

Assembly Information:

Package Type: LQFP (Pb-Free) 20x20x1.4
 Flammability: UL 94-V0
 Moisture Sensitivity (JEDEC J-STD20A) Level 4
 Date Code Range: 0527 to 0548

MOISTURE SENSITIVITY LEVEL 4

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
ULTRASOUND	0527	DS26303	J-STD-020		8	0	
STORAGE LIFE			125C	24 HRS	8		
MOISTURE SOAK			30C/60% R.H.	96 HRS	8		
CONVECTION REFLOW			260C +/-5C	3 PASS	8	0	
EXTERNAL VISUAL			J-STD-020, 6.1a		8	0	
PRECONDITION U/S			J-STD-020		8	0	
ULTRASOUND	0548	DS26303	J-STD-020		8	0	
STORAGE LIFE			125C	24 HRS	8		
MOISTURE SOAK			30C/60% R.H.	96 HRS	8		
CONVECTION REFLOW			260C +/-5C	3 PASS	8	0	
EXTERNAL VISUAL			J-STD-020, 6.1a		8	0	
PRECONDITION U/S			J-STD-020		8	0	
				Total:		0	

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0527	DS26303	125C, 3.5 VOLTS	1000 HRS	45	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
HIGH TEMP OP LIFE	0548	DS26303	125C, 3.5 VOLTS	1000 HRS	45	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
				Total:		0	

PACKAGE TESTS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
SOLDERABILITY (Sn/Pb)	0527	DS26303	JESD22-B102, COND C		3	0	
SOLDERABILITY (Pb-Free)			JESD22-B102, COND C		3	0	
X-RAY	0527	DS26303	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS			JESD22-B100		6	0	
MARK PERMANENCY			JESD22-B107		6	0	
LEAD INTEGRITY			JESD22-B105, COND B		6	0	
EXTERNAL VISUAL			JESD22-B101		6	0	
EDX			25 C		6	0	
SOLDERABILITY (Sn/Pb)	0548	DS26303	JESD22-B102, COND C		3	0	
SOLDERABILITY (Pb-Free)			JESD22-B102, COND C		3	0	
X-RAY	0548	DS26303	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS			JESD22-B100		6	0	
MARK PERMANENCY			JESD22-B107		6	0	
LEAD INTEGRITY			JESD22-B105, COND B		6	0	
EXTERNAL VISUAL			JESD22-B101		6	0	
EDX			25 C		6	0	
				Total:		0	

PRECONDITIONING LEVEL 4

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0527	DS26303	125C	24 HRS	321		
MOISTURE SOAK			30C/60% R.H.	96 HRS	321		

CONVECTION REFLOW	0527	DS26303	260C +/-5C	3	PASS	321	0
STORAGE LIFE	0548	DS26303	125C	24	HRS	321	
MOISTURE SOAK			30C/60% R.H.	96	HRS	321	
CONVECTION REFLOW			260C +/-5C	3	PASS	321	0
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0527	DS26303	150C	1000 HRS	77	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
STORAGE LIFE	0548	DS26303	150C	1000 HRS	77	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0527	DS26303	-55C TO 125C	1000 CYS	77	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
TEMP CYCLE	0548	DS26303	-55C TO 125C	1000 CYS	77	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
Total:						0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
BIASED MOISTURE	0527	DS26303	85/85, 3.5 VOLTS	1000 HRS	45	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
BIASED MOISTURE	0548	DS26303	85/85, 3.5 VOLTS	1000 HRS	45	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
Total:						0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST, NO BIAS	0527	DS26303	130C, 85% R.H.	200 HRS	76	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
HAST, NO BIAS	0548	DS26303	130C, 85% R.H.	200 HRS	77	0	
VISUAL INSPECTION			WHISKERS < 50uM		3	0	
Total:						0	

FAILURE RATE:

MTTF (YRS): 64207

FITS: 1.8