

RELIABILITY MONITOR REPORT  
FOR

**SSOP 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)	36	SSOP	ATP (Amkor, PI)	16 SSOP
ATP (Amkor, PI)	28	SSOP	ATP (Amkor, PI)	36 SSOP
ATP (Amkor, PI)	16	SSOP (Pb-Free)	ATP (Amkor, PI)	24 SSOP (Pb-Free)
ATP (Amkor, PI)	28	SSOP (Pb-Free)	ATP (Amkor, PI)	36 SSOP (Pb-Free)
Carsem	36	SSOP	Carsem	16 SSOP (Pb-Free)
Carsem	24	SSOP (Pb-Free)	Carsem	28 SSOP (Pb-Free)
Carsem	36	SSOP (Pb-Free)	Hynix	28 SSOP

The calculated failure rate for this assembly is:

**FAILURE RATE:                    MTTF (YRS): 18096                    FITS: 6.3**

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. At 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 10/1/2005 and 9/30/2006.

**Assembly Information:**

Package Type:                    SSOP 7.5x2.4  
 Flammability:                    UL 94-V0  
 Moisture Sensitivity                    Level 1  
 (JEDEC J-STD20A)  
 Date Code Range:                    0517 to 0517

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0517	DS2118M	125C, 5.5 VOLTS	1000 HRS	77	0	
<b>Total:</b>						<b>0</b>	

**PACKAGE TESTS**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
ULTRASOUND	0517	DS2118M	J-STD-020		4	0	
<b>Total:</b>						<b>0</b>	

**PRECONDITIONING LEVEL 1**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0517	DS2118M	125C	48 HRS	238		
MOISTURE SOAK			85 C/85% R.H.	168 HRS	238		
CONVECTION REFLOW			235C +5/-0C	3 PASS	238	0	
PRECONDITION U/S	0517	DS2118M	J-STD-020		4	0	
<b>Total:</b>						<b>0</b>	

**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
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TEMP CYCLE	0517	DS2118M	-55C TO 125C	1000	CYS	76	0
						<b>Total:</b>	<b>0</b>

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**UNBIASED MOISTURE RESISTANCE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
AUTOCLAVE	0517	DS2118M	121C, 2 ATM STEAM, UNBIASED	168	HRS	75	0
						<b>Total:</b>	<b>0</b>

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**Assembly Information:**

Package Type: SSOP (Pb-Free) 7.5x2.4  
 Flammability: UL 94-V0  
 Moisture Sensitivity (JEDEC J-STD20A) Level 1  
 Date Code Range: 0547 to 0547

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**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0547	DS2118M	125C, 5.5 VOLTS	1000	HRS	77	0
						<b>Total:</b>	<b>0</b>

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**PACKAGE TESTS**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
ULTRASOUND	0547	DS2118M	J-STD-020			4	0
						<b>Total:</b>	<b>0</b>

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**PRECONDITIONING LEVEL 1**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0547	DS2118M	125C	48	HRS	235	
MOISTURE SOAK			85 C/85% R.H.	168	HRS	235	
CONVECTION REFLOW			260C +/-5C	3	PASS	235	0
PRECONDITION U/S	0547	DS2118M	J-STD-020			4	0
						<b>Total:</b>	<b>0</b>

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**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0547	DS2118M	-55C TO 125C	1000	CYS	77	0
						<b>Total:</b>	<b>0</b>

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**UNBIASED MOISTURE RESISTANCE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
AUTOCLAVE	0547	DS2118M	121C, 2 ATM STEAM, UNBIASED	168	HRS	76	0
						<b>Total:</b>	<b>0</b>

**FAILURE RATE: MTTF (YRS): 18096 FITS: 6.3**