

RELIABILITY MONITOR REPORT
FOR

SOT Package

Dallas Semiconductor

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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		
ATP (Amkor, PI)	5	TSOT23	ATP (Amkor, PI)	6 TSOT23 (Pb-Free)
ATP (Amkor, PI)	8	TSOT23 (Pb-Free)	Carsem	3 SOT223
Carsem	3	SOT23	Carsem	5 SOT23
Carsem	8	SOT23	Carsem	3 SOT23 (Pb-Free)
Carsem	5	SOT23 (Pb-Free)	Carsem	5 TSOT23 (Pb-Free)
Fastech	3	SOT23	Fastech	5 SOT23
Hana	3	SOT223	Hana	3 SOT223 (Pb-Free)
ISPL (ATEC, PI)	3	SOT23	ISPL (ATEC, PI)	5 SOT23
ISPL (ATEC, PI)	3	SOT23 (Pb-Free)	ISPL (ATEC, PI)	5 SOT23 (Pb-Free)
ISPL (ATEC, PI)	3	SOT23 ATEC	Unisem	3 SOT23
Unisem	3	SOT23 (Pb-Free)	UTL (NSEB) UTAC	3 SOT23
UTL (NSEB) UTAC	5	SOT23	UTL (NSEB) UTAC	3 SOT23 (Pb-Free)
UTL (NSEB) UTAC	5	SOT23 (Pb-Free)	UTL (NSEB) UTAC	8 SOT23 (Pb-Free)

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 18801 FITS: 6.1

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: SOT223 140x1.75
 Flammability: UL 94-V0
 Moisture Sensitivity Level 1
 (JEDEC J-STD20A)
 Date Code Range: 0524 to 0547

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0524	DS1233	125C, 5.5 VOLTS	1000 HRS	80	0	
HIGH TEMP OP LIFE	0547	DS1233	125C, 5.5 VOLTS	1000 HRS	80	0	
Total:						0	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
ULTRASOUND	0524	DS1233	J-STD-020		4	0	
STORAGE LIFE	0524	DS1233	125C	24 HRS	241		
MOISTURE SOAK			85 C/85% R.H.	168 HRS	241		
CONVECTION REFLOW			235C +5/-0C	3 PASS	241	0	
PRECONDITION U/S	0524	DS1233	J-STD-020		4	0	
ULTRASOUND	0547	DS1233	J-STD-020		4	0	

STORAGE LIFE	0547	DS1233	125C	24	HRS	241	
MOISTURE SOAK			85 C/85% R.H.	168	HRS	241	
CONVECTION REFLOW			235C +5/-0C	3	PASS	241	0
PRECONDITION U/S	0547	DS1233	J-STD-020			4	0
Total:							0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0524	DS1233	-55C TO 125C	1000	CYS	40	0
TEMP CYCLE	0547	DS1233	-55C TO 125C	1000	CYS	40	0
Total:							0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST	0524	DS1233	130C, 85%R.H.,5.5V	96	HRS	77	0
HAST	0547	DS1233	130C, 85%R.H.,5.5V	96	HRS	77	0
Total:							0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
AUTOCLAVE	0524	DS1233	121C, 2 ATM STEAM, UNBIASED	168	HRS	40	0
AUTOCLAVE	0547	DS1233	121C, 2 ATM STEAM, UNBIASED	168	HRS	40	0
Total:							0

FAILURE RATE: MTTF (YRS): 18801 FITS: 6.1