

RELIABILITY MONITOR REPORT
FOR

MQFP 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	MQFP	ATK (Amkor, K)	80 MQFP
ATP (Amkor, PI)	100	MQFP	ATP (Amkor, PI)	44 MQFP
ATP (Amkor, PI)	80	MQFP	Carsem	80 MQFP
Stats	100	MQFP	Stats	80 MQFP

The calculated failure rate for this assembly is:

FAILURE RATE: **MTTF (YRS): 11872** **FITS: 9.6**

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 04/01/2004 and 03/31/2005.

Assembly Information:

Package Type: MQFP 14 mm
 Flammability: UL 94-V0
 Moisture Sensitivity
 (JEDEC J-STD20A) Level 4
 Date Code Range: 0347 to 0442

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0416	DS5240	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0440	DS5250	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0441	DS5240	125C, 5.5 VOLTS	1000 HRS	69	1	30031985
Total:						1	

PRECONDITIONING LEVEL 3

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
ULTRASOUND	0442	DS5002	J-STD-020		4	0	
STORAGE LIFE	0442	DS5002	125C	24 HRS	206		
MOISTURE SOAK			30C/60% R.H.	192 HRS	206		
CONVECTION REFLOW			220C +5/-0C	3 PASS	206	0	
Total:						0	

PRECONDITIONING LEVEL 4

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0347	DS5002	125C	48 HRS	77	0	
MOISTURE SOAK			30C/60% R.H.	96 HRS	77	0	
CONVECTION REFLOW			220C +5/-0C	3 PASS	77	0	
STORAGE LIFE	0347	DS5002	125C	48 HRS	77	0	
MOISTURE SOAK			30C/60% R.H.	96 HRS	77	0	

CONVECTION REFLOW	0347	DS5002	220C +5/-0C	3	PASS	77	0
STORAGE LIFE	0348	DS5002	125C	48	HRS	77	0
MOISTURE SOAK			30C/60% R.H.	96	HRS	77	0
CONVECTION REFLOW			220C +5/-0C	3	PASS	77	0
Total:						77	0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0441	DS5240	-55C TO 125C	1000	CYS	77	0
Total:						77	0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
AUTOCLAVE	0347	DS5002	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0
AUTOCLAVE	0347	DS5002	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0
AUTOCLAVE	0348	DS5002	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0
Total:						231	0

FAILURE RATE: MTTF (YRS): 11872 FITS: 9.6