



4/8/2009

RELIABILITY MONITOR REPORT
FOR

TQFP Package

MAXIM Integrated Products

120 San Gabriel Dr.
Sunnyvale, CA 94086

This Report was prepared by
Maxim Reliability Engineering

Summary:

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

ASSY SITE	PINS	PACKAGE		
ANAM-BUPYANG	48	TQFP (Pb-Free)	ATK (Amkor, K)	48 TQFP
Carsem-S	48	TQFP (Pb-Free)		

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 16377 FITS: 7.0

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

Cf: 60% Ea: 0.7 Tu: 25 °C

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 7/1/2007 and 6/30/2008.

Assembly Information:

Package Type: TQFP
Date Code Range: 0735 to 0735

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0735	DS3150	125C, 3.5 VOLTS	1000 HRS	77	0	
Total:						0	

Assembly Information:

Package Type: TQFP (Pb-Free)
Date Code Range: 0717 to 0751

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0727	MAX3674ECM+	135C	288 HRS	48	0	
HIGH TEMP OP LIFE	0730	MAX1308ECM+	135C	500 HRS	48	0	
Total:						0	

PACKAGE TESTS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
SOLDERABILITY (Pb-Free)	0730	MAX1308ECM+	JESD22-B102, COND C (245C)		15	0	
SOLDERABILITY (Pb-Free)	0730	MAX1308ECM+	JESD22-B102, COND C (245C)		15	0	
Total:						0	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
CONVECTION REFLOW	0730	MAX1308ECM+	260C +/-5C	3 PASS	240	0	
CONVECTION REFLOW	0747	MAX1313ECM+	260C +/-5C	3 PASS	240	0	

CONVECTION REFLOW	0751	MAX1312ECM+	260C +/-5C	3	PASS	240	0
						Total:	0

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0730	MAX1308ECM+	150C	1000 HRS	45	0	
						Total:	0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL	0717	MAX1304ECM+	-65C TO 150C	1000 CYS	73	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0717	MAX1304ECM+	-65C TO 150C	1000 CYS	73	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0717	MAX1304ECM+	-65C TO 150C	1000 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0730	MAX1308ECM+	-65C TO 150C	500 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0747	MAX1313ECM+	-65C TO 150C	1000 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0751	MAX1312ECM+	-65C TO 150C	1000 CYS	80	0	
						Total:	0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
BIASED MOISTURE	0717	MAX1304ECM+	130C, 85% R.H.	100 HRS	50	0	
BIASED MOISTURE	0717	MAX1304ECM+	130C, 85% R.H.	100 HRS	50	0	
BIASED MOISTURE	0730	MAX1308ECM+	130C, 85% R.H.	96 HRS	19	0	
BIASED MOISTURE	0747	MAX1313ECM+	130C, 85% R.H.	96 HRS	36	0	
BIASED MOISTURE	0751	MAX1312ECM+	130C, 85% R.H.	96 HRS	34	0	
						Total:	0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
MOISTURE SOAK	0730	MAX1308ECM+	130C, 85% R.H.	100 HRS	80	0	
						Total:	0

FAILURE RATE: MTTF (YRS): 16377 FITS: 7.0