



4/13/2009

RELIABILITY MONITOR REPORT
FOR

PBGA 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		
ATK (Amkor, K)	484	PBGA-HS (Pb-Free)	ATP (Amkor, PI)	400 PBGA-TE (Pb-Free)
ATP (Amkor, PI)	484	PBGA-TE (Pb-Free)		

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 10575 FITS: 10.8

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 10/1/2007 and 9/30/2008.

Assembly Information:

Package Type: PBGA-HS (Pb-Free)
Date Code Range: 0820 to 0824

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0824	DS34T108	125C, 2.0V (PSB) & 3.5V (PSA)	1000 HRS	45	0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0820	DS34T108	150C	1000 HRS	77	0	
STORAGE LIFE	0824	DS34T108	150C	1000 HRS	77	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL	0820	DS34T108	-40C TO +125C	1000 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0824	DS34T108	-40C TO +125C	1000 CYS	77	0	
Total:						0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
BIASED MOISTURE	0820	DS34T108	85/85, 3.5 VOLTS	1000 HRS	45	0	
BIASED MOISTURE	0824	DS34T108	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
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HAST, NO BIAS	0820	DS34T108	130C, 85% R.H.	100	HRS	77	0
HAST, NO BIAS	0824	DS34T108	130C, 85% R.H.	100	HRS	70	0
Total:							0

Assembly Information:

Package Type: PBGA-TE (Pb-Free)
Date Code Range: 0708 to 0743

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0743	DS32506	125C, 2.0V (PSA) & 3.5V (PSB)	1000 HRS	45	0	
Total:							0

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0743	DS32506	150C	1000 HRS	77	0	
Total:							0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL	0708	DS33R41	-40C TO +125C	1000 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0708	DS33R41	-40C TO +125C	1000 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0743	DS32506	-55C TO 125C	1000 CYS	77	0	
Total:							0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
BIASED MOISTURE	0743	DS32506	85/85, 2.0 VOLTS	1000 HRS	45	0	
Total:							0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST, NO BIAS	0743	DS32506	110C, 85% R.H.	264 HRS	74	0	
Total:							0

FAILURE RATE: MTTF (YRS): 10575 FITS: 10.8