



1/25/2008

RELIABILITY MONITOR REPORT
FOR

CSBGA 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		
ATP (Amkor, PI)	256	CSBGA	ATP (Amkor, PI)	25 CSBGA (Pb-Free)
ATP (Amkor, PI)	256	CSBGA (Pb-Free)	ATP (Amkor, PI)	144 CSBGA-TE
SCK (StatsChipPac)	144	CSBGA (Pb-Free)	SCS (StatsChipPac Si	16 CSBGA
SCS (StatsChipPac Si	49	CSBGA (Pb-Free)	SCS (StatsChipPac Si	100 CSBGA (Pb-Free)
UNK	100	CSBGA	UNK	169 CSBGA

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 45615 FITS: 2.5

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 and

Assembly Information:

Package Type: CSBGA
 Flammability: UL 94-V0
 Date Code Range: 0704 to 0711

DATA RETENTION

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0711	DS3650	150C	1000 HRS	77	0	
Total:						0	

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0704	MAX5859EX W+	135C, 5.25V	1000 HRS	45	0	
			135C, 5.25V	1000 HRS	45	0	
			135C, 5.25V	1000 HRS	44	0	
HIGH TEMP OP LIFE	0705	DS3100	125C, 3.5V (PSA) & 2.0V (PSB)	1000 HRS	48	0	
HIGH TEMP OP LIFE	0706	806-0634-22+	135C, 5.25V	1000 HRS	45	0	
HIGH TEMP OP LIFE	0711	DS3650	125C, 3.0V (PSB) & 3.6V (PSA)	1000 HRS	45	0	
Total:						0	

Assembly Information:

Package Type: CSBGA (Pb-Free)
 Flammability: UL 94-V0
 Date Code Range: 0641 to 0729

DATA RETENTION

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
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STORAGE LIFE	0651	DS3641	150C	1000 HRS	77	0
STORAGE LIFE	0715	DS3605	150C	1000 HRS	77	0
Total:						0

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0641	DS21348	125C, 3.5 VOLTS	1000 HRS	45	0	
HIGH TEMP OP LIFE	0642	DS32504	125C, 2.0V (PSA) & 3.5V (PSB)	1000 HRS	45	0	
HIGH TEMP OP LIFE	0649	DS33X162	125C, 2.0V (PSB) & 3.5V (PSA)	1000 HRS	45	0	
HIGH TEMP OP LIFE	0650	DS26522	125C, 3.5 VOLTS	1000 HRS	45	0	
HIGH TEMP OP LIFE	0650	DS26522	125C, 3.5 VOLTS	1000 HRS	45	0	
HIGH TEMP OP LIFE	0651	DS3641	125C, 3.6 VOLTS	1000 HRS	45	0	
HIGH TEMP OP LIFE	0715	DS3605	125C, 3.6 VOLTS	1000 HRS	45	0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0641	DS21348	150C	1000 HRS	77	0	
STORAGE LIFE	0650	DS26522	150C	1000 HRS	77	0	
STORAGE LIFE	0650	DS26522	150C	1000 HRS	77	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0641	DS21348	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0650	DS26522	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0650	DS26522	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0729	DS2155	-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	0641	DS21348	85/85, 3.5 VOLTS	1000 HRS	45	0	
BIASED MOISTURE CYCLING	0650	DS26522	85/85, 3.5 VOLTS	1000 HRS	40	0	
BIASED MOISTURE CYCLING	0650	DS26522	85/85, 3.5 VOLTS	1000 HRS	40	0	
Total:						0	

Assembly Information:

Package Type: CSBGA-TE
 Flammability: UL 94-V0
 Date Code Range: 0641 to 0641

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0641	DS3254	125C, 3.5 VOLTS	1000 HRS	45	0	
				Total:		0	

FAILURE RATE: MTTF (YRS): 45615 FITS: 2.5