



5/9/2009

RELIABILITY MONITOR REPORT
FOR

TSSOP 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)	8	TSSOP (Pb-Free)	ATP (Amkor, PI)	20 TSSOP (Pb-Free)
ATP (Amkor, PI)	24	TSSOP (Pb-Free)	ATP (Amkor, PI)	28 TSSOP (Pb-Free)
ATP (Amkor, PI)	48	TSSOP (Pb-Free)	Carsem	28 TSSOP (Pb-Free)
Carsem-M	16	TSSOP (Pb-Free)	Carsem-S	14 TSSOP
Carsem-S	14	TSSOP (Pb-Free)	Carsem-S	28 TSSOP (Pb-Free)
Carsem-S	48	TSSOP (Pb-Free)	Hana AYUTHAYA	8 TSSOP
Unisem Malaysia	8	TSSOP	UTL (NSEB) UTAC	28 TSSOP
UTL (NSEB) UTAC	14	TSSOP (Pb-Free)	UTL (NSEB) UTAC	20 TSSOP (Pb-Free)
UTL (NSEB) UTAC	28	TSSOP (Pb-Free)		

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 102698 FITS: 1.1

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 1/1/2008 and 12/31/2008.

Assembly Information:

Package Type: TSSOP
 Date Code Range: 0735 to 0825

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0735	MAX7500MUA+	150C	500 HRS	80	0	
STORAGE LIFE	0735	MAX7500MUA+	150C	500 HRS	80	0	
STORAGE LIFE	0735	MAX7500MUA+	150C	1000 HRS	80	0	
STORAGE LIFE	0735	MAX7500MUA+	150C	1000 HRS	80	0	
STORAGE LIFE	0741	MAX7500MUA+	150C	1000 HRS	48	0	
STORAGE LIFE	0741	MAX7500MUA+	150C	1000 HRS	48	0	
STORAGE LIFE	0747	MAX4394EUD+	150C	1000 HRS	80	0	
STORAGE LIFE	0747	MAX4394EUD+	150C	1000 HRS	80	0	
STORAGE LIFE	0804	MAX7034AUI+	150C	1000 HRS	80	0	
STORAGE LIFE	0804	MAX7034AUI+	150C	1000 HRS	80	0	
STORAGE LIFE	0825	MAX1790EUA+	150C	1000 HRS	80	0	
STORAGE LIFE	0825	MAX1790EUA+	150C	500 HRS	80	0	
STORAGE LIFE	0825	MAX1790EUA+	150C	500 HRS	80	0	
STORAGE LIFE	0825	MAX1790EUA+	150C	1000 HRS	80	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
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TEMP CYCLE, 5' RAMP, 10' DWELL	0735	MAX7500MUA+	-65C TO 150C	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0735	MAX7500MUA+	-65C TO 150C	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0747	MAX4394EUD+	-65C TO 150C	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0747	MAX4394EUD+	-65C TO 150C	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0747	MAX4394EUD+	-65C TO 150C	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0747	MAX4394EUD+	-65C TO 150C	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0804	MAX7034AUI+	-65C TO 150C	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0804	MAX7034AUI+	-65C TO 150C	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0825	MAX1790EUA+	-65C TO 150C	200	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0825	MAX1790EUA+	-65C TO 150C	200	CYS	80	0
Total:						0	0

Assembly Information:

Package Type: TSSOP (Pb-Free)

Date Code Range: 0649 to 0826

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0734	DS1081L	125C, 3.6 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0734	MAX2027EUP+	135C	1000 HRS	48	0	
HIGH TEMP OP LIFE	0749	MAXQ3180	125C, 3.6 VOLTS	1000 HRS	44	0	
HIGH TEMP OP LIFE	0751	DS2119M	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0803	MAX3388ECUG+	135C	1000 HRS	50	0	
HIGH TEMP OP LIFE	0803	MAX3388ECUG+	135C	1000 HRS	50	0	
HIGH TEMP OP LIFE	0803	MAX3388ECUG+	135C	1000 HRS	50	0	
HIGH TEMP OP LIFE	0804	DS2780	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0804	MAX3222EEUP+	135C	138 HRS	45	0	
HIGH TEMP OP LIFE	0806	DS2710	125C, 5.5 VOLTS	1000 HRS	45	0	
HIGH TEMP OP LIFE	0807	DS2119M	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0807	DS2119M	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0807	DS2119M	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0818	MAX11508UUD+	135C	192 HRS	50	0	
HIGH TEMP OP LIFE	0818	MAX11509UUD+	135C	192 HRS	48	0	
HIGH TEMP OP LIFE	0819	MAX6693UP9A+	135C	192 HRS	50	0	
Total:						0	0

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0649	MAX1082AEUE+	150C	1000 HRS	45	0	

STORAGE LIFE	0734	DS1081L	150C	1000 HRS	77	0
STORAGE LIFE	0751	DS2119M	150C	1000 HRS	77	0
STORAGE LIFE	0801	MAX9246EUM+	150C	1000 HRS	44	0
STORAGE LIFE	0803	MAX3388ECUG+	150C	1000 HRS	80	0
STORAGE LIFE	0803	MAX3388ECUG+	150C	1000 HRS	80	0
STORAGE LIFE	0803	MAX3388ECUG+	150C	1000 HRS	80	0
STORAGE LIFE	0807	DS2119M	150C	1000 HRS	77	0
STORAGE LIFE	0807	DS2119M	150C	1000 HRS	77	0
STORAGE LIFE	0807	DS2119M	150C	1000 HRS	77	0
STORAGE LIFE	0818	MAX7033EUI+	150C	1000 HRS	80	0
STORAGE LIFE	0818	MAX7033EUI+	150C	1000 HRS	79	0
STORAGE LIFE	0818	MAX7033EUI+	150C	1000 HRS	79	0
STORAGE LIFE	0819	MAX9246EUM+	150C	1000 HRS	80	0
STORAGE LIFE	0819	MAX9246EUM+	150C	1000 HRS	80	0
STORAGE LIFE	0819	MAX9246EUM+	150C	500 HRS	80	0
STORAGE LIFE	0819	MAX9246EUM+	150C	1000 HRS	80	0
STORAGE LIFE	0819	MAX4234AUD+	150C	500 HRS	45	0
Total:						0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL	0649	MAX1082AEUE+	-65C TO 150C	1000 CYS	78	0	
BOND STRENGTH	0734	DS1081L	MIL-STD-883-2011 : COND D	40 WIRES	5	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0734	DS1081L	-65C TO 150C	500 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0751	DS2119M	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0803	MAX7034AUI+	-65C TO 150C	1000 CYS	74	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0803	MAX3388ECUG+	-65C TO 150C	1000 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0803	MAX3388ECUG+	-65C TO 150C	1000 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0803	MAX3388ECUG+	-65C TO 150C	1000 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0804	MAX3222EEUP+	-65C TO 150C	1000 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0807	DS2119M	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0807	DS2119M	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0807	DS2119M	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0808	MAX3225EUP+	-65C TO 150C	1000 CYS	80	0	

TEMP CYCLE, 5' RAMP, 10' DWELL	0818	MAX7033EUI+	-65C TO 150C	900	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0818	MAX7033EUI+	-65C TO 150C	900	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0818	MAX7033EUI+	-65C TO 150C	900	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0819	MAX9246EUM+	-65C TO 150C	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0819	MAX9246EUM+	-65C TO 150C	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0819	MAX9246EUM+	-65C TO 150C	1000	CYS	80	0
Total:						0	0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST	0734	DS1081L	130C, 85%R.H.,3.5V	96	HRS	77	0
BIASED MOISTURE	0751	DS2119M	85/85, 5.5 VOLTS	1000	HRS	77	0
HAST, NO BIAS	0751	DS2119M	130C, 85% R.H.	96	HRS	77	0
BIASED MOISTURE	0807	DS2119M	85/85, 5.5 VOLTS	1000	HRS	45	0
BIASED MOISTURE	0807	DS2119M	85/85, 5.5 VOLTS	1000	HRS	45	0
BIASED MOISTURE	0807	DS2119M	85/85, 5.5 VOLTS	1000	HRS	45	0
Total:						0	0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
AUTOCLAVE	0734	DS1081L	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0
Total:						0	0

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0802	DS3508	150C	1000	HRS	77	0
WRITE CYCLE STRESS (KCYS)	0802	DS3508	85 C, 5.5 V (PSA) & 15.0 V (PSB)	50	KCYS	77	0
STORAGE LIFE	0826	DS2784	150C	1000	HRS	77	0
WRITE CYCLE STRESS (KCYS)	0826	DS2784	50 C, 5.5 V (PSA) & 15.0 V (PSB)	50	KCYS	77	0
Total:						0	0

FAILURE RATE: MTTF (YRS): 102698 FITS: 1.1