

4/16/2014



**RELIABILITY MONITOR REPORT
FOR**

SOT Package

MAXIM INTEGRATED

**160 RIO ROBLES
SAN JOSE, CA 95134**

**This Report was prepared by
MAXIM INTEGRATED 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	6	SOT23 (Pb-Free)	Carsem-M	3 SOT23 (Pb-Free)
Carsem-M	6	SOT23 (Pb-Free)	CHIPBOND/UTL	6 SOT23 Flip Chip
TERAPROBE/ATP	6	SOT23 (Pb-Free)	TERAPROBE/UTL	6 SOT23 (Pb-Free)
UTL	8	SOT23 (Pb-Free)		

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 190259 FITS: 0.6

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 4/1/2013 and 3/31/2014.

Assembly Information:

Package Type: SOT23 (Pb-Free)

Date Code Range: 1206 to 1406

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	1206	MAX6070BAUT25+T	135°C	1000 HRS	79	0	
HIGH TEMP OP LIFE	1221	MAX6070AAUT41+T	135°C	1000 HRS	78	0	
HIGH TEMP OP LIFE	1221	MAX6070AAUT41+T	135°C	500 HRS	79	0	
HIGH TEMP OP LIFE	1221	MAX6070BAUT12+T	135°C	1000 HRS	80	0	
HIGH TEMP OP LIFE	1221	MAX6070BAUT12/V+ T	135°C	1000 HRS	77	0	
HIGH TEMP OP LIFE	1308	MAX6008AEUR/V+	135°C	192 HRS	80	0	
HIGH TEMP OP LIFE	1312	MAX14667EKA+	135°C	228 HRS	80	0	
HIGH TEMP OP LIFE	1313	MAX15070AAUT+	135°C	1000 HRS	79	0	
HIGH TEMP OP LIFE	1313	MAX15070AAUT+	135°C	1000 HRS	80	0	
HIGH TEMP OP LIFE	1313	MAX15070AAUT+	135°C	1000 HRS	80	0	
HIGH TEMP OP LIFE	1327	MAX6070BAUT12/V+ T	135°C	1000 HRS	78	0	
HIGH TEMP OP LIFE	1331	MAX6070BAUT12/V+ T	135°C	1000 HRS	78	0	
HIGH TEMP OP LIFE	1333	MAX8880EUT+T	135°C	1000 HRS	76	0	
HIGH TEMP OP LIFE	1333	MAX8880EUT+T	135°C	500 HRS	77	0	
HIGH TEMP OP LIFE	1333	MAX8880EUT+T	135°C	1000 HRS	77	0	
HIGH TEMP OP LIFE	1333	MAX8880EUT+T	135°C	500 HRS	77	0	
HIGH TEMP OP LIFE	1333	MAX8880EUT+T	135°C	1000 HRS	77	0	

HIGH TEMP OP LIFE	1341	MAX6070BAUT12/V+ 135°C T	500 HRS	79	0
HIGH TEMP OP LIFE	1344	MAX5048BAUT+ 135°C	1000 HRS	48	0
HIGH TEMP OP LIFE	1345	MAX6008AEUR/V+ 135°C	192 HRS	80	0
HIGH TEMP OP LIFE	1345	MAX6008AEUR/V+ 135°C	192 HRS	79	0
Total:				0	0

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	1221	MAX6070BAUT12/V+ 150°C T	150°C	1000 HRS	49	0	
STORAGE LIFE	1308	MAX6008AEUR/V+ 150°C	150°C	500 HRS	50	0	
STORAGE LIFE	1313	MAX15070AAUT+ 150°C	150°C	1000 HRS	80	0	
STORAGE LIFE	1313	MAX15070AAUT+ 150°C	150°C	1000 HRS	80	0	
STORAGE LIFE	1313	MAX15070AAUT+ 150°C	150°C	1000 HRS	80	0	
STORAGE LIFE	1327	MAX6070BAUT12/V+ 150°C T	150°C	1000 HRS	80	0	
STORAGE LIFE	1331	MAX6070BAUT12/V+ 150°C T	150°C	1000 HRS	80	0	
STORAGE LIFE	1333	MAX8880EUT+T 150°C	150°C	1000 HRS	80	0	
STORAGE LIFE	1333	MAX8880EUT+T 150°C	150°C	1000 HRS	80	0	
STORAGE LIFE	1333	MAX8880EUT+T 150°C	150°C	1000 HRS	80	0	
STORAGE LIFE	1341	MAX6070BAUT12/V+ 150°C T	150°C	1000 HRS	50	0	
STORAGE LIFE	1341	MAX6070BAUT12/V+ 150°C T	150°C	500 HRS	50	0	
STORAGE LIFE	1344	MAX5048BAUT+ 150°C	150°C	1000 HRS	80	0	
STORAGE LIFE	1406	MAX1697TEUT+T 150°C	150°C	500 HRS	80	0	
Total:				0	0	0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL	1221	MAX6070BAUT12/V+ 150°C T	-65C TO 150C	500 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	1221	MAX6070BAUT12/V+ 150°C T	-65C TO 150C	100 CYS	30	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	1313	MAX15070AAUT+ 150°C	-65C TO 150C	1000 CYS	79	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	1313	MAX15070AAUT+ 150°C	-65C TO 150C	1000 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	1313	MAX15070AAUT+ 150°C	-65C TO 150C	1000 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	1327	MAX6070BAUT12/V+ 150°C T	-65C TO 150C	500 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	1331	MAX6070BAUT12/V+ 150°C T	-65C TO 150C	500 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	1333	MAX8880EUT+T 150°C	-65C TO 150C	1000 CYS	80	0	

TEMP CYCLE, 5' RAMP, 10' DWELL	1333	MAX8880EUT+T	-65C TO 150C	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1333	MAX8880EUT+T	-65C TO 150C	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1341	MAX6070BAUT12/V+ T	-65C TO 150C	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1344	MAX5048BAUT+	-65C TO 150C	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1345	MAX6008AEUR/V+	-65C TO 150C	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1345	MAX6008AEUR/V+	-65C TO 150C	500	CYS	80	0
Total:						0	0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
BIASED MOISTURE	1313	MAX15070AAUT+	130C, 85% R.H.	100	HRS	80	0
BIASED MOISTURE	1313	MAX15070AAUT+	130C, 85% R.H.	100	HRS	80	0
BIASED MOISTURE	1327	MAX6070BAUT12/V+ T	130C, 85% R.H.	100	HRS	80	0
BIASED MOISTURE	1331	MAX6070BAUT12/V+ T	130C, 85% R.H.	100	HRS	80	0
BIASED MOISTURE	1341	MAX6070BAUT12/V+	130C, 85% R.H.	100	HRS	80	0
BIASED MOISTURE	1344	MAX5048BAUT+	130C, 85% R.H.	100	HRS	79	0
BIASED MOISTURE	1345	MAX6008AEUR/V+	130C, 85% R.H.	100	HRS	80	0
BIASED MOISTURE	1345	MAX6008AEUR/V+	130C, 85% R.H.	100	HRS	80	0
BIASED MOISTURE	1406	MAX1697TEUT+T	130C, 85% R.H.	100	HRS	80	0
Total:						0	0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
MOISTURE SOAK	1221	MAX6070BAUT12/V+ T	130C, 85% R.H.	100	HRS	80	0
MOISTURE SOAK	1327	MAX6070BAUT12/V+ T	130C, 85% R.H.	100	HRS	80	0
MOISTURE SOAK	1331	MAX6070BAUT12/V+ T	130C, 85% R.H.	100	HRS	80	0
MOISTURE SOAK	1333	MAX8880EUT+T	130C, 85% R.H.	1000	HRS	80	0
MOISTURE SOAK	1333	MAX8880EUT+T	85 C/85% R.H.	1000	HRS	45	0
MOISTURE SOAK	1333	MAX8880EUT+T	130C, 85% R.H.	1000	HRS	80	0
MOISTURE SOAK	1333	MAX8880EUT+T	85 C/85% R.H.	1000	HRS	45	0
MOISTURE SOAK	1333	MAX8880EUT+T	130C, 85% R.H.	1000	HRS	80	0
MOISTURE SOAK	1333	MAX8880EUT+T	85 C/85% R.H.	1000	HRS	45	0
MOISTURE SOAK	1341	MAX6070BAUT12/V+	130C, 85% R.H.	100	HRS	80	0
MOISTURE SOAK	1345	MAX6008AEUR/V+	130C, 85% R.H.	100	HRS	80	0
MOISTURE SOAK	1345	MAX6008AEUR/V+	130C, 85% R.H.	100	HRS	80	0

MOISTURE SOAK	1406	MAX1697TEUT+T	130C, 85% R.H.	100	HRS	80	0
Total:							0

Assembly Information:

Package Type: SOT23 Flip Chip
 Date Code Range: 1405 to 1405

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	1405	MAX16945TGU#TG1 6	150°C	500	HRS	80	0
Total:							0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL	1405	MAX16945TGU#TG1 6	-65C TO 150C	500	CYS	80	0
Total:							0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
BIASED MOISTURE	1405	MAX16945TGU#TG1 6	130C, 85% R.H.	100	HRS	80	0
Total:							0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
MOISTURE SOAK	1405	MAX16945TGU#TG1 6	130C, 85% R.H.	100	HRS	80	0
Total:							0

FAILURE RATE: MTTF (YRS): 190259 FITS: 0.6