



10/8/2010

**RELIABILITY MONITOR REPORT
FOR**

WLP 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		
CASIO MICRONIC	6	WLP (Pb-Free)	CASIO MICRONIC	16 WLP (Pb-Free)
CASIO MICRONIC	25	WLP (Pb-Free)	CASIO MICRONIC	42 WLP (Pb-Free)
CASIO MICRONIC	49	WLP (Pb-Free)	CASIO MICRONIC	63 WLP (Pb-Free)
CASIO MICRONIC	70	WLP (Pb-Free)	CASIO MICRONIC	100 WLP (Pb-Free)
CASIO MICRONIC	110	WLP (Pb-Free)	CASIO MICRONIC	182 WLP (Pb-Free)
CASIO MICRONIC	225	WLP (Pb-Free)	DALLAS-MAXFIL	30 WLP (Pb-Free)
DALLAS-MAXFIL	81	WLP (Pb-Free)	DALLAS-MAXFIL	100 WLP (Pb-Free)

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 163078 FITS: 0.7

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 10/1/2009 and 9/30/2010.

Assembly Information:

Package Type: WLP (Pb-Free)

Date Code Range: 1024 to N/A

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE		MAX2203EWT+T	135C	1000 HRS	44	0	
HIGH TEMP OP LIFE		MAX8699EWC+T	135C	500 HRS	46	0	
HIGH TEMP OP LIFE	0838	MAX8920EWI+T	135C	1000 HRS	45	0	
HIGH TEMP OP LIFE	0902	MAX2203EWT+T	135C	1000 HRS	45	0	
HIGH TEMP OP LIFE	0921	MAX8930EWJ+T	135C	1000 HRS	48	0	
HIGH TEMP OP LIFE	0922	MAX8930EWJ+T	135C	1000 HRS	48	0	
HIGH TEMP OP LIFE	0937	MAX15050EWE+	135C	192 HRS	50	0	
HIGH TEMP OP LIFE	0937	MAX15050EWE+	135C	192 HRS	50	0	
HIGH TEMP OP LIFE	0950	MAX8893CEWV+T	135C	281 HRS	50	0	
HIGH TEMP OP LIFE	0951	MAX8930EWJ+T	135C	1000 HRS	48	0	
HIGH TEMP OP LIFE	1005	MAX8930EWJ+T	135C	1000 HRS	46	0	
HIGH TEMP OP LIFE	1005	MAX8930EWJ+T	135C	500 HRS	46	0	
HIGH TEMP OP LIFE	1005	MAX8930EWJ+T	135C	500 HRS	46	0	
HIGH TEMP OP LIFE	1010	MAX8930EWJ+T	135C	1000 HRS	46	0	
HIGH TEMP OP LIFE	1010	MAX8930EWJ+T	135C	500 HRS	46	0	
HIGH TEMP OP LIFE	1023	MAX8930EWJ+	135C	1000 HRS	46	0	

HIGH TEMP OP LIFE	1026	MAX97000EWA+T	135C	1000 HRS	46	0
HIGH TEMP OP LIFE	1026	MAX8930EWJ+T	135C	1000 HRS	46	0
HIGH TEMP OP LIFE	N/A	MAX8930EWJ+T	135C	1000 HRS	48	0
HIGH TEMP OP LIFE	N/A	MAX8920EWI+T	135C	1000 HRS	45	0
HIGH TEMP OP LIFE	N/A	MAX8697SEWQ+T	135C	1000 HRS	46	0
HIGH TEMP OP LIFE	N/A	MAX8697SEWQ+T	135C	1000 HRS	45	0
Total:					0	0

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE		MAX8699EWC+T	150C	1000 HRS	80	0	
STORAGE LIFE	0111	MAX8698CEWO+T	150C	500 HRS	77	0	
STORAGE LIFE	0111	MAX8698CEWO+T	150C	500 HRS	77	0	
STORAGE LIFE	0111	MAX8698CEWO+T	150C	500 HRS	77	0	
STORAGE LIFE	0951	MAX8930EWJ+T	150C	1000 HRS	80	0	
STORAGE LIFE	1005	MAX8930EWJ+T	150C	1000 HRS	77	0	
STORAGE LIFE	1005	MAX8930EWJ+T	150C	1000 HRS	77	0	
STORAGE LIFE	1005	MAX8930EWJ+T	150C	1000 HRS	77	0	
STORAGE LIFE	1010	MAX8930EWJ+T	150C	1000 HRS	80	0	
STORAGE LIFE	1010	MAX8930EWJ+T	150C	1000 HRS	80	0	
STORAGE LIFE	1018	MAX8930EWJ+	150C	1000 HRS	80	0	
STORAGE LIFE	1020	MAX8930EWJ+	150C	1000 HRS	80	0	
STORAGE LIFE	1020	MAX8930EWJ+	150C	1000 HRS	80	0	
STORAGE LIFE	1023	MAX8930EWJ+	150C	1000 HRS	80	0	
STORAGE LIFE	1023	MAX8930EWJ+	150C	1000 HRS	80	0	
STORAGE LIFE	1026	MAX97000EWA+T	150C	1000 HRS	80	0	
STORAGE LIFE	1026	MAX8930EWJ+T	150C	1000 HRS	80	0	
STORAGE LIFE	N/A	MAX9888EWJ+	150C	1000 HRS	80	0	
STORAGE LIFE	N/A	MAX9888EWJ+	150C	1000 HRS	80	0	
STORAGE LIFE	N/A	MAX9888EWJ+	150C	1000 HRS	80	0	
STORAGE LIFE	N/A	MAX9888EWJ+T	150C	1000 HRS	80	0	
STORAGE LIFE	N/A	MAX9888EWJ+T	150C	1000 HRS	80	0	
STORAGE LIFE	N/A	MAX9888EWJ+T	150C	1000 HRS	80	0	
STORAGE LIFE	N/A	MAX8998EWQ+T	150C	1000 HRS	80	0	
STORAGE LIFE	N/A	MAX8998EWQ+T	150C	1000 HRS	80	0	
STORAGE LIFE	N/A	MAX8998EWQ+T	150C	1000 HRS	80	0	
STORAGE LIFE	N/A	MAX8920EWI+T	150C	1000 HRS	77	0	
STORAGE LIFE	N/A	MAX8920EWI+T	150C	1000 HRS	77	0	
STORAGE LIFE	N/A	MAX8998EWQ+T	150C	500 HRS	80	0	

STORAGE LIFE	N/A	MAX8998EWQ+T	150C	500	HRS	80	0
STORAGE LIFE	N/A	MAX8998EWQ+T	150C	500	HRS	80	0
STORAGE LIFE	N/A	MAX8697SEWQ+T	150C	1000	HRS	80	0
STORAGE LIFE	N/A	MAX8697SEWQ+T	150C	1000	HRS	79	0
STORAGE LIFE	N/A	MAX14568EEWA+T	150C	1000	HRS	77	0
STORAGE LIFE	N/A	MAX14568EEWA+T	150C	1000	HRS	77	0
STORAGE LIFE	N/A	MAX14568EEWA+T	150C	500	HRS	77	0
STORAGE LIFE	N/A	MAX14803AEWZ+T	150C	500	HRS	77	0
STORAGE LIFE	N/A	MAX14803AEWZ+T	150C	500	HRS	77	0
STORAGE LIFE	N/A	MAX14803AEWZ+T	150C	500	HRS	77	0
Total:							0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX8699EWC+T	-40C TO +125C	200 CYS	80	0	
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX9888EWY+T	-40C TO +125C	1000 CYS	50	0	
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX9888EWY+T	-40C TO +125C	1000 CYS	50	0	
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX9888EWY+T	-40C TO +125C	1000 CYS	49	0	
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX8899EWZ+T	-40C TO +125C	500 CYS	77	0	
TEMP CYCLE, 15' RAMP, 15' DWELL	0921	MAX8930EWJ+T	-40C TO +125C	500 CYS	80	0	
TEMP CYCLE, 15' RAMP, 15' DWELL	0922	MAX8930EWJ+T	-40C TO +125C	500 CYS	80	0	
TEMP CYCLE, 15' RAMP, 15' DWELL	0922	MAX8930EWJ+T	-40C TO +125C	500 CYS	80	0	
TEMP CYCLE, 15' RAMP, 15' DWELL	0922	MAX8930EWJ+T	-40C TO +125C	500 CYS	80	0	
TEMP CYCLE, 15' RAMP, 15' DWELL	0951	MAX8930EWJ+T	-40C TO +125C	500 CYS	80	0	
TEMP CYCLE, 15' RAMP, 15' DWELL	1005	MAX8930EWJ+T	-40C TO +125C	500 CYS	77	0	
TEMP CYCLE, 15' RAMP, 15' DWELL	1005	MAX8930EWJ+T	-40C TO +125C	500 CYS	77	0	
TEMP CYCLE, 15' RAMP, 15' DWELL	1005	MAX8930EWJ+T	-40C TO +125C	500 CYS	77	0	
TEMP CYCLE, 15' RAMP, 15' DWELL	1010	MAX8930EWJ+T	-40C TO +125C	500 CYS	80	0	
TEMP CYCLE, 15' RAMP, 15' DWELL	1010	MAX8930EWJ+T	-40C TO +125C	500 CYS	80	0	
TEMP CYCLE, 15' RAMP, 15' DWELL	1018	MAX8930EWJ+	-40C TO +125C	500 CYS	80	0	
TEMP CYCLE, 15' RAMP, 15' DWELL	1020	MAX8930EWJ+	-40C TO +125C	500 CYS	80	0	

TEMP CYCLE, 15' RAMP, 15' DWELL	1020	MAX8930EWJ+	-40C TO +125C	500	CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	1023	MAX8930EWJ+	-40C TO +125C	500	CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	1023	MAX8930EWJ+	-40C TO +125C	500	CYS	79	0
TEMP CYCLE, 15' RAMP, 15' DWELL	1024	MAX9888EWY+T	-40C TO +125C	500	CYS	77	0
TEMP CYCLE, 15' RAMP, 15' DWELL	1024	MAX9888EWY+T	-40C TO +125C	500	CYS	77	0
TEMP CYCLE, 15' RAMP, 15' DWELL	1026	MAX97000EWA+T	-40C TO +125C	200	CYS	80	
TEMP CYCLE, 15' RAMP, 15' DWELL	1026	MAX8930EWJ+T	-40C TO +125C	500	CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX9888EWJ+	-40C TO +125C	1000	CYS	80	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX9888EWJ+	-40C TO +125C	1000	CYS	80	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX9888EWJ+T	-40C TO +125C	1000	CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX9888EWJ+T	-40C TO +125C	1000	CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX9888EWJ+T	-40C TO +125C	1000	CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8906EWA+T	-40C TO +125C	400	CYS	30	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8906EWA+T	-40C TO +125C	400	CYS	40	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8906EWA+T	-40C TO +125C	400	CYS	40	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8906EWA+T	-40C TO +125C	350	CYS	80	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8906EWA+T	-40C TO +125C	350	CYS	80	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8906EWA+T	-40C TO +125C	350	CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8998EWQ+T	-40C TO +125C	350	CYS	200	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8920EWI+T	-40C TO +125C	750	CYS	75	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8920EWI+T	-40C TO +125C	750	CYS	77	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8920EWI+T	-40C TO +125C	750	CYS	75	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8998EWQ+T	-40C TO +125C	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX8998EWQ+T	-65C TO 150C	500	CYS	77	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8998EWQ+T	-40C TO +125C	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX8998EWQ+T	-65C TO 150C	500	CYS	77	0

TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8998EWQ+T	-40C TO +125C	1000 CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX8998EWQ+T	-65C TO 150C	500 CYS	77	0
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX8697SEWQ+T	-65C TO 150C	500 CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8697SEWQ+T	-40C TO +125C	200 CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8697SEWQ+T	-40C TO +125C	750 CYS	78	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8697SEWQ+T	-40C TO +125C	750 CYS	79	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8697SEWQ+T	-40C TO +125C	750 CYS	77	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX14568EEWA+T	-40C TO +125C	1000 CYS	77	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX14568EEWA+T	-40C TO +125C	1000 CYS	77	
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX14568EEWA+T	-40C TO +125C	1000 CYS	77	0
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX14568EEWA+T	-65C TO 150C	500 CYS	77	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MA8991EWG+T	-40C TO +125C	500 CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MA8991EWG+T	-40C TO +125C	500 CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MA8991EWG+T	-40C TO +125C	500 CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX14803AEWZ+T	-40C TO +125C	500 CYS	77	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX14803AEWZ+T	-40C TO +125C	500 CYS	77	0
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX14803AEWZ+T	-65C TO 150C	500 CYS	77	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX14803AEWZ+T	-40C TO +125C	500 CYS	77	0
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX14803AEWZ+T	-65C TO 150C	500 CYS	77	0

Total: 0

FAILURE RATE: MTTF (YRS): ##### FITS: 0.7