



7/19/2012

RELIABILITY MONITOR REPORT
FOR

uMAX 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	8	uMAX (Pb-Free)	ATP	10 uMAX (Pb-Free)
Unisem Malaysia	8	uMAX (Pb-Free)	UTL	8 uMAX (Pb-Free)
UTL	10	uMAX (Pb-Free)		

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 33429 FITS: 3.4

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 7/1/2011 and 6/30/2012.

Assembly Information:

Package Type: uMAX (Pb-Free)
Date Code Range: 1106 to 1213

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	1106	DS1080CL	125C, 3.6 VOLTS	1000 HRS	45	0	
HIGH TEMP OP LIFE	1139	MT23	135C, 12.0V (PSA)	192 HRS	80	0	
HIGH TEMP OP LIFE	1139	MAX16128UAACAC+ T	135C	192 HRS	80	0	
HIGH TEMP OP LIFE	1146	MAX4003EUA+	135C	500 HRS	73	0	
HIGH TEMP OP LIFE	1146	MAX4003EUA+	135C	500 HRS	79	0	
HIGH TEMP OP LIFE	1152	MAX4003EUA+	135C	500 HRS	80	0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	1131	MAX9924UAUB+	150C	1000 HRS	50	0	
STORAGE LIFE	1140	MAX4489AUA+	150C	1000 HRS	50	0	
STORAGE LIFE	1213	MAX1744EUB/V+	150C	500 HRS	50	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL	1112	MAX2750AUA+	-65C TO 150C	1000 CYS	75	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	1140	MAX4489AUA+	-65C TO 150C	500 CYS	80	0	

TEMP CYCLE, 5' RAMP, 10' DWELL	1141	MAX4489AUA+	-65C TO 150C	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1141	MAX4489AUA+	-65C TO 150C	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1213	MAX1744EUB/V+	-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	1131	MAX9924UAUB+	130C, 85% R.H.	100	HRS	26	0
BIASED MOISTURE	1140	MAX4489AUA+	130C, 85% R.H.	100	HRS	30	0
Total:							0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
MOISTURE SOAK	1140	MAX4489AUA+	130C, 85% R.H.	100	HRS	80	0
MOISTURE SOAK	1141	MAX4489AUA+	130C, 85% R.H.	100	HRS	80	0
MOISTURE SOAK	1141	MAX4489AUA+	130C, 85% R.H.	100	HRS	80	0
Total:							0

FAILURE RATE: MTTF (YRS): 33429 FITS: 3.4