

10/23/2014



RELIABILITY MONITOR REPORT  
FOR

**BGA 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		
ASE Chung-Li	81	CTBGA (Pb-Free)	Carsem-S	48 BGA Module w/Battery & Crystal

The calculated failure rate for this assembly is:

**FAILURE RATE: MTTF (YRS): 138 FITS: 827.0**

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 10/1/2013 and 9/30/2014.

**Assembly Information:**

Package Type: BGA Module w/Battery & Crystal

Date Code Range: 1350 to 1350

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	1350	DS12R887	65 C, 3.3 VOLTS	1000 HRS	44	0	
<b>Total:</b>						<b>0</b>	

**Assembly Information:**

Package Type: CTBGA (Pb-Free)

Date Code Range: 1350 to 1350

**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL	1350	806-0714-25+	-65C TO +150C (Condition C)	1000 CYS	45	0	
<b>Total:</b>						<b>0</b>	

**FAILURE RATE: MTTF (YRS): 138 FITS: 827.0**