

4/23/2015



RELIABILITY MONITOR REPORT
FOR

TQFN-CU 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	ASSY SITE	PINS	PACKAGE
ASE Chung-Li	20	TQFN-CU (Pb-Free)	ASE Chung-Li	28	TQFN-CU (Pb-Free)
ASE Chung-Li	48	TQFN-CU (Pb-Free)			

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 12436 FITS: 9.2

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 4/1/2014 and 3/31/2015.

Assembly Information:

Package Type: TQFN-CU (Pb-Free)
Date Code Range: 1406 to 1442

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	1406	MAX14662ETI+	135°C	192 HRS	80	0	
HIGH TEMP OP LIFE	1419	MAX14691ATP+	135°C	192 HRS	79	0	
HIGH TEMP OP LIFE	1439	MAX2880ETP+	135°C	712 HRS	79	0	
HIGH TEMP OP LIFE	1439	MAX2880ETP+	135°C	500 HRS	79	0	
HIGH TEMP OP LIFE	1440	MAX15068ATP+	135°C	192 HRS	80	1	
Total:						1	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	1439	MAX2880ETP+	150°C	1000 HRS	80	0	
STORAGE LIFE	1439	MAX2880ETP+	150°C	1000 HRS	80	0	
STORAGE LIFE	1439	MAX2880ETP+	150°C	1000 HRS	80	0	
STORAGE LIFE	1441	MAX20091ATM+	150°C	1000 HRS	50	0	
STORAGE LIFE	1441	MAX20091ATM+	150°C	500 HRS	50	0	
STORAGE LIFE	1442	MAX20091ATM+	150°C	500 HRS	50	0	
STORAGE LIFE	1442	MAX20091ATM+	150°C	1000 HRS	50	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL	1439	MAX2880ETP+	-65C TO +150C (Condition C)	1000 CYS	78	0	

TEMP CYCLE, 5' RAMP, 10' DWELL	1439	MAX2880ETP+	-65C TO +150C (Condition C)	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1439	MAX2880ETP+	-65C TO +150C (Condition C)	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1441	MAX20091ATM+	-65C TO +150C (Condition C)	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1442	MAX20091ATM+	-65C TO +150C (Condition C)	500	CYS	80	0
Total:							0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
MOISTURE SOAK	1441	MAX20091ATM+	130C, 85% R.H.	100	HRS	80	0
MOISTURE SOAK	1442	MAX20091ATM+	130C, 85% R.H.	96	HRS	80	0
Total:							0

FAILURE RATE: MTTF (YRS): 12436 FITS: 9.2