



4/17/2012

RELIABILITY MONITOR REPORT
FOR

TDFN 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		
ASE Chung-Li	8	TDFN	ASE Chung-Li	14 TDFN
DOMINANT SEMI	6	TDFN	HANA-AYT	6 TDFN
UTACDG	8	TDFN	UTACDG	10 TDFN
UTL	8	TDFN	UTL	10 TDFN
UTL	14	TDFN		

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 49097 FITS: 2.3

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 4/1/2011 and 3/31/2012.

Assembly Information:

Package Type: TDFN
Date Code Range: 1138 to N/A

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE		MAX15062ATA+T	135C	1000 HRS	41	0	
HIGH TEMP OP LIFE		MAX15062ATA+T	135C	1000 HRS	45	0	
HIGH TEMP OP LIFE		MAX15062ATA+T	135C	1000 HRS	45	0	
HIGH TEMP OP LIFE		MAX44000GDT+T	135C	192 HRS	80	0	
HIGH TEMP OP LIFE		MAX44000GDT+T	135C	192 HRS	80	0	
HIGH TEMP OP LIFE		MAX44000GDT+T	135C	192 HRS	80	0	
HIGH TEMP OP LIFE	1014	MAX15024AATB+T	135C	700 HRS	77	0	
HIGH TEMP OP LIFE	1107	MAX8901BETA+T	135C	1000 HRS	45	0	
HIGH TEMP OP LIFE	1107	MAX8901BETA+T	135C	1000 HRS	45	0	
HIGH TEMP OP LIFE	1107	MAX8901BETA+T	135C	1000 HRS	45	0	
HIGH TEMP OP LIFE	1113	DS3911	125C, 5.5 VOLTS	192 HRS	48	0	
HIGH TEMP OP LIFE	1118	MAX14602ETA+	135C	240 HRS	80	0	
HIGH TEMP OP LIFE	1119	MAX14591ETA+	135C	240 HRS	80	0	
HIGH TEMP OP LIFE	1129	DS1347	125C, 5.5 VOLTS	192 HRS	77	0	
HIGH TEMP OP LIFE	1134	MAX17048	125C, 5.0 VOLTS	192 HRS	77	0	
HIGH TEMP OP LIFE	1138	MAX17601ATA+	135C	192 HRS	48	1	
HIGH TEMP OP LIFE	1140	MAX34565	125C, 5.0V (PSA) & 13.2V (PSB)	500 HRS	77	0	

HIGH TEMP OP LIFE	1141	MAX6767TALD2+	135C	1024	HRS	48	0
HIGH TEMP OP LIFE	1207	MAX44005EDT+	135C	500	HRS	79	0
HIGH TEMP OP LIFE	1207	MAX44005EDT+	135C	500	HRS	79	0
HIGH TEMP OP LIFE	1208	MAX44005EDT+	135C	500	HRS	80	0
Total:							1

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
CONVECTION REFLOW	1207	MAX44005EDT+	260C +0/-5C	27	PASS	1000	0
Total:							0

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE		MAX15062ATA+T	150C	1000	HRS	77	0
STORAGE LIFE		MAX15062ATA+T	150C	1000	HRS	77	0
STORAGE LIFE		MAX15062ATA+T	150C	1000	HRS	77	0
STORAGE LIFE	1049	MAX1556ETB/V+	150C	1000	HRS	77	0
STORAGE LIFE	1107	MAX8901BETA+T	150C	1000	HRS	77	0
STORAGE LIFE	1107	MAX8901BETA+T	150C	1000	HRS	77	0
STORAGE LIFE	N/A	MAX44000GDT+T	150C	1000	HRS	80	0
Total:							0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX15062ATA+T	-65C TO 150C	1000	CYS	77	0
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX15062ATA+T	-65C TO 150C	1000	CYS	77	0
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX15062ATA+T	-65C TO 150C	1000	CYS	77	0
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX9635EDT+T	-65C TO 150C	1000	CYS	100	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1036	MAX9830ETD+T	-65C TO 150C	1000	CYS	77	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1107	MAX8901BETA+T	-65C TO 150C	1000	CYS	77	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1107	MAX8901BETA+T	-65C TO 150C	1000	CYS	77	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1121	MAX6769TALD2+	-65C TO 150C	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1121	MAX6769TALD2+	-65C TO 150C	500	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1141	MAX6767TALD2+	-65C TO 150C	1000	CYS	80	1
TEMP CYCLE, 5' RAMP, 10' DWELL	1145	MAX6767TALD2+	-65C TO 150C	500	CYS	90	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1146	MAX6767TALD2+	-65C TO 150C	500	CYS	90	0

TEMP CYCLE, 5' RAMP, 10' DWELL	1207	MAX44005EDT+	-65C TO 150C	200	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1207	MAX44005EDT+	-65C TO 150C	200	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX44000GDT+T	-65C TO 150C	1000	CYS	80	1
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX44000GDT+T	-65C TO 150C	1000	CYS	80	0
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX9635EDT+T	-40C TO +125C	500	CYS	100	0
Total:							2

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
BIASED MOISTURE	1121	MAX6769TALD2+	130C, 85% R.H.	96	HRS	80	0
BIASED MOISTURE	1121	MAX6769TALD2+	130C, 85% R.H.	96	HRS	80	0
BIASED MOISTURE	1141	MAX6767TALD2+	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		MAX15062ATA+T	85 C/85% R.H.	1000	HRS	15	0
MOISTURE SOAK		MAX15062ATA+T	130C, 85% R.H.	1000	HRS	77	0
MOISTURE SOAK		MAX15062ATA+T	85 C/85% R.H.	1000	HRS	19	0
MOISTURE SOAK	1121	MAX6769TALD2+	130C, 85% R.H.	96	HRS	79	0
MOISTURE SOAK	1121	MAX6769TALD2+	130C, 85% R.H.	96	HRS	80	0
MOISTURE SOAK	1131	MAX44000GDT+T	85 C/85% R.H.	1000	HRS	76	0
MOISTURE SOAK	1131	MAX44000GDT+T	85 C/85% R.H.	1000	HRS	77	0
MOISTURE SOAK	1131	MAX9635EDT+	85 C/85% R.H.	1000	HRS	29	0
MOISTURE SOAK	1131	MAX9635EDT+	85 C/85% R.H.	1000	HRS	29	0
MOISTURE SOAK	1131	MAX9635EDT+	85 C/85% R.H.	1000	HRS	29	0
MOISTURE SOAK	1141	MAX6767TALD2+	130C, 85% R.H.	100	HRS	80	0
MOISTURE SOAK	1145	MAX6767TALD2+	130C, 85% R.H.	100	HRS	80	0
MOISTURE SOAK	1146	MAX6767TALD2+	130C, 85% R.H.	100	HRS	80	0
Total:							0

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