



7/19/2012

**RELIABILITY MONITOR REPORT  
FOR**

**HYBRID**

**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 Process Reliability Monitor. The specific products in this process monitor are:

MAX11014BGT	MAX11014BGT	MAX1441GUP/V	MAX1441GUP+	MAX1454AUE/V
MAX1480BCPI+	MAX1480BEPI+	MAX15301ETJ+	MAX2079CXE+	MAX8798ETX+
MAX9679ETG+	MAX9684ETN+			

The calculated failure rate for devices using this process is:

**FAILURE RATE:    MTTF (YRS): 77092    QUANTITY: 1019    FAILS: 1    FITS: 1.5**

The parameters used to calculate this failure rate are as follows:

**Cf: 60%                    Ea: 0.7                    Tu: 25    °C**

The reliability data follows and in this section is the detailed reliability data by stress. The reliability data section includes the latest data available. This report covers data between 7/1/2011 and 6/30/2012 .

**Process Information:**

Process Description:            HYBRID

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1042	MAX1441GUP+	135C	1000 HRS	48	0	NFTUBAHX
HIGH TEMP OP LIFE	1050	MAX2079CXE+	135C	1000 HRS	45	0	BHDXAAD
HIGH TEMP OP LIFE	1051	MAX2079CXE+	135C	1000 HRS	42	0	BHDXAAI
HIGH TEMP OP LIFE	1051	MAX2079CXE+	135C	1000 HRS	43	0	BHDXAAJ
HIGH TEMP OP LIFE	1103	MAX1480BEPI+	135C	1000 HRS	45	0	EFEPBFQ3
HIGH TEMP OP LIFE	1103	MAX1480BEPI+	135C	1000 HRS	45	0	EFEPBGI
HIGH TEMP OP LIFE	1105	MAX8798ETX+	135C	1000 HRS	46	0	BBKTBKQ5
HIGH TEMP OP LIFE	1105	MAX8798ETX+	135C	1000 HRS	46	0	BBKTBKQ6
HIGH TEMP OP LIFE	1110	MAX11014BGTM+	135C	1000 HRS	41	0	BDWTAGQ1
HIGH TEMP OP LIFE	1110	MAX11014BGTM=	135C	1000 HRS	44	0	BDWTAGQ2
HIGH TEMP OP LIFE	1110	MAX11014BGTM+	135C	1000 HRS	45	0	BDWTAGQ3
HIGH TEMP OP LIFE	1114	MAX9679ETG+	135C	1000 HRS	44	0	NHETAAQ1
HIGH TEMP OP LIFE	1114	MAX9679ETG+	135C	1000 HRS	45	0	NHETAAQ2
HIGH TEMP OP LIFE	1118	MAX9679ETG+	135C	500 HRS	77	1	NHLTAAK
HIGH TEMP OP LIFE	1122	MAX1454AUE/V+	135C	192 HRS	79	0	NHGUAABDQ
HIGH TEMP OP LIFE	1122	MAX1480BCPI+	135C	1000 HRS	77	0	8GKPBAQ2
HIGH TEMP OP LIFE	1122	MAX1480BCPI+	135C	1000 HRS	77	0	8GKPBAQ3
HIGH TEMP OP LIFE	1131	MAX9684ETN+	135C	1000 HRS	78	0	NHHTAAQ3
HIGH TEMP OP LIFE	1148	MAX15301ETJ+	135C	336 HRS	20	0	NHITAAGCQ

HIGH TEMP OP LIFE	1212	MAX1441GUP/V+	135C	192	HRS	32	0	NFTUBAME
<b>Total:</b>							<b>1</b>	

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**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
STORAGE LIFE	1050	MAX2079CXE+	150C	1000 HRS	77	0	BHDXAAD	
STORAGE LIFE	1051	MAX2079CXE+	150C	1000 HRS	76	0	BHDXAAI	
STORAGE LIFE	1051	MAX2079CXE+	150C	1000 HRS	77	0	BHDXAAJ	
STORAGE LIFE	1110	MAX11014BGTM+	150C	1000 HRS	77	0	BDWTAGQ1	
STORAGE LIFE	1110	MAX11014BGTM+	150C	1000 HRS	77	0	BDWTAGQ2	
STORAGE LIFE	1110	MAX11014BGTM+	150C	1000 HRS	77	0	BDWTAGQ3	
STORAGE LIFE	1114	MAX9679ETG+	150C	1000 HRS	77	0	NHETAAQ1	
STORAGE LIFE	1114	MAX9679ETG+	150C	1000 HRS	77	0	NHETAAQ2	
STORAGE LIFE	1115	MAX9679ETG+	150C	1000 HRS	77	0	NHETAAQ3	
STORAGE LIFE	1122	MAX1480BCPI+	150C	1000 HRS	77	0	8GKPBAQ2	
STORAGE LIFE	1122	MAX1480BCPI+	150C	1000 HRS	77	0	8GKPBAQ3	
STORAGE LIFE	1131	MAX9684ETN+	150C	1000 HRS	77	0	NHHTAAQ1	
STORAGE LIFE	1131	MAX9684ETN+	150C	1000 HRS	77	0	NHHTAAQ2	
STORAGE LIFE	1131	MAX9684ETN+	150C	1000 HRS	77	0	NHHTAAQ3	
STORAGE LIFE	1207	MAX9684ETN+	150C	1000 HRS	77	0	NHHTAAQ4	
STORAGE LIFE	1207	MAX9684ETN+	150C	1000 HRS	77	0	NHHTAAQ5	
STORAGE LIFE	1207	MAX9684ETN+	150C	1000 HRS	77	0	NHHTAAQ6	
STORAGE LIFE	1212	MAX1441GUP/V+	150C	500 HRS	50	0	NFTUBAME	
<b>Total:</b>							<b>0</b>	

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**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL	1050	MAX2079CXE+	-65C TO 150C	1000	CYS	77	0	BHDXAAD
TEMP CYCLE, 5' RAMP, 10' DWELL	1051	MAX2079CXE+	-65C TO 150C	1000	CYS	77	0	BHDXAAI
TEMP CYCLE, 5' RAMP, 10' DWELL	1051	MAX2079CXE+	-65C TO 150C	1000	CYS	77	0	BHDXAAJ
TEMP CYCLE, 5' RAMP, 10' DWELL	1114	MAX9679ETG+	-65C TO 150C	1000	CYS	76	0	NHETAAQ1
TEMP CYCLE, 5' RAMP, 10' DWELL	1114	MAX9679ETG+	-65C TO 150C	1000	CYS	77	0	NHETAAQ2
TEMP CYCLE, 5' RAMP, 10' DWELL	1115	MAX9679ETG+	-65C TO 150C	1000	CYS	77	0	NHETAAQ3
TEMP CYCLE, 5' RAMP, 10' DWELL	1122	MAX1480BCPI+	-65C TO 150C	1000	CYS	77	0	8GKPBAQ2
TEMP CYCLE, 5' RAMP, 10' DWELL	1122	MAX1480BCPI+	-65C TO 150C	1000	CYS	77	0	8GKPBAQ3

TEMP CYCLE, 5' RAMP, 10' DWELL	1131	MAX9684ETN+	-65C TO 150C	1000	CYS	72	0	NHHTAAQ1
TEMP CYCLE, 5' RAMP, 10' DWELL	1131	MAX9684ETN+	-65C TO 150C	1000	CYS	77	0	NHHTAAQ2
TEMP CYCLE, 5' RAMP, 10' DWELL	1207	MAX9684ETN+	-65C TO 150C	1000	CYS	77	0	NHHTAAQ4
TEMP CYCLE, 5' RAMP, 10' DWELL	1207	MAX9684ETN+	-65C TO 150C	500	CYS	77	0	NHHTAAQ5
TEMP CYCLE, 5' RAMP, 10' DWELL	1207	MAX9684ETN+	-65C TO 150C	1000	CYS	77	0	NHHTAAQ6
<b>Total:</b>							<b>0</b>	

**TEMPERATURE HUMIDITY BIAS**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1207	MAX9684ETN+	130C, 85% R.H.	100	HRS	45	0	NHHTAAQ4
BIASED MOISTURE	1207	MAX9684ETN+	130C, 85% R.H.	100	HRS	45	0	NHHTAAQ6
<b>Total:</b>							<b>0</b>	

**UNBIASED MOISTURE RESISTANCE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK	1050	MAX2079CXE+	85 C/85% R.H.	1000	HRS	45	0	BHDXAAD
MOISTURE SOAK	1051	MAX2079CXE+	85 C/85% R.H.	1000	HRS	45	0	BHDXAAI
MOISTURE SOAK	1051	MAX2079CXE+	85 C/85% R.H.	1000	HRS	43	0	BHDXAAJ
MOISTURE SOAK	1105	MAX8798ETX+	85 C/85% R.H.	1000	HRS	19	0	BBKTBQ5
MOISTURE SOAK	1105	MAX8798ETX+	85 C/85% R.H.	1000	HRS	45	0	BFRTBJQ1
MOISTURE SOAK	1110	MAX11014BGTM+	85 C/85% R.H.	1000	HRS	30	0	BDWTAGQ2
MOISTURE SOAK	1110	MAX11014BGTM+	85 C/85% R.H.	1000	HRS	29	0	BDWTAGQ3
<b>Total:</b>							<b>0</b>	

**FAILURE RATE: MTTF (YRS): 77092      QUANTITY: 1019      FAILS: 1      FITS: 1.5**