



10/8/10

**RELIABILITY MONITOR REPORT  
FOR**

**MFN SiGe HBT BiPolar (GST30)**

**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:

MAX109EHF	MAX109EHF+	MAX2388ETC+	MAX3802UTK+
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The calculated failure rate for devices using this process is:

**FAILURE RATE: MTTF (YRS): 12790 QUANTITY: 135 FAILS: 0 FITS: 8.9**

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 10/1/2009 and 9/30/2010 .

**Process Information:**

Process Description: MFN SiGe HBT BiPolar (GST30)

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1021	MAX2388ETC+	135C	500 HRS	45	0	N22DXU015Q1
HIGH TEMP OP LIFE	1021	MAX2388ETC+	135C	500 HRS	45	0	N22DXU015Q2
HIGH TEMP OP LIFE	1022	MAX3802UTK+	135C	500 HRS	45	0	N9R1BA016Q2
<b>Total:</b>						<b>0</b>	

**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1021	MAX2388ETC+	150C	1000 HRS	77	0	N22DXU015Q1
STORAGE LIFE	1021	MAX2388ETC+	150C	1000 HRS	77	0	N22DXU015Q2
STORAGE LIFE	1022	MAX3802UTK+	150C	500 HRS	77	0	N9R1BA016Q1
STORAGE LIFE	1022	MAX3802UTK+	150C	500 HRS	77	0	N9R1BA016Q2
<b>Total:</b>						<b>0</b>	

**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	0712	MAX109EHF	-65C TO 150C	1000 CYS	39	0	NZT0D3003AQ
TEMP CYCLE, 5' RAMP, 10' DWELL	0747	MAX109EHF+	-65C TO 150C	500 CYS	130	0	NZT0D300K
TEMP CYCLE, 5' RAMP, 10' DWELL	1021	MAX2388ETC+	-65C TO 150C	1000 CYS	77	0	N22DXU015Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	1021	MAX2388ETC+	-65C TO 150C	1000 CYS	77	0	N22DXU015Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	1022	MAX3802UTK+	-65C TO 150C	500 CYS	77	0	N9R1BA016Q1

TEMP CYCLE, 5' RAMP, 1022 MAX3802UTK+ -65C TO 150C 500 CYS 77 0 N9R1BA016Q2  
 10' DWELL

**Total: 0**

**UNBIASED MOISTURE RESISTANCE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	0747	MAX109EHF+	85 C/85% R.H.	1000 HRS	45	0	NZT0D3006J
MOISTURE SOAK	0747	MAX109EHF+	85 C/85% R.H.	1000 HRS	45	0	NZT0D3005K
MOISTURE SOAK	0747	MAX109EHF+	85 C/85% R.H.	1000 HRS	45	0	NZT0D3005L
MOISTURE SOAK	1021	MAX2388ETC+	85 C/85% R.H.	1000 HRS	45	0	N22DXU015Q1
MOISTURE SOAK	1021	MAX2388ETC+	85 C/85% R.H.	1000 HRS	45	0	N22DXU015Q2
<b>Total:</b>						<b>0</b>	

**FAILURE RATE: MTTF (YRS): 12790 QUANTITY: 135 FAILS: 0 FITS: 8.9**