



5/9/2009

**RELIABILITY MONITOR REPORT  
FOR**

**MFN SiGe HBT BiPolar**

**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+	MAX109EHJ+	MAX2388ETC+	MAX2680EUT+	MAX2680EUT+(
MAX2680EUT+T	MAX2750AUA+	MAX3723UTP+	MAX3801UGG	MAX3802UTK+

The calculated failure rate for devices using this process is:

**FAILURE RATE:**                      **MTTF (YRS): 93499**                      **FITS: 1.2**

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 1/1/2008 and 12/31/2008.

**Process Information:**

Process Description:                      MFN SiGe HBT BiPolar

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0528	MAX3802UTK+	135C	1000 HRS	45	0	N9R1A3007QB
HIGH TEMP OP LIFE	0528	MAX3802UTK+	135C	1000 HRS	45	0	N9R1A3007QC
HIGH TEMP OP LIFE	0723	MAX2680EUT+T	135C	1000 HRS	77	0	NR3AEA078D#
HIGH TEMP OP LIFE	0724	MAX2680EUT+	135C	1000 HRS	79	0	NR3AE3019J#
HIGH TEMP OP LIFE	0732	MAX3723UTP+	135C	192 HRS	50	0	NGDZA3001EQ
HIGH TEMP OP LIFE	0742	MAX2750AUA+	135C	1000 HRS	74	0	N7CBHA010D#
HIGH TEMP OP LIFE	0742	MAX3801UGG	135C	1000 HRS	80	0	N250AA208B
HIGH TEMP OP LIFE	0747	MAX109EHF+	135C	524 HRS	45	0	NZT0D3005J
HIGH TEMP OP LIFE	0747	MAX109EHF+	135C	1000 HRS	45	0	NZT0D3005K
HIGH TEMP OP LIFE	0747	MAX109EHF+	135C	1000 HRS	45	0	NZT0D3005L
<b>Total:</b>						<b>0</b>	

**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	0739	MAX2680EUT+T	150C	1000 HRS	45	0	NR3AEA079D#
STORAGE LIFE	0742	MAX2750AUA+	150C	500 HRS	80	0	N7CBHA010D#
STORAGE LIFE	0742	MAX3801UGG	150C	1000 HRS	80	0	N250AA208B
STORAGE LIFE	0747	MAX109EHF+	150C	1000 HRS	45	0	NZT0D3005J
STORAGE LIFE	0747	MAX109EHF+	150C	1000 HRS	45	0	NZT0D3005K
STORAGE LIFE	0747	MAX109EHF+	150C	1000 HRS	45	0	NZT0D3005L
STORAGE LIFE	0801	MAX3801UGG	150C	1000 HRS	80	0	N250AA219B

**Total: 0**

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**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	0723	MAX2680EUT+T	-65C TO 150C	1000 CYS	80	0	NR3AEA078D#
TEMP CYCLE, 5' RAMP, 10' DWELL	0724	MAX2680EUT+(AUT+)	-65C TO 150C	1000 CYS	79	0	NR3AE3019J#
TEMP CYCLE, 5' RAMP, 10' DWELL	0739	MAX2680EUT+T	-65C TO 150C	1000 CYS	80	0	NR3AEA079D#
TEMP CYCLE, 5' RAMP, 10' DWELL	0742	MAX3801UGG	-65C TO 150C	1000 CYS	80	0	N250AA208B
TEMP CYCLE, 5' RAMP, 10' DWELL	0801	MAX3801UGG	-65C TO 150C	1000 CYS	80	0	N250AA219B
<b>Total:</b>						<b>0</b>	

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**UNBIASED MOISTURE RESISTANCE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	0528	MAX3802UTK+	85 C/85% R.H.	1000 HRS	45	0	N9R1A3997QA
MOISTURE SOAK	0528	MAX3802UTK+	85 C/85% R.H.	1000 HRS	45	0	N9R1A3997QB
MOISTURE SOAK	0528	MAX3802UTK+	85 C/85% R.H.	1000 HRS	45	0	N9R1A3997QC
MOISTURE SOAK	0534	MAX2388ETC+	85 C/85% R.H.	1000 HRS	45	0	N22DXA014QL
MOISTURE SOAK	0534	MAX2388ETC+	85 C/85% R.H.	1000 HRS	45	0	N22DXA014QM
MOISTURE SOAK	0534	MAX2388ETC+	85 C/85% R.H.	1000 HRS	45	0	N22DXA014QN
MOISTURE SOAK	0747	MAX109EHF+	85 C/85% R.H.	500 HRS	45	0	NZT0D3005J
MOISTURE SOAK	0747	MAX109EHF+	85 C/85% R.H.	500 HRS	45	0	NZT0D3005K
MOISTURE SOAK	0747	MAX109EHJ+	85 C/85% R.H.	500 HRS	45	0	NZT0D3005L
<b>Total:</b>						<b>0</b>	

**FAILURE RATE: MTTF (YRS): 93499 FITS: 1.2**