

4/23/2015



**RELIABILITY MONITOR REPORT  
FOR**

**X3 MBiC3 SiGe HBT 0.35μm (MB3)**

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

MAX2172ETL+C	MAX2769BETI
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The calculated failure rate for devices using this process is:

**FAILURE RATE:    MTTF (YRS): 5432    QUANTITY: 147    FAILS: 0    FITS: 21.0**

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

**Process Information:**

Process Description:            X3 MBIc3 SiGe HBT 0.35µm (MB3)

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1431	MAX2769BETI+	135°C	192 HRS	73	0	SS70BA023J
HIGH TEMP OP LIFE	1435	MAX2769BETI+	135°C	192 HRS	74	0	SS70BA025F#
<b>Total:</b>						<b>0</b>	

**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1422	MAX2172ETL+C8S	150°C	1000 HRS	80	0	SP1020830S2
STORAGE LIFE	1427	MAX2769BETI+	150°C	500 HRS	50	0	SS70BA021K#
STORAGE LIFE	1438	MAX2172ETL+C8S	150°C	1000 HRS	80	0	SPTXCA325C
<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	1422	MAX2172ETL+C8S	-65C TO +150C (Condition C)	1000 CYS	80	0	SP1020830S2
TEMP CYCLE, 5' RAMP, 10' DWELL	1427	MAX2769BETI+	-65C TO +150C (Condition C)	500 CYS	80	0	SS70BA021K#
TEMP CYCLE, 5' RAMP, 10' DWELL	1435	MAX2769BETI+	-65C TO +150C (Condition C)	500 CYS	80	0	SS70BA025F#
TEMP CYCLE, 5' RAMP, 10' DWELL	1438	MAX2172ETL+C8S	-65C TO +150C (Condition C)	500 CYS	80	0	SPTXCA325C
<b>Total:</b>						<b>0</b>	

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**TEMPERATURE HUMIDITY BIAS**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1427	MAX2769BETI+	130C, 85% R.H.	100	HRS	48	0	SS70BA021K#
BIASED MOISTURE	1431	MAX2769BETI+	130C, 85% R.H.	100	HRS	48	0	SS70BA023J
BIASED MOISTURE	1435	MAX2769BETI+	130C, 85% R.H.	100	HRS	48	0	SS70BA025F#
						<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	1427	MAX2769BETI+	130C, 85% R.H.	100	HRS	80	0	SS70BA021K#
MOISTURE SOAK	1431	MAX2769BETI+	130C, 85% R.H.	100	HRS	80	0	SS70BA023J
MOISTURE SOAK	1435	MAX2769BETI+	130C, 85% R.H.	100	HRS	80	0	SS70BA025F#
						<b>Total:</b>	<b>0</b>	

**FAILURE RATE: MTTF (YRS): 5432      QUANTITY: 147      FAILS: 0      FITS: 21.0**