



5/9/2009

**RELIABILITY MONITOR REPORT
FOR**

X3 SiGe HBT 0.35 μ m BiCMOS

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:

806-MP25-2A+A	806-MP25-2B+A	MAX2141ETH+	MAX2169ETL+	MAX2172ETL+C
MAX2547ELM+	MAX2659ELT+T	MAX2830ETM+	MAX2831ETM+	MAX2838ETM+
MAX2839ETN+	MAX3678UTN+	MAX3698CTJ+	MAXQ2593Y7P1	

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 63785** **FITS: 1.8**

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 and

Process Information:

Process Description: X3 SiGe HBT 0.35µm BiCMOS

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0718	MAX2830ETM+	135C	1000 HRS	77	0	STB1S3070C
HIGH TEMP OP LIFE	0742	MAX2838ETM+	135C	192 HRS	21	0	SDEWE3007CQ
HIGH TEMP OP LIFE	0742	MAX2838ETM+	135C	192 HRS	21	0	SDEWE3007DQ
HIGH TEMP OP LIFE	0749	MAX2831ETM+	135C	240 HRS	77	0	STB2S2203F
HIGH TEMP OP LIFE	0749	MAX2831ETM+	135C	1000 HRS	77	0	STB2S2203A
HIGH TEMP OP LIFE	0802	MAX2141ETH+	135C	1000 HRS	78	0	STX27Z074H
HIGH TEMP OP LIFE	0802	MAX2839ETN+	135C	192 HRS	48	0	SESZD3006EQ
HIGH TEMP OP LIFE	0813	MAX3678UTN+	135C	192 HRS	50	0	SZH0MZ001EQ
HIGH TEMP OP LIFE	0813	MAX3678UTN+	135C	192 HRS	78	0	SZH0MZ001ED
HIGH TEMP OP LIFE	0814	MAX2831ETM+	135C	1000 HRS	76	0	STB2S3126DX
HIGH TEMP OP LIFE	0826	MAX2838ETM+	135C	192 HRS	4	0	SDETA3025BQ
HIGH TEMP OP LIFE	0829	MAX3698CTJ+	135C	192 HRS	48	0	SJWZCQ003DQ
HIGH TEMP OP LIFE	0830	MAX2547ELM+	135C	192 HRS	47	0	SWC7NZ034AQ
HIGH TEMP OP LIFE	0847	MAX2172ETL+C8S	135C	192 HRS	48	0	SPTZB3003DQ
HIGH TEMP OP LIFE	0850	MAX2169ETL+	135C	192 HRS	48	0	SLAZD3002DQ
				Total:		0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	0718	MAX2830ETM+	150C	1000 HRS	80	0	STB1S3070C
STORAGE LIFE	0751	MAX2141ETH+	150C	1000 HRS	80	0	SGWYB3114E

Total: 0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	0703	MAXQ2593Y7P1AFELB+	-65C TO 150C	3000 CYS	77	0	SYV7A2001QA
TEMP CYCLE, 5' RAMP, 10' DWELL	0703	MAXQ2593Y7P1AFELB+	-65C TO 150C	3000 CYS	77	0	SYV7A2001QB
TEMP CYCLE, 5' RAMP, 10' DWELL	0703	MAXQ2593Y7P1AFELB+	-65C TO 150C	3000 CYS	77	0	SYV7A2001QC
TEMP CYCLE, 5' RAMP, 10' DWELL	0718	MAX2830ETM+	-65C TO 150C	1000 CYS	80	0	STB1S3070C
TEMP CYCLE, 5' RAMP, 10' DWELL	0745	806-MP25-2B+A5	-65C TO 150C	1000 CYS	77	0	SFRZAZ004OA
TEMP CYCLE, 5' RAMP, 10' DWELL	0751	MAX2141ETH+	-65C TO 150C	1000 CYS	80	0	SGWYB3114E
TEMP CYCLE, 5' RAMP, 10' DWELL	0751	806-MP25-2A+A5	-65C TO 150C	1000 CYS	77	0	SFRZA3002BA
TEMP CYCLE, 5' RAMP, 10' DWELL	0850	MAX2659ELT+T	-65C TO 150C	250 CYS	77	0	SBXZB4021GA
Total:						0	

FAILURE RATE:

MTTF (YRS): 63785

FITS: 1.8