

4/17/2013



**RELIABILITY MONITOR REPORT
FOR**

Epson SiGe HBT 0.35 μ m BiCMOS (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:

MAX2553ETN+	MAX2569ELT+T	MAX2659ELT+T	TX27TETH+	TX27YETH+
YX27YETH+				

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 78465 QUANTITY: 637 FAILS: 0 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 4/1/2012 and 3/31/2013 .

Process Information:

Process Description: Epson SiGe HBT 0.35µm BiCMOS (MB3)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1222	TX27YETH+	135°C	500 HRS	74	0	E24WUA040I
HIGH TEMP OP LIFE	1232	TX27YETH+	135°C	500 HRS	79	0	EAFLLQ045I/A045J
HIGH TEMP OP LIFE	1232	TX27YETH+	135°C	1000 HRS	78	0	EAFLL5Q045I/A045J
HIGH TEMP OP LIFE	1233	TX27YETH+	135°C	379 HRS	80	0	EAFLL5A045C/D
HIGH TEMP OP LIFE	1234	TX27YETH+	135°C	1000 HRS	86	0	EAFLL5A048C
HIGH TEMP OP LIFE	1235	TX27YETH+	135°C	1000 HRS	80	0	EAFLL5A049A
HIGH TEMP OP LIFE	1240	MAX2659ELT+T	135°C	500 HRS	80	0	EAI8Q001B
HIGH TEMP OP LIFE	1304	MAX2553ETN+	135°C	192 HRS	80	0	EAKP0A012EQ
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1232	TX27YETH+	150°C	1000 HRS	80	0	EAFLL5Q045I/A045J
STORAGE LIFE	1234	TX27YETH+	150°C	1000 HRS	80	0	EAFLL5A048C/D/E
STORAGE LIFE	1235	TX27YETH+	150°C	1000 HRS	80	0	EAFLL5A049A
STORAGE LIFE	1240	MAX2659ELT+T	150°C	1000 HRS	80	0	EAI8Q001B
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	1222	TX27TETH+	-65C TO 150C	200 CYS	80	0	E24WUA041D

TEMP CYCLE, 5' RAMP, 10' DWELL	1232	TX27YETH+	-65C TO 150C	500	CYS	79	0	EAFL5Q045I/A045J
TEMP CYCLE, 5' RAMP, 10' DWELL	1232	TX27YETH+	-65C TO 150C	1000	CYS	79	0	EAFLQ045I
TEMP CYCLE, 5' RAMP, 10' DWELL	1235	TX27YETH+	-65C TO 150C	1000	CYS	78	0	EAFL5A049A
TEMP CYCLE, 5' RAMP, 10' DWELL	1240	MAX2569ELT+T	-65C TO 150C	1000	CYS	80	0	EAIB8Q001B
TEMP CYCLE, 5' RAMP, 10' DWELL	1245	YX27YETH+	-65C TO 150C	500	CYS	80	0	EAFL5A048C/D/E
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	1234	TX27YETH+	85 C/85% R.H.	1000 HRS	32	0	EAFL5A048C/D/E
MOISTURE SOAK	1234	TX27YETH+	85 C/85% R.H.	1000 HRS	60	0	EAFL5A048C/D/E
MOISTURE SOAK	1235	TX27YETH+	85 C/85% R.H.	240 HRS	80	0	EAFL5A049A
Total:						0	

FAILURE RATE: MTF (YRS): 78465 QUANTITY: 637 FAILS: 0 FITS: 1.5