

10/23/2014



**RELIABILITY MONITOR REPORT
FOR**

Epson MBiC3 SiGe HBT 0.35 μ m (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+	MAX2553ETN/V	MAX2659ELT+	MAX2659ELT+T	MAX2870ETJ+
MAX2880ETP+				

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 47707 QUANTITY: 955 FAILS: 1 FITS: 2.4

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 10/1/2013 and 9/30/2014 .

Process Information:

Process Description: Epson MBiC3 SiGe HBT 0.35µm (MB3)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1314	MAX2553ETN/V+	135°C	1000 HRS	79	0	EAKP0A016BA
HIGH TEMP OP LIFE	1319	MAX2553ETN/V+	135°C	1000 HRS	77	0	EAKP0A008AA
HIGH TEMP OP LIFE	1333	MAX2870ETJ+	135°C	1028 HRS	80	0	EANL3Q002C
HIGH TEMP OP LIFE	1346	MAX2880ETP+	135°C	240 HRS	80	1	EANF2Q001CQ
HIGH TEMP OP LIFE	1346	MAX2880ETP+	135°C	240 HRS	80	0	EANF2Q001DQ
HIGH TEMP OP LIFE	1404	MAX2172ETL+	135°C	192 HRS	80	0	EAKE62030BA
HIGH TEMP OP LIFE	1404	MAX2172ETL+	135°C	500 HRS	80	0	EAKE62030BA
HIGH TEMP OP LIFE	1404	MAX2659ELT+T	135°C	500 HRS	79	0	EAJL22044AB
HIGH TEMP OP LIFE	1405	MAX2172ETL+	135°C	500 HRS	80	0	EAKE62029AA
HIGH TEMP OP LIFE	1416	MAX2659ELT+T	135°C	1000 HRS	80	0	EAJL2A0A0H
HIGH TEMP OP LIFE	1419	MAX2659ELT+T	135°C	192 HRS	80	0	EAJL2A020H
HIGH TEMP OP LIFE	1419	MAX2659ELT+T	135°C	500 HRS	80	0	EAJL2A020
Total:						1	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1419	MAX2659ELT+T	150°C	1000 HRS	80	0	EAJL2A020H
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	1349	MAX2659ELT+	-65C TO +150C (Condition C)	1000 CYS	250	0	EAJL2A013Q6

TEMP CYCLE, 5' RAMP, 1419 MAX2659ELT+T
10' DWELL

-65C TO 1000 CYS 80
+150C
(Condition C)

0 EAJL2A020H

Total: 0

FAILURE RATE: **MTTF (YRS): 47707**

QUANTITY: 955

FAILS: 1

FITS: 2.4