1/15/2016

RELIABILITY MONITOR REPORT
FOR

Epson 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:

MAX2551ETN+	MAX2634AXT+	MAX2659ELT+	MAX2659ELT+T	MAX2769BETI+
MAX2880ETP+				

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 122615 QUANTITY: 910 FAILS: 0 FITS: 0.9

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 1/1/2015 and 12/31/2015.

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	1344	MAX2659ELT+	135°C	1000 HRS	76		EAPS0A036C#
HIGH TEMP OP LIFE	1433	MAX2659ELT+	135°C	1000 HRS	79	0	EAJL2A035Q1
HIGH TEMP OP LIFE	1433	MAX2659ELT+	135°C	1000 HRS	80	0	EAJL2A035Q2
HIGH TEMP OP LIFE	1433	MAX2659ELT+	135°C	1000 HRS	80	0	EAJL2A035Q3
HIGH TEMP OP LIFE	1439	MAX2880ETP+	135°C	712 HRS	79	0	EANF2Q003Q1
HIGH TEMP OP LIFE	1439	MAX2880ETP+	135°C	1000 HRS	79	0	EANF2Q003Q1
HIGH TEMP OP LIFE	1439	MAX2880ETP+	135°C	500 HRS	79	0	EANF2Q003Q2
HIGH TEMP OP LIFE	1439	MAX2880ETP+	135°C	1000 HRS	79	0	EANF2Q003Q2
HIGH TEMP OP LIFE	1439	MAX2880ETP+	135°C	1000 HRS	80	0	EANF2Q003Q3
HIGH TEMP OP LIFE	1446	MAX2551ETN+	135°C	500 HRS	60	0	ZX418300ACA
HIGH TEMP OP LIFE	1446	MAX2551ETN+	135°C	500 HRS	60	0	ZX418300AD
HIGH TEMP OP LIFE	1522	MAX2769BETI+	135°C	1000 HRS	79		EBAH33002AB
				Total:		**0**	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1439	MAX2880ETP+	150°C	1000 HRS	80	0	EANF2Q003Q1
STORAGE LIFE	1439	MAX2880ETP+	150°C	1000 HRS	80	0	EANF2Q003Q2
STORAGE LIFE	1439	MAX2880ETP+	150°C	1000 HRS	80	0	EANF2Q003Q3
				Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.

TEMP CYCLE, 5' RAMP, 10' DWELL	1439	MAX2880ETP+	-65C TO +150C (Condition C)	1000	CYS	78	0	EANF2Q003Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	1439	MAX2880ETP+	-65C TO +150C (Condition C)	1000	CYS	80	0	EANF2Q003Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	1439	MAX2880ETP+	-65C TO +150C (Condition C)	1000	CYS	80	0	EANF2Q003Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	1510	MAX2634AXT+	-65C TO +150C (Condition C)	500	CYS	79	0	EBAC02001BC
					Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT		QUANTITY	FAILS	LOT NO.
BIASED MOISTURE	1433	MAX2659ELT+	130C, 85% R.H.	200	HRS	80	0	EAJL2A035Q1
BIASED MOISTURE	1433	MAX2659ELT+	130C, 85% R.H.	200	HRS	79	0	EAJL2A035Q2
BIASED MOISTURE	1433	MAX2659ELT+	130C, 85% R.H.	200	HRS	79	0	EAJL2A035Q3
BIASED MOISTURE	1510	MAX2634AXT+	130C, 85% R.H.	100	HRS	99	0	EBAC02001BC
					Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT		QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	1349	MAX2659ELT+T	130C, 85% R.H.	500	HRS	77	0	EAJL2A013Q1
MOISTURE SOAK	1349	MAX2659ELT+T	130C, 85% R.H.	500	HRS	79	0	EAJL2A013Q2
MOISTURE SOAK	1349	MAX2659ELT+T	130C, 85% R.H.	500	HRS	78	0	EAJL2A013Q3
MOISTURE SOAK	1433	MAX2659ELT+	130C, 85% R.H.	500	HRS	80	0	EAJL2A035Q1
MOISTURE SOAK	1433	MAX2659ELT+	130C, 85% R.H.	500	HRS	80	0	EAJL2A035Q2
MOISTURE SOAK	1433	MAX2659ELT+	130C, 85% R.H.	500	HRS	80	0	EAJL2A035Q3
MOISTURE SOAK	1510	MAX2634AXT+	130C, 85% R.H.	100	HRS	79	0	EBAC02001BC
					Total:		**0**	

FAILURE RATE: MTTF (YRS): 122615 QUANTITY: 910 FAILS: 0 FITS: 0.9