

4/17/2013



**RELIABILITY MONITOR REPORT
FOR**

MFN 80V Bipolar CMOS DMOS (BCD88)

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:

MAX13021ASA+	MAX16823AUE/	MAX5023LASA	MAX5051AAUI+	MAX6767TALD
MAX9708ETN/V	MAX9708ETN+			

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 100885 QUANTITY: 692 FAILS: 0 FITS: 1.1

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: MFN 80V Bipolar CMOS DMOS (BCD88)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1141	MAX6767TALD2+	135°C	240 HRS	35	0	J982DA015BA
HIGH TEMP OP LIFE	1145	MAX6767TALD2+	135°C	1000 HRS	79	0	J982DA017AA
HIGH TEMP OP LIFE	1146	MAX6767TALD2+	135°C	1000 HRS	78	0	J982DA018AA
HIGH TEMP OP LIFE	1152	MAX13021ASA+	135°C	1000 HRS	97	0	JP11DQ003AA
HIGH TEMP OP LIFE	1152	MAX13021ASA+	135°C	1000 HRS	80	0	JP11DA005AA
HIGH TEMP OP LIFE	1206	MAX5023LASA+	135°C	1000 HRS	45	0	J6R0EA046Q1
HIGH TEMP OP LIFE	1206	MAX5023LASA+	135°C	1000 HRS	45	0	J6R0EA046Q2
HIGH TEMP OP LIFE	1206	MAX5023LASA+	135°C	1000 HRS	45	0	J6R0EA046Q3
HIGH TEMP OP LIFE	1216	MAX5051AAUI+	135°C	192 HRS	47	0	JAFT9Q001CQ
HIGH TEMP OP LIFE	1216	MAX9708ETN+	135°C	1000 HRS	47	0	JXJ0CA030E#
HIGH TEMP OP LIFE	1216	MAX9708ETN+	135°C	500 HRS	47	0	JXJ0CA031B#
HIGH TEMP OP LIFE	1227	MAX9708ETN+	135°C	192 HRS	47	0	JXJ0CA033HX
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1152	MAX13021ASA+	150°C	1000 HRS	50	0	JP11DQ003AA
STORAGE LIFE	1206	MAX5023LASA+	150°C	1000 HRS	80	0	J6R0EA046Q1
STORAGE LIFE	1206	MAX5023LASA+	150°C	1000 HRS	80	0	J6R0EA046Q2
STORAGE LIFE	1206	MAX5023LASA+	150°C	1000 HRS	80	0	J6R0EA046Q3
STORAGE LIFE	1216	MAX9708ETN+	150°C	1000 HRS	50	0	JXJ0CA030E#

Total: 0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	1152	MAX13021ASA+	-65C TO 150C	1000 CYS	80	0	JP11DA007AA
TEMP CYCLE, 5' RAMP, 10' DWELL	1206	MAX5023LASA+	-65C TO 150C	1000 CYS	80	0	J6R0EA046Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	1206	MAX5023LASA+	-65C TO 150C	1000 CYS	80	0	J6R0EA046Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	1206	MAX5023LASA+	-65C TO 150C	1000 CYS	80	0	J6R0EA046Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	1216	MAX9708ETN+	-65C TO 150C	500 CYS	80	0	JXJ0CA031B#
TEMP CYCLE, 5' RAMP, 10' DWELL	1222	MAX16823AUE/V+	-65C TO 150C	500 CYS	80	0	JEOZCA117C#
TEMP CYCLE, 5' RAMP, 10' DWELL	1227	MAX9708ETN/V+	-65C TO 150C	500 CYS	80	0	JXJ0CA033H#
Total:						0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
BIASED MOISTURE	1152	MAX13021ASA+	130C, 85% R.H.	100 HRS	80	0	JP11DQ003AA
BIASED MOISTURE	1152	MAX13021ASA+	130C, 85% R.H.	100 HRS	80	0	JP11DA005AA
BIASED MOISTURE	1206	MAX5023LASA+	130C, 85% R.H.	100 HRS	80	0	J6R0EA046Q1
BIASED MOISTURE	1206	MAX5023LASA+	130C, 85% R.H.	100 HRS	80	0	J6R0EA046Q2
BIASED MOISTURE	1206	MAX5023LASA+	130C, 85% R.H.	100 HRS	80	0	J6R0EA046Q3
BIASED MOISTURE	1222	MAX16823AUE/V+	130C, 85% R.H.	100 HRS	48	0	JEOZCA117C#
BIASED MOISTURE	1227	MAX9708ETN/V+	130C, 85% R.H.	100 HRS	45	0	JXJ0CA033H#
Total:						0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	1051	MAX9708ETN+	130C, 85% R.H.	100 HRS	80	0	JXJ0CA012AN
MOISTURE SOAK	1102	MAX9708ETN+	130C, 85% R.H.	100 HRS	35	0	JXJ0C3013AQ
MOISTURE SOAK	1106	MAX9708ETN+	130C, 85% R.H.	100 HRS	80	0	JXJ0C3014AZ
MOISTURE SOAK	1206	MAX5023LASA+	130C, 85% R.H.	100 HRS	80	0	J6R0EA046Q1
MOISTURE SOAK	1206	MAX5023LASA+	130C, 85% R.H.	100 HRS	80	0	J6R0EA046Q2

MOISTURE SOAK	1206	MAX5023LASA+	130C, 85% R.H.	100	HRS	80	0	J6R0EA046Q3
MOISTURE SOAK	1222	MAX16823AUE/V+	130C, 85% R.H.	100	HRS	80	0	JEOZCA117C#
MOISTURE SOAK	1227	MAX9708ETN/V+	130C, 85% R.H.	100	HRS	77	0	JXJ0CA033H#

Total: **0**

FAILURE RATE: **MTTF (YRS): 100885** **QUANTITY: 692** **FAILS: 0** **FITS: 1.1**