



4/11/2009

**RELIABILITY MONITOR REPORT
FOR**

MFN 80V Bipolar CMOS DMOS

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:

MAX13448EESD	MAX15008ATJ+	MAX16816ATJ+	MAX16823AUE+	MAX16912ETT+
MAX5090AATE	MAX5090BATE+	MAX5090CATE+	MAX6397LATA	MAX6397LATA
MAX6397MATA	MAX6495ATT+T	MAX6496ATA+	MAX8798ETX+	MAX9113EKA+
MAX9714ETJ+				

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 69501** **FITS: 1.6**

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 10/1/2007 and 9/30/2008 .

Process Information:

Process Description: MFN 80V Bipolar CMOS DMOS

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0712	MAX9714ETJ+	135C	1000 HRS	80	0	NHH0B3650A#
HIGH TEMP OP LIFE	0726	MAX9714ETJ+	135C	1000 HRS	80	0	NHH0BA738A
HIGH TEMP OP LIFE	0729	MAX15008ATJ+	135C	192 HRS	55	0	N990BQ002AQ
HIGH TEMP OP LIFE	0737	MAX9714ETJ+	135C	1000 HRS	45	0	NHH0BA764A#
HIGH TEMP OP LIFE	0739	MAX16816ATJ+	135C	192 HRS	55	0	NBRTAAFAQ
HIGH TEMP OP LIFE	0741	MAX16912ETT+	135C	192 HRS	48	0	NKXZAQ001CQ
HIGH TEMP OP LIFE	0750	MAX6496ATA+	135C	1000 HRS	46	0	NW1ABQ002B#
HIGH TEMP OP LIFE	0803	MAX13448EESD+	135C	192 HRS	50	0	NGAZCQ001AQ
HIGH TEMP OP LIFE	0807	MAX8798ETX+	135C	168 HRS	48	0	NBKTBAP
HIGH TEMP OP LIFE	0819	MAX16823AUE+	135C	832 HRS	80	0	NEOZAQ001A#
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	0720	MAX5090BATE+	150C	1000 HRS	80	0	NZ6BAA004B#
STORAGE LIFE	0733	MAX6397LATA+	150C	1000 HRS	45	0	NWI0DA014E#
STORAGE LIFE	0737	MAX9714ETJ+	150C	1000 HRS	80	0	NHH0BA764A#
STORAGE LIFE	0813	MAX16823AUE+	150C	500 HRS	45	0	NEOXAQ001H#
STORAGE LIFE	0813	MAX16823AUE+	150C	1000 HRS	43	0	NEOZAQ001H#
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	0652	MAX6397MATA+	-65C TO 150C	1000 CYS	80	0	NWI0DA007E#
TEMP CYCLE, 5' RAMP, 10' DWELL	0704	MAX6397LATA+	-65C TO 150C	1000 CYS	77	0	NWI0CA005H#
TEMP CYCLE, 5' RAMP, 10' DWELL	0708	MAX5090CATE+	-65C TO 150C	1000 CYS	77	0	NZ6DAQ002A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0713	MAX6495ATT+T	-65C TO 150C	1000 CYS	77	0	NW1ACQ003F#
TEMP CYCLE, 5' RAMP, 10' DWELL	0720	MAX5090BATE+	-65C TO 150C	1000 CYS	80	0	NZ6BAA004B#
TEMP CYCLE, 5' RAMP, 10' DWELL	0737	MAX9714ETJ+	-65C TO 150C	500 CYS	80	0	NHH0BA764#
TEMP CYCLE, 5' RAMP, 10' DWELL	0737	MAX9714ETJ+	-65C TO 150C	1000 CYS	80	0	NHH0BA764A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0746	MAX5090AATE+	-65C TO 150C	1000 CYS	80	0	NZ6AAQ002D#
TEMP CYCLE, 5' RAMP, 10' DWELL	0807	MAX8798ETX+	-65C TO 150C	1000 CYS	99	0	NBKTBP
TEMP CYCLE, 5' RAMP, 10' DWELL	0813	MAX16823AUE+	-65C TO 150C	500 CYS	79	0	NEOZAQ001H#
Total:						0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
BIASED MOISTURE	0620	MAX9113EKA+	130C, 85% R.H.	96 HRS	38	0	Q1ZAAA010H#
BIASED MOISTURE	0652	MAX6397MATA+	130C, 85% R.H.	100 HRS	20	0	NWI0DA007E#
BIASED MOISTURE	0704	MAX6397LATA+	130C, 85% R.H.	96 HRS	17	0	NWI0CA005H#
BIASED MOISTURE	0708	MAX5090CATE+	130C, 85% R.H.	96 HRS	38	0	NZ6DAQ002A#
BIASED MOISTURE	0713	MAX6495ATT+T	130C, 85% R.H.	100 HRS	77	0	NW1ACQ003F#
BIASED MOISTURE	0713	MAX6495ATT+T	130C, 85% R.H.	96 HRS	31	0	NWIACQ003F#
BIASED MOISTURE	0714	MAX6495ATT+T	130C, 85% R.H.	96 HRS	45	0	NW1ACQ003H#
BIASED MOISTURE	0720	MAX5090BATE+	130C, 85% R.H.	6 HRS	50	1	NZ6BAA004B#
BIASED MOISTURE	0726	MAX9714ETJ+	130C, 85% R.H.	96 HRS	50	0	NHH0BA738A
BIASED MOISTURE	0733	MAX6397LATA+	130C, 85% R.H.	96 HRS	17	0	NWI0DA014E#
BIASED MOISTURE	0737	MAX9714ETJ+	130C, 85% R.H.	100 HRS	50	0	NHH0BA764#
BIASED MOISTURE	0746	MAX5090AATE+	130C, 85% R.H.	96 HRS	34	0	NZ6AAQ002D#
BIASED MOISTURE	0813	MAX16823AUE+	130C, 85% R.H.	2 HRS	32	0	NEOZAQ001H#
Total:						1	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	0620	MAX9113EKA+	130C, 85% R.H.	100 HRS	74	0	Q1ZAAA010H#

MOISTURE SOAK	0652	MAX6397MATA+	130C, 85% R.H.	96	HRS	80	0	NWI0DA007E#
MOISTURE SOAK	0704	MAX6397LATA+	130C, 85% R.H.	96	HRS	77	0	NWI0CA005H#
MOISTURE SOAK	0708	MAX5090CATE+	130C, 85% R.H.	96	HRS	77	0	NZ6DAQ002A#
MOISTURE SOAK	0713	MAX6495ATT+T	130C, 85% R.H.	100	HRS	77	0	NW1ACQ003F#
MOISTURE SOAK	0714	MAX6495ATT+T	130C, 85% R.H.	96	HRS	77	0	NW1ACQ003H#
MOISTURE SOAK	0733	MAX6397LATA+	130C, 85% R.H.	100	HRS	77	0	NWI0DA014E#
MOISTURE SOAK	0746	MAX5090AATE+	130C, 85% R.H.	100	HRS	80	0	NZ6AAQ002D#
MOISTURE SOAK	0813	MAX16823AUE+	130C, 85% R.H.	96	HRS	80	0	NEOZAQ001H#

Total: **0**

FAILURE RATE: **MTTF (YRS): 69501** **FITS: 1.6**