



5/9/2009

RELIABILITY MONITOR REPORT
FOR

MFN Standard Metal Gate CMOS

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:

DG211CSE+	ICL7665AEPA	ICL7665AEPA+	ICL7665AESA+	MAX1232CPA+
MAX232CSE	MAX232MLP	MAX369CPN+		

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 56197** **FITS: 2.0**

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 1/1/2008 and 12/31/2008.

Process Information:

Process Description: MFN Standard Metal Gate CMOS

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0727	ICL7665AEPA+	135C	408 HRS	250	0	NYUADA061P
HIGH TEMP OP LIFE	0746	MAX369CPN+	135C	1000 HRS	49	0	NRXBBA011Q1
HIGH TEMP OP LIFE	0746	MAX369CPN+	135C	1000 HRS	50	0	NRXBBA011Q2
HIGH TEMP OP LIFE	0746	MAX369CPN+	135C	1000 HRS	50	0	NRXBBA011Q3
HIGH TEMP OP LIFE	0804	MAX1232CPA+	135C	500 HRS	80	0	NPPADA675B
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	0642	ICL7665AEPA	150C	500 HRS	100	0	NYUADA060N
STORAGE LIFE	0741	ICL7665AESA+	150C	1000 HRS	160	0	NYUADA063F#
STORAGE LIFE	0746	MAX369CPN+	150C	500 HRS	77	0	NRXBBA011Q2
STORAGE LIFE	0746	MAX369CPN+	150C	1000 HRS	75	0	NRXBBA011Q1
STORAGE LIFE	0746	MAX369CPN+	150C	1000 HRS	77	0	NRXBBA011Q3
STORAGE LIFE	0802	DG211CSE+	150C	1000 HRS	80	0	NRCAEA194B
STORAGE LIFE	0804	MAX1232CPA+	150C	1000 HRS	80	0	NPPADA675B
STORAGE LIFE	0805	MAX232CSE	150C	1000 HRS	80	0	NHUBBA6Q9B
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	0741	ICL7665AESA+	-65C TO 150C	1000 CYS	80	0	NYUADA063F#

TEMP CYCLE, 5' RAMP, 10' DWELL	0746	MAX369CPN+	-65C TO 150C	1000	CYS	77	0	NRXBBA011Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0746	MAX369CPN+	-65C TO 150C	1000	CYS	77	0	NRXBBA011Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0746	MAX369CPN+	-65C TO 150C	1000	CYS	75	0	NRXBBA011Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	0802	DG211CSE+	-65C TO 150C	1000	CYS	80	0	NRCAEA194B
TEMP CYCLE, 5' RAMP, 10' DWELL	0804	MAX1232CPA+	-65C TO 150C	1000	CYS	80	0	NPPADA675B
TEMP CYCLE, 5' RAMP, 10' DWELL	0805	MAX232CSE	-65C TO 150C	500	CYS	80	0	NHUBBA6Q9B
TEMP CYCLE, 5' RAMP, 10' DWELL	0805	MAX232CSE	-65C TO 150C	1000	CYS	80	0	NHUBBAA6Q9B
TEMP CYCLE, 5' RAMP, 10' DWELL	0817	MAX232MLP	-65C TO 150C	1000	CYS	78	0	NPWBDA081Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0817	MAX232MLP	-65C TO 150C	500	CYS	78	0	NPWBDA081Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0818	MAX232MLP	-65C TO 150C	1000	CYS	78	0	NPWBDA081Q3

Total: **0**

FAILURE RATE: **MTTF (YRS): 56197** **FITS: 2.0**