



4/8/2009

**RELIABILITY MONITOR REPORT
FOR**

SAT 0.8 μ m Silicon Gate CMOS w/memory

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:

MAX16031ETM	MAX16046ETN+	MAX1781ETM+	MAX1781ETM+	MAX1782ETM+
MAX8798ETX+				

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 9227** **FITS: 12.4**

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 7/1/2007 and 6/30/2008 .

Process Information:

Process Description: SAT 0.8µm Silicon Gate CMOS w/memory

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0709	MAX1782ETM+	135C	192 HRS	53	0	TML6CQ001CQ
HIGH TEMP OP LIFE	0709	MAX1782ETM+	135C	192 HRS	53	0	TML6CQ001CQ
HIGH TEMP OP LIFE	0718	MAX16031ETM+	135C	192 HRS	48	0	T6F0BQ001CQ
HIGH TEMP OP LIFE	0718	MAX16031ETM+	135C	192 HRS	48	0	T6F0BQ001CQ
HIGH TEMP OP LIFE	0741	MAX16046ETN+	135C	192 HRS	48	0	TFDZBQ001FQ
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	073	MAX1781ETM+	150C	500 HRS	40	0	TLM5AA5B8Q1
STORAGE LIFE	0722	MAX1781ETM+C6D	150C	500 HRS	80	0	TML5C4062A
STORAGE LIFE	0722	MAX1781ETM+C6D	150C	1000 HRS	80	0	TML5C4062AA
STORAGE LIFE	0733	MAX1781ETM+	150C	1000 HRS	40	0	TLM5AA5B8Q1
STORAGE LIFE	0733	MAX1781ETM+	150C	1000 HRS	40	0	TLM5AA5B8Q2
STORAGE LIFE	0733	MAX1781ETM+	150C	500 HRS	40	0	TLM5AA5B8Q3
STORAGE LIFE	0737	MAX1781ETM+	150C	1000 HRS	80	0	TML5AA0J4A
STORAGE LIFE	0742	MAX1781ETM+	150C	1000 HRS	80	0	TML5A30L2B
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	0722	MAX1781ETM+C6D	-65C TO 150C	1000 CYS	80	0	TML5C4062AA

TEMP CYCLE, 5' RAMP, 10' DWELL	0726	MAX1781ETM+C6D	-65C TO 150C	788	CYS	989	0	TML5C6101A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0726	MAX1781ETM+	-65C TO 150C	1000	CYS	987	0	TML5C6101A
TEMP CYCLE, 5' RAMP, 10' DWELL	0737	MAX1781ETM+	-65C TO 150C	1000	CYS	80	0	TML5AA0J4A
TEMP CYCLE, 5' RAMP, 10' DWELL	0742	MAX1781ETM+	-65C TO 150C	1000	CYS	80	0	TML5A30L2B
TEMP CYCLE, 5' RAMP, 10' DWELL	0743	MAX1781ETM+	-65C TO 150C	788	CYS	994	0	TML5A42L2J#
TEMP CYCLE, 5' RAMP, 10' DWELL	0743	MAX1781ETM+	-65C TO 150C	1000	CYS	943	0	TML5A44L2J
TEMP CYCLE, 5' RAMP, 10' DWELL	0746	MAX1781ETM+	-65C TO 150C	788	CYS	992	0	TML5A44L2A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0746	MAX1782ETM+	-65C TO 150C	500	CYS	798	0	TML6AA4N9A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0809	MAX1781ETM+	-65C TO 150C	1000	CYS	77	0	TML5C4013D
TEMP CYCLE, 5' RAMP, 10' DWELL	0809	MAX1781ETM+	-65C TO 150C	1000	CYS	77	0	TML5C4013D
TEMP CYCLE, 5' RAMP, 10' DWELL	0809	MAX1781ETM+	-65C TO 150C	1000	CYS	77	0	TML5C4013E
TEMP CYCLE, 5' RAMP, 10' DWELL	0809	MAX1781ETM+	-65C TO 150C	1000	CYS	77	0	TML5C4013E
TEMP CYCLE, 5' RAMP, 10' DWELL	0809	MAX1781ETM+	-65C TO 150C	1000	CYS	76	0	TML5C4013F
TEMP CYCLE, 5' RAMP, 10' DWELL	0809	MAX1781ETM+	-65C TO 150C	1000	CYS	76	0	TML5C4013F
TEMP CYCLE, 5' RAMP, 10' DWELL	0812	MAX8798ETX+	-65C TO 150C	516	CYS	60	0	NBKTBAWJ
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
BIASED MOISTURE	0733	MAX1781ETM+	130C, 85% R.H.	100 HRS	45	0	TLM5AA5B8Q1
BIASED MOISTURE	0733	MAX1781ETM+	130C, 85% R.H.	100 HRS	50	0	TLM5AA5B8Q2
BIASED MOISTURE	0742	MAX1781ETM+	130C, 85% R.H.	96 HRS	50	0	TML5A30L2B
BIASED MOISTURE	0809	MAX1781ETM+	130C, 85% R.H.	96 HRS	50	0	TML5C4013D
BIASED MOISTURE	0809	MAX1781ETM+	130C, 85% R.H.	96 HRS	50	0	TML5C4013D
BIASED MOISTURE	0809	MAX1781ETM+	130C, 85% R.H.	96 HRS	45	0	TML5C4013F
BIASED MOISTURE	0809	MAX1781ETM+	130C, 85% R.H.	96 HRS	45	0	TML5C4013F
Total:						0	

FAILURE RATE:

MTTF (YRS): 9227

FITS: 12.4