



5/9/2009

**RELIABILITY MONITOR REPORT  
FOR**

**X3 0.6 $\mu$ m Silicon 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:

MAX1139MEEE	MAX11500USA+	MAX11501USA+	MAX11503EUA+	MAX11506CEE+
MAX11508UUD	MAX11509UUD	MAX1308ECM+	MAX1312ECM+	MAX1313ECM+
MAX1379ATP	MAX3001EEBP+	MAX3001EEWP	MAX4791EUK+	MAX5048AAUT
MAX5048BAUT	MAX5383EZT+	MAX5383EZT+T	MAX6737XKTG	MAX7474EAE+
MAX9722AETE+	MAX9724CENG	MAX9724DETC	MAX9776ETJ+	MAX9789AETJ+
NMAX1068BCE				

The calculated failure rate for devices using this process is:

**FAILURE RATE:**                      **MTTF (YRS): 117475**                      **FITS: 1.0**

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 and

**Process Information:**

Process Description:                      X3 0.6µm Silicon Gate CMOS

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0715	MAX11500USA+	135C	192 HRS	48	0	SGSZAQ001CQ
HIGH TEMP OP LIFE	0719	MAX11501USA+	135C	192 HRS	48	0	SGMZAQ001BQ
HIGH TEMP OP LIFE	0742	MAX7474EAE+	135C	192 HRS	55	0	SR00CA007AQ
HIGH TEMP OP LIFE	0750	MAX11503EUA+	135C	192 HRS	55	0	SHEZAQ001BQ
HIGH TEMP OP LIFE	0802	MAX9724DETC+	135C	192 HRS	50	0	SWW3BA031AQ
HIGH TEMP OP LIFE	0805	MAX9722AETE+	135C	1000 HRS	47	0	SIY0JQ001A
HIGH TEMP OP LIFE	0807	MAX9789AETJ+	135C	1000 HRS	80	0	SZ00GA346E
HIGH TEMP OP LIFE	0808	MAX11506CEE+	135C	192 HRS	48	0	SLPZAQ001DQ
HIGH TEMP OP LIFE	0810	MAX1379ATP	135C	192 HRS	48	0	SWH1DQ001BQ
HIGH TEMP OP LIFE	0810	MAX9724CENGETC+	135C	192 HRS	48	0	SANXAQ003AQ
HIGH TEMP OP LIFE	0816	MAX5383EZT+	135C	1000 HRS	50	0	S3JAEA004Q1
HIGH TEMP OP LIFE	0816	MAX5383EZT+	135C	1000 HRS	50	0	S3JAEA004Q2
HIGH TEMP OP LIFE	0816	MAX5383EZT+	135C	1000 HRS	50	0	S3JAEA004Q3
HIGH TEMP OP LIFE	0818	MAX11509UUD+	135C	192 HRS	48	0	SNBYBQ001DQ
HIGH TEMP OP LIFE	0818	MAX11508UUD+	135C	192 HRS	50	0	SNBZBQ001CQ
HIGH TEMP OP LIFE	0818	MAX5383EZT+T	135C	1000 HRS	50	0	S3JAEA004Q4
HIGH TEMP OP LIFE	0818	MAX5383EZT+T	135C	1000 HRS	49	0	S3JAEA004Q5
HIGH TEMP OP LIFE	0818	MAX5383EZT+T	135C	1000 HRS	50	0	S3JAEA004Q6

HIGH TEMP OP LIFE	0819	NMAX1068BCEG+	135C	192	HRS	48	0	SJ50EQ003AQ
HIGH TEMP OP LIFE	0834	MAX9776ETJ+	135C	1000	HRS	80	0	ST61EA246BA
<b>Total:</b>							<b>0</b>	

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### STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
STORAGE LIFE	0621	MAX1139MEEE+	150C	1000 HRS	45	0	SHT4AQ001B#	
STORAGE LIFE	0730	MAX1308ECM+	150C	1000 HRS	45	0	SHG1GQ002A#	
STORAGE LIFE	0751	MAX4791EUK+	150C	1000 HRS	45	0	SKG2FA014A#	
STORAGE LIFE	0751	MAX6737XKTGD3+T	150C	500 HRS	78	0	SC711EA011Q1	
STORAGE LIFE	0751	MAX6737XKTGD3+T	150C	1000 HRS	78	0	SC71EA011Q1	
STORAGE LIFE	0751	MAX6737XKTGD3+T	150C	500 HRS	78	0	SC711EA011Q2	
STORAGE LIFE	0751	MAX6737XKTGD3+T	150C	1000 HRS	78	0	SC71EA011Q2	
STORAGE LIFE	0751	MAX6737XKTGD3+T	150C	500 HRS	78	0	SC711EA011Q3	
STORAGE LIFE	0751	MAX6737XKTGD3+T	150C	1000 HRS	77	0	SC71EA011Q3	
STORAGE LIFE	0805	MAX9722AETE+	150C	1000 HRS	80	0	SIY0JQ001A	
STORAGE LIFE	0818	MAX5383EZT+T	150C	1000 HRS	80	0	S3JAE004Q4	
STORAGE LIFE	0831	MAX9789AETJ+	150C	1000 HRS	80	0	SZ00G429B#	
STORAGE LIFE	0834	MAX9776ETJ+	150C	1000 HRS	80	0	ST61EA246BA	
<b>Total:</b>							<b>0</b>	

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### TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	0621	MAX1139MEEE+	-65C TO 150C	1000 CYS	80	0	SHT4AQ001B#
TEMP CYCLE, 5' RAMP, 10' DWELL	0642	MAX5048BAUT#G16	-65C TO 150C	1000 CYS	310	0	SH71EA008BA
TEMP CYCLE, 5' RAMP, 10' DWELL	0714	MAX5048BAUT#G16	-65C TO 150C	1000 CYS	2271	0	SH71EA026AA
TEMP CYCLE, 5' RAMP, 10' DWELL	0738	MAX9789AETJ+	-65C TO 150C	1000 CYS	998	0	SZ00EA206A
TEMP CYCLE, 5' RAMP, 10' DWELL	0747	MAX1313ECM+	-65C TO 150C	1000 CYS	80	0	SHG2GQ002D#
TEMP CYCLE, 5' RAMP, 10' DWELL	0751	MAX1312ECM+	-65C TO 150C	1000 CYS	80	0	SHG2GQ002F#
TEMP CYCLE, 5' RAMP, 10' DWELL	0751	MAX4791EUK+	-65C TO 150C	1000 CYS	80	0	SKG2FA014A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0751	MAX6737XKTGD3+T	-65C TO 150C	1000 CYS	77	0	SC711EA011Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0751	MAX6737XKTGD3+T	-65C TO 150C	1000 CYS	77	0	SC711EA011Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0751	MAX6737XKTGD3+T	-65C TO 150C	1000 CYS	77	0	SC711EA011Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	0752	MAX9789AETJ+	-65C TO 150C	1000 CYS	983	0	SZ00EA286A

TEMP CYCLE, 5' RAMP, 10' DWELL	0804	MAX5048BAUT#G16	-65C TO 150C	1000	CYS	660	0	SH71EA032AA
TEMP CYCLE, 5' RAMP, 10' DWELL	0805	MAX9722AETE+	-65C TO 150C	1000	CYS	80	0	SIY0JQ001A
TEMP CYCLE, 5' RAMP, 10' DWELL	0818	MAX5383EZT+T	-65C TO 150C	1000	CYS	12	0	S3JAEA004Q4
TEMP CYCLE, 5' RAMP, 10' DWELL	0818	MAX5383EZT+T	-65C TO 150C	1000	CYS	79	0	S3JAEA004Q5
TEMP CYCLE, 5' RAMP, 10' DWELL	0818	MAX5383EZT+T	-65C TO 150C	1000	CYS	80	0	S3JAEA004Q6
TEMP CYCLE, 5' RAMP, 10' DWELL	0831	MAX9789AETJ+	-65C TO 150C	500	CYS	80	0	SZ00GA429B#
TEMP CYCLE, 5' RAMP, 10' DWELL	0834	MAX9776ETJ+	-65C TO 150C	950	CYS	80	0	ST61EA246BA
TEMP CYCLE, 5' RAMP, 10' DWELL	0843	MAX5048AAUT+T	-65C TO 150C	1000	CYS	80	0	SH70EA052Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0843	MAX5048AAUT+T	-65C TO 150C	1000	CYS	80	0	SH70EA052Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0843	MAX5048AAUT+T	-65C TO 150C	1000	CYS	80	0	SH70EA052Q3
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX3001EEBP+T	-40C TO +125C	1000	CYS	77	0	SKJ1FA054V
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX3001EEWP+T	-40C TO +125C	1000	CYS	77	0	SKJ1FA064C#
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX3001EEWP+T	-40C TO +125C	500	CYS	77	0	SKJ1FA064CX

**Total: 0**

**FAILURE RATE: MTTF (YRS): 117475 FITS: 1.0**