



5/9/2009

**RELIABILITY MONITOR REPORT
FOR**

San Antonio 0.4 μ 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:

MAX15021ATI+	MAX15022AT1	MAX15023ETG+	MAX1589ETZ25	MAX1589EZT25
MAX17017GTM	MAX1707GTM+	MAX17112ETB+	MAX1740IGTJ+	MAX1829ETL+
MAX1976AETA1	MAX4814EECB+	MAX4885EETG+	MAX4929EEP+	MAX4967EGEE+
MAX4967EQEE+	MAX4996LETG+	MAX5679ETJ	MAX8527EUD+	MAX8606ETD+T
MAX8631XETI+	MAX8643ETG+	MAX8671CETL+	MAX8676ELB+	MAX8695GELR+
MAX8784ETL	MAX8784ETL+	MAX8815AETB+	MAX8822ETE+	MAX8856ETD+
MAX9591ETU	MAX9654AUB+	MAX9669ETI+	MAX9725EETC+	

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 76224** **FITS: 1.5**

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: San Antonio 0.4µm Silicon Gate CMOS

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0716	MAX4929EEP+	135C	192 HRS	48	0	TBCZBQ001GQ
HIGH TEMP OP LIFE	0717	MAX4814EECB+	135C	192 HRS	48	0	TFPZAQ001FQ
HIGH TEMP OP LIFE	0723	MAX8671CETL+	135C	192 HRS	50	0	TGCYC4002BQ
HIGH TEMP OP LIFE	0731	MAX9725EETC+	135C	192 HRS	55	0	THYZAQ001EQ
HIGH TEMP OP LIFE	0738	MAX8822ETE+	135C	192 HRS	55	0	TFKZBQ001CQ
HIGH TEMP OP LIFE	0741	MAX5679ETJ	135C	192 HRS	47	1	TKLZAU001DQ
HIGH TEMP OP LIFE	0742	MAX4996LETG+	135C	192 HRS	48	0	TKIZA3001BQ
HIGH TEMP OP LIFE	0744	MAX8784ETL	135C	1000 HRS	33	0	TX40FQ001AC
HIGH TEMP OP LIFE	0746	MAX8695GELR+	135C	1000 HRS	45	0	TW63BA101KA
HIGH TEMP OP LIFE	0746	MAX8676ELB+	135C	192 HRS	43	0	TAWZD6197C
HIGH TEMP OP LIFE	0748	MAX15021ATI+	135C	192 HRS	48	0	TLWZAQ001HQ
HIGH TEMP OP LIFE	0748	MAX15022AT1	135C	192 HRS	50	0	TLWYAQ001HQ
HIGH TEMP OP LIFE	0802	MAX1589ETZ250+T	135C	1000 HRS	79	0	TM20G2060G
HIGH TEMP OP LIFE	0802	MAX8631XETI+	135C	192 HRS	80	0	TDCCA291H
HIGH TEMP OP LIFE	0805	MAX9591ETU	135C	192 HRS	55	0	TNLZAQ001AQ
HIGH TEMP OP LIFE	0806	MAX1589EZT250+T	135C	1000 HRS	79	0	TM20G2125DC
HIGH TEMP OP LIFE	0812	MAX8815AETB+	135C	192 HRS	49	0	TKPZBQ001EQ

HIGH TEMP OP LIFE	0813	MAX15023ETG+	135C	192	HRS	55	0	TFWZBQ001EQ
HIGH TEMP OP LIFE	0814	MAX8631XETI+	135C	192	HRS	37	0	TDPCC2452K
HIGH TEMP OP LIFE	0814	MAX17017GTM+	135C	500	HRS	71	0	TGEIZ001PA
HIGH TEMP OP LIFE	0814	MAX17017GTM+	135C	1000	HRS	71	0	TGEZIZ001PA
HIGH TEMP OP LIFE	0816	MAX1740IGTJ+	135C	192	HRS	50	0	TDCZGQ002BQ
HIGH TEMP OP LIFE	0817	MAX17017GTM+	135C	1000	HRS	75	0	TGEZIA002A
HIGH TEMP OP LIFE	0818	MAX1707GTM+	135C	1000	HRS	74	0	TGEZ1Z001E
HIGH TEMP OP LIFE	0819	MAX4967EQEE+	135C	324	HRS	48	0	TKWZBQ001#
HIGH TEMP OP LIFE	0821	MAX9654AUB+	135C	192	HRS	50	0	TMYZBQ001EQ
HIGH TEMP OP LIFE	0822	MAX8856ETD+	135C	192	HRS	48	0	TYA1AA004AQ
HIGH TEMP OP LIFE	0825	MAX8606ETD+T	135C	192	HRS	48	0	TYA0DQ003AQ
HIGH TEMP OP LIFE	0827	MAX9669ETI+	135C	500	HRS	80	0	TRMZAQ001A#
HIGH TEMP OP LIFE	0829	MAX4885EETG+	135C	192	HRS	48	0	TPEZAQ002FQ
HIGH TEMP OP LIFE	0830	MAX8643ETG+	135C	192	HRS	48	0	TM0AEQ003IQ
HIGH TEMP OP LIFE	0830	MAX1829ETL+W	135C	500	HRS	48	0	TQ2042334A
HIGH TEMP OP LIFE	0830	MAX1829ETL+W	135C	1000	HRS	48	0	TQ20H2334A
HIGH TEMP OP LIFE	0830	MAX1829ETL+W	135C	1000	HRS	48	0	TQ20H2334C
HIGH TEMP OP LIFE	0844	MAX17112ETB+T	135C	192	HRS	48	0	TSMZDQ002Q
HIGH TEMP OP LIFE	0844	MAX8527EUD+	135C	138	HRS	1918	0	TAC0GA004M#
Total:							1	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	0744	MAX8784ETL+	150C	1000 HRS	79	0	TX40FQ001AC
STORAGE LIFE	0810	MAX1976AETA130+T	150C	1000 HRS	80	0	TM20GA071Q1
STORAGE LIFE	0814	MAX17017GTM+	150C	1000 HRS	80	0	TGEZIZ001PA
STORAGE LIFE	0817	MAX17017GTM+	150C	1000 HRS	80	0	TGEZIZ002A
STORAGE LIFE	0818	MAX17017GTM+	150C	1000 HRS	80	0	TGEZIZ001E
STORAGE LIFE	0819	MAX4967EGEE+	150C	500 HRS	45	0	TKWZBQ001#
STORAGE LIFE	0827	MAX9669ETI+	150C	500 HRS	80	0	TRMZAQ991A#
STORAGE LIFE	0827	MAX9669ETI+	150C	880 HRS	80	0	TRMZAQ001A#
STORAGE LIFE	0829	MAX4967EGEE+	150C	500 HRS	45	0	TKWZBQ003B#
Total:							0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	0744	MAX8784ETL+	-65C TO 150C	1000 CYS	79	0	TX40FQ001AC
TEMP CYCLE, 5' RAMP, 10' DWELL	0810	MAX1976AETA130+T	-65C TO 150C	1000 CYS	79	0	TM20GA071Q1

TEMP CYCLE, 5' RAMP, 10' DWELL	0810	MAX1976AETA130+T	-65C TO 150C	1000	CYS	80	0	TM20GA071Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0814	MAX17017GTM+	-65C TO 150C	1000	CYS	80	0	TGEZIZ001PA
TEMP CYCLE, 5' RAMP, 10' DWELL	0818	MAX17017GTM+	-65C TO 150C	1000	CYS	80	0	TGEZIZ001E
TEMP CYCLE, 5' RAMP, 10' DWELL	0819	MAX4967EGEE+	-65C TO 150C	497	CYS	80	0	TKWZBQ001#
TEMP CYCLE, 5' RAMP, 10' DWELL	0829	MAX4967EGEE+	-65C TO 150C	500	CYS	80	0	TKWZBQ003B#
TEMP CYCLE, 5' RAMP, 10' DWELL	0830	MAX1829ETL+W	-65C TO 150C	1000	CYS	80	0	TQ20H2334A
TEMP CYCLE, 5' RAMP, 10' DWELL	0830	MAX1829ETL+W	-65C TO 150C	1000	CYS	80	0	TQ20H2336C
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE	TEST CODE	VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
BIASED MOISTURE	0818	MAX17017GTM+		130C, 85% R.H.	1000 HRS	26	0	TGEZIZ001E
Total:							0	

FAILURE RATE: **MTTF (YRS): 76224** **FITS: 1.5**