



4/8/2009

**RELIABILITY MONITOR REPORT
FOR**

SVL 0.8 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:

MAX13413EESA	MAX15003ATM	MAX1526ETM+	MAX1577ZETA+	MAX1607ESA+
MAX1607ESA+C	MAX16824EUE+	MAX16825EUE	MAX17009GTL+	MAX1782ETM+
MAX1802EHJ+	MAX1806EUA25	MAX1842ETI+	MAX3301EETJ+	MAX3349EAETE
MAX4358ECE+	MAX4402AKA+	MAX4402AUA	MAX4402AUA+	MAX4845EYT
MAX4845EYT+	MAX4845EYT+T	MAX4925ELT+	MAX4945EYT+	MAX4959ELB
MAX5960LECS+	MAX6389XS31D	MAX6613MXK+	MAX6710EUT+	MAX6749KA+
MAX6969AUG+	MAX7500MSA+	MAX7500MUA+	MAX8655ETN+	MAX8659ETL+
MAX8722BEEG	MAX8778ETJ+	MAX8826ETL+	MAX9814ETD+	

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 209638** **FITS: 0.5**

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

Process Information:

Process Description: SVL 0.8µm Silicon Gate CMOS

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0606	MAX1782ETM+	135C	1000 HRS	44	0	SML3HA247G
HIGH TEMP OP LIFE	0636	MAX3349EAETE+	135C	192 HRS	48	0	TBBZAQ001EQ
HIGH TEMP OP LIFE	0637	MAX8826ETL+	135C	192 HRS	48	0	TBZZAQ001GQ
HIGH TEMP OP LIFE	0647	MAX9814ETD+	135C	192 HRS	48	0	TAPZBQ001CQ
HIGH TEMP OP LIFE	0706	MAX8778ETJ+	135C	192 HRS	55	0	T810FQ003GQ
HIGH TEMP OP LIFE	0708	MAX17009GTL+	135C	192 HRS	48	0	TEJZBQ001FQ
HIGH TEMP OP LIFE	0709	MAX6969AUG+	135C	1000 HRS	48	0	R060178CL1
HIGH TEMP OP LIFE	0710	MAX4845EYT+T	135C	500 HRS	45	0	TYW2AA037Q4
HIGH TEMP OP LIFE	0711	MAX4925ELT+	135C	192 HRS	47	0	TS82BA005GQ
HIGH TEMP OP LIFE	0713	MAX6749KA+	135C	1000 HRS	48	0	DLZ3CA004D
HIGH TEMP OP LIFE	0713	MAX5960LECS+	135C	192 HRS	50	0	TX73BQ002AQ
HIGH TEMP OP LIFE	0713	MAX4959ELB	135C	192 HRS	48	0	TDHZBQ001DQ
HIGH TEMP OP LIFE	0717	MAX8722BEEG+	135C	192 HRS	48	0	TRX0FQ001BQ
HIGH TEMP OP LIFE	0717	MAX8659ETL+	135C	1000 HRS	46	0	JW77AAKQ1
HIGH TEMP OP LIFE	0717	MAX8659ETL+	135C	1000 HRS	48	0	JW77AAKQ2
HIGH TEMP OP LIFE	0717	MAX8659ETL+	135C	1000 HRS	44	0	JW77AAKQ3
HIGH TEMP OP LIFE	0721	MAX1607ESA+C71055	135C	1000 HRS	80	0	T9DAKA028B

HIGH TEMP OP LIFE	0721	MAX8655ETN+	135C	1000 HRS	45	0	NA1TAALQ1
HIGH TEMP OP LIFE	0721	MAX8655ETN+	135C	1000 HRS	44	0	NA1TAALQ2
HIGH TEMP OP LIFE	0722	MAX15003ATM+	135C	192 HRS	48	0	TBKZAQ001GQ
HIGH TEMP OP LIFE	0722	MAX8655ETN+	135C	1000 HRS	6	0	NA1TAALQ3
HIGH TEMP OP LIFE	0722	MAX3301EETJ+	135C	1000 HRS	48	0	SQW0CA005B#
HIGH TEMP OP LIFE	0727	MAX7500MSA+	135C	1000 HRS	48	0	SRTOCA006N#
HIGH TEMP OP LIFE	0729	MAX4845EYT+	135C	500 HRS	45	0	TYW2AA081Q1
HIGH TEMP OP LIFE	0729	MAX4945EYT+	135C	500 HRS	50	0	TYW2AA081Q2
HIGH TEMP OP LIFE	0729	MAX4845EYT+	135C	1000 HRS	44	0	TYW2AA081Q2
HIGH TEMP OP LIFE	0729	MAX4845EYT	135C	500 HRS	45	0	TYW2AA081Q3
HIGH TEMP OP LIFE	0729	MAX4845EYT+	135C	1000 HRS	45	0	TYW2AA081Q3
HIGH TEMP OP LIFE	0731	MAX1526ETM+	135C	1000 HRS	80	0	TRS0FA729C
HIGH TEMP OP LIFE	0731	MAX4358ECE+	135C	1000 HRS	50	0	S9LADQ001Q1
HIGH TEMP OP LIFE	0731	MAX4358ECE+	135C	1000 HRS	50	0	S9LADQ001Q2
HIGH TEMP OP LIFE	0731	MAX4358ECE+	135C	1000 HRS	47	0	S9LADQ001Q3
HIGH TEMP OP LIFE	0733	MAX1607ESA+	135C	1000 HRS	80	0	T9DAKA030E#
HIGH TEMP OP LIFE	0738	MAX13413EESA+	135C	192 HRS	48	0	TFXWBQ002BQ
HIGH TEMP OP LIFE	0740	MAX16825EUE	135C	192 HRS	48	0	TGLYBQ001CQ
HIGH TEMP OP LIFE	0740	MAX16824EUE+	135C	192 HRS	48	0	TGLZBQ001CQ
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	072	MAX8655ETN+	150C	1000 HRS	77	0	NA1TAALQ1
STORAGE LIFE	0631	MAX4402AUA+	150C	1000 HRS	43	0	SOHAEQ002A#
STORAGE LIFE	0708	MAX4845EYT+T	150C	1000 HRS	75	0	TYW2AA037Q1
STORAGE LIFE	0710	MAX4845EYT+T	150C	1000 HRS	77	0	TYW2AA037Q3
STORAGE LIFE	0710	MAX4845EYT+T	150C	1000 HRS	77	0	TYW2AA037Q4
STORAGE LIFE	0713	MAX6749KA+	150C	1000 HRS	80	0	DLZ3CA004D
STORAGE LIFE	0717	MAX8659ETL+	150C	500 HRS	77	0	JW7TAAKQ1
STORAGE LIFE	0717	MAX8659ETL+	150C	500 HRS	77	0	JW7TAAKQ2
STORAGE LIFE	0717	MAX8659ETL+	150C	1000 HRS	77	0	JW7TAAKQ3
STORAGE LIFE	0721	MAX1607ESA+C71055	150C	1000 HRS	79	0	T9DAKA028B
STORAGE LIFE	0721	MAX8655ETN+	150C	1000 HRS	75	0	NA1TAALQ2
STORAGE LIFE	0722	MAX8655ETN+	150C	1000 HRS	77	0	NA1TAALQ3
STORAGE LIFE	0729	MAX4845EYT+	150C	1000 HRS	80	0	TYW2AA081Q1
STORAGE LIFE	0729	MAX4845EYT+	150C	1000 HRS	65	0	TYW2AA081Q2
STORAGE LIFE	0729	MAX4845EYT+	150C	1000 HRS	80	0	TYW2AA081Q3

STORAGE LIFE	0731	MAX1526ETM+	150C	1000	HRS	80	0	TRS0FA729C
STORAGE LIFE	0731	MAX4358ECE+	150C	1000	HRS	77	0	S9LADQ001Q1
STORAGE LIFE	0731	MAX4358ECE+	150C	1000	HRS	77	0	S9LADQ001Q2
STORAGE LIFE	0731	MAX4358ECE+	150C	500	HRS	77	0	S9LADQ001Q3
STORAGE LIFE	0733	MAX1607ESA+	150C	1000	HRS	80	0	T9DAKA030E#
STORAGE LIFE	0733	MAX3301EETJ+	150C	500	HRS	80	0	SQW0CA005B#
STORAGE LIFE	0742	MAX1842ETI+	150C	1000	HRS	80	0	T3QBGA056Q1
STORAGE LIFE	0742	MAX1842ETI+	150C	1000	HRS	80	0	T3QBGA056Q2
STORAGE LIFE	0742	MAX1842ETI+	150C	1000	HRS	80	0	T3QBGA056Q3
STORAGE LIFE	0811	MAX6710EUT+	150C	500	HRS	80	0	D6O2DA007Q1
STORAGE LIFE	0811	MAX6710EUT+	150C	1000	HRS	80	0	D6O2DA007Q2
STORAGE LIFE	0811	MAX6710EUT+	150C	1000	HRS	80	0	D6O2DA007Q3
Total:							0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	0515	MAX4402AUA	-65C TO 150C	1000 CYS	77	0	SOHAEQ001F#
TEMP CYCLE, 5' RAMP, 10' DWELL	0515	MAX4402AUA	-65C TO 150C	1000 CYS	77	0	SOHAEQ001F#
TEMP CYCLE, 5' RAMP, 10' DWELL	0631	MAX4402AUA+	-65C TO 150C	1000 CYS	77	0	SOHAEQ002A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0703	MAX1577ZETA+T	-65C TO 150C	1000 CYS	71	0	STD0C2015FA
TEMP CYCLE, 5' RAMP, 10' DWELL	0708	MAX4845EYT+T	-65C TO 150C	1000 CYS	77	0	TYW2AA037Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0710	MAX4845EYT+T	-65C TO 150C	1000 CYS	76	0	TYW2AA037Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	0710	MAX4845EYT+T	-65C TO 150C	1000 CYS	53	0	TYW2AA037Q4
TEMP CYCLE, 5' RAMP, 10' DWELL	0713	MAX6749KA+	-65C TO 150C	1000 CYS	80	0	DLZ3CA004D
TEMP CYCLE, 5' RAMP, 10' DWELL	0721	MAX1607ESA+C71055	-65C TO 150C	1000 CYS	80	0	T9DAKA028B
TEMP CYCLE, 5' RAMP, 10' DWELL	0721	MAX8655ETN+	-65C TO 150C	1000 CYS	77	0	NA1TAALQ1
TEMP CYCLE, 5' RAMP, 10' DWELL	0721	MAX8655ETN+	-65C TO 150C	1000 CYS	77	0	NA1TAALQ2
TEMP CYCLE, 5' RAMP, 10' DWELL	0722	MAX8655ETN+	-65C TO 150C	500 CYS	77	0	NA1TAAQ3
TEMP CYCLE, 5' RAMP, 10' DWELL	0722	MAX8655ETN+	-65C TO 150C	1000 CYS	77	0	NA1TAALQ3
TEMP CYCLE, 5' RAMP, 10' DWELL	0729	MAX4845EYT+	-65C TO 150C	1000 CYS	73	0	TYW2AA081Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0729	MAX4845EYT+	-65C TO 150C	1000 CYS	80	0	TYW2AA081Q2

TEMP CYCLE, 5' RAMP, 10' DWELL	0729	MAX4845EYT+	-65C TO 150C	500	CYS	80	0	TYW2AA081Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	0729	MAX4845EYT+	-65C TO 150C	1000	CYS	80	0	TYW2AA081Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	0731	MAX1526ETM+	-65C TO 150C	1000	CYS	80	0	TRS0FA729C
TEMP CYCLE, 5' RAMP, 10' DWELL	0731	MAX4358ECE+	-65C TO 150C	1000	CYS	77	0	S9LADQ001Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0731	MAX4358ECE+	-65C TO 150C	1000	CYS	77	0	S9LADQ001Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0731	MAX4358ECE+	-65C TO 150C	1000	CYS	77	0	S9LADQ001Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	0732	MAX6613MXK+T	-65C TO 150C	500	CYS	77	0	DH10CQ001Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0733	MAX1607ESA+	-65C TO 150C	1000	CYS	80	0	T9DAKA030E#
TEMP CYCLE, 5' RAMP, 10' DWELL	0733	MAX3301EETJ+	-65C TO 150C	1000	CYS	80	0	SQW0CA005B#
TEMP CYCLE, 5' RAMP, 10' DWELL	0734	MAX6389XS31D2+T	-65C TO 150C	1000	CYS	77	0	D0PGDA010E#
TEMP CYCLE, 5' RAMP, 10' DWELL	0736	MAX4402AKA+	-65C TO 150C	1000	CYS	75	0	DOHAFQ001A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0741	MAX1802EHJ+	-65C TO 150C	1000	CYS	64	0	D66AC3008A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0741	MAX1802EHJ+	-65C TO 150C	1000	CYS	13	0	D66AC3008A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0742	MAX1842ETI+	-65C TO 150C	1000	CYS	80	0	T3QBGA056Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0742	MAX1842ETI+	-65C TO 150C	1000	CYS	80	0	T3QBGA056Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0742	MAX1842ETI+	-65C TO 150C	1000	CYS	80	0	T3QBGA056Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	0811	MAX6710EUT+	-65C TO 150C	1000	CYS	80	0	D6O2DA007Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0811	MAX6710EUT+	-65C TO 150C	1000	CYS	80	0	D6O2DA007Q3
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	0515	MAX4402AUA	130C, 85% R.H.	96	HRS	40	0	SOHAEQ001F#
BIASED MOISTURE	0515	MAX4402AUA	130C, 85% R.H.	96	HRS	40	0	SOHAEQ001F#
BIASED MOISTURE	0631	MAX4402AUA+	130C, 85% R.H.	96	HRS	27	0	SOHAEQ002A#
BIASED MOISTURE	0713	MAX6749KA+	130C, 85% R.H.	96	HRS	19	0	DLZ3CA004D
BIASED MOISTURE	0721	MAX1607ESA+C71055	130C, 85% R.H.	96	HRS	50	0	T9DAKA028B
BIASED MOISTURE	0721	MAX8655ETN+	130C, 85% R.H.	100	HRS	45	0	NA1TAALQ1
BIASED MOISTURE	0724	MAX7500MUA+	130C, 85% R.H.	96	HRS	47	0	SRT0CQ003F#
BIASED MOISTURE	0729	MAX4845EYT+	130C, 85% R.H.	100	HRS	25	0	TYW2AA081Q1
BIASED MOISTURE	0729	MAX4845EYT+	130C, 85% R.H.	100	HRS	23	0	TYW2AA081Q2

BIASED MOISTURE	0729	MAX4845EYT	130C, 85% R.H.	100	HRS	25	0	TYW2AA081Q3
BIASED MOISTURE	0729	MAX4845EYT+	130C, 85% R.H.	100	HRS	25	0	TYW2AA081Q3
BIASED MOISTURE	0731	MAX4358ECE+	130C, 85% R.H.	96	HRS	20	0	S9LADQ001Q1
BIASED MOISTURE	0731	MAX4358ECE+	130C, 85% R.H.	96	HRS	20	0	S9LADQ001Q3
BIASED MOISTURE	0733	MAX1607ESA+	130C, 85% R.H.	96	HRS	50	0	T9DAKA030E#
BIASED MOISTURE	0733	MAX3301EETJ+	130C, 85% R.H.	96	HRS	43	0	SQW0CA005B#
BIASED MOISTURE	0734	MAX6389XS31D2+T	130C, 85% R.H.	96	HRS	48	0	D0PGDA010E#
BIASED MOISTURE	0736	MAX4402AKA+	130C, 85% R.H.	96	HRS	32	0	DOHAFQ001A#
BIASED MOISTURE	0742	MAX1842ETI+	130C, 85% R.H.	96	HRS	50	0	T3QBGA056Q1
BIASED MOISTURE	0742	MAX1842ETI+	130C, 85% R.H.	96	HRS	50	0	T3QBGA056Q2
BIASED MOISTURE	0742	MAX1842ETI+	130C, 85% R.H.	96	HRS	50	0	T3QBGA056Q3
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK	0515	MAX4402AUA	130C, 85% R.H.	96	HRS	77	0	SOHAEQ001F#
MOISTURE SOAK	0515	MAX4402AUA	130C, 85% R.H.	96	HRS	77	0	SOHAEQ001F#
MOISTURE SOAK	0631	MAX4402AUA+	130C, 85% R.H.	96	HRS	77	0	SOHAEQ002A#
MOISTURE SOAK	0713	MAX6749KA+	130C, 85% R.H.	100	HRS	80	0	DLZ3CA004D
MOISTURE SOAK	0734	MAX6389XS31D2+T	130C, 85% R.H.	96	HRS	77	0	D0PGDA010E#
MOISTURE SOAK	0736	MAX4402AKA+	130C, 85% R.H.	96	HRS	77	0	DOHAFQ001A#
Total:						0		

FAILURE RATE:

MTTF (YRS): 209638

FITS: 0.5