



4/13/2009

**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+	MAX1558ETB+T	MAX1607ESA+
MAX16824EUE+	MAX16825EUE	MAX1790EUA+	MAX1802EHJ+	MAX1806EUA25
MAX1842ETI+	MAX232MLP	MAX3301EETJ+	MAX3349EAETE	MAX4358ECE+
MAX4402AKA+	MAX4402AUA	MAX4402AUA+	MAX4845EYT	MAX4845EYT+
MAX4945EYT+	MAX4959ELB	MAX5960LECS+	MAX6389XS31D	MAX6710EUT+
MAX6749KA+	MAX7500MSA+	MAX7500MUA+	MAX8655ETN+	MAX8659ETL+
MAX8722BEEG	MAX8734AEED+	MAX8734AEEI+	MAX8734EEI+	

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 215848** **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 10/1/2007 and 9/30/2008 .

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		MAX8734EEI+	135C	1000 HRS	80	0	J0BFJ3001C
HIGH TEMP OP LIFE	0636	MAX3349EAETE+	135C	192 HRS	48	0	TBBZAQ001EQ
HIGH TEMP OP LIFE	0713	MAX6749KA+	135C	1000 HRS	48	0	DLZ3CA004D
HIGH TEMP OP LIFE	0713	MAX4959ELB	135C	192 HRS	48	0	TDHZBQ001DQ
HIGH TEMP OP LIFE	0713	MAX5960LECS+	135C	192 HRS	50	0	TX73BQ002AQ
HIGH TEMP OP LIFE	0717	MAX8722BEEG+	135C	192 HRS	48	0	TRX0FQ001BQ
HIGH TEMP OP LIFE	0717	MAX8659ETL+	135C	1000 HRS	46	0	JW7TAAKQ1
HIGH TEMP OP LIFE	0717	MAX8659ETL+	135C	1000 HRS	48	0	JW7TAAKQ2
HIGH TEMP OP LIFE	0717	MAX8659ETL+	135C	1000 HRS	44	0	JW7TAAKQ3
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	0727	MAX7500MSA+	135C	1000 HRS	48	0	SRTOCA006N#
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	0733	MAX3301EETJ+	135C	1000 HRS	48	0	SQW0CA005B#
HIGH TEMP OP LIFE	0738	MAX13413EESA+	135C	192 HRS	48	0	TFXWBQ002BQ
HIGH TEMP OP LIFE	0740	MAX16824EUE+	135C	192 HRS	48	0	TGLZBQ001CQ
HIGH TEMP OP LIFE	0740	MAX16825EUE	135C	192 HRS	48	0	TGLYBQ001CQ
HIGH TEMP OP LIFE	0822	MAX8734AEEL+	135C	192 HRS	80	0	J0BFJQ002EA
HIGH TEMP OP LIFE	0822	MAX8734AEEL+	135C	500 HRS	80	0	J0BFJQ002EA
HIGH TEMP OP LIFE	0822	MAX8734EEI+	135C	1000 HRS	80	0	J0BFJQ002EA
HIGH TEMP OP LIFE	0825	MAX1790EUA+	135C	1000 HRS	80	0	J8VAIQ003CA
HIGH TEMP OP LIFE	0828	MAX1558ETB+T	135C	500 HRS	80	0	JHM0JZ001FC
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE		MAX8734EEI+	150C	1000 HRS	80	0	J0BFJ3001C
STORAGE LIFE	0631	MAX4402AUA+	150C	1000 HRS	43	0	SOHAEQ002A#
STORAGE LIFE	0724	MAX7500MUA+	150C	1000 HRS	72	0	SRT0CQ003F#
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
STORAGE LIFE	0822	MAX8734EEI+	150C	1000 HRS	80	0	J0BFJQ002EA
STORAGE LIFE	0825	MAX1790EUA+	150C	1000 HRS	80	0	J8VAIQ003CA
STORAGE LIFE	0825	MAX1790EUA+	150C	1000 HRS	80	0	J8VAIQ003CA
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX8734EEI+	-65C TO 150C	231 CYS	80	0	J0BFJ3001C
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX8734EEI+	-65C TO 150C	500 CYS	80	0	J0BFJ3001C
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX8734EEI+	-65C TO 150C	1000 CYS	80	0	J0BFJ3001C
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	0724	MAX7500MUA+	-65C TO 150C	500 CYS	76	0	SRT0CQ003F#
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	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	0810	MAX1802EHJ+	-65C TO 150C	1000 CYS	77	0	D66AC3008Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0810	MAX1802EHJ+	-65C TO 150C	497 CYS	77	0	D66AC3008Q2
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

TEMP CYCLE, 5' RAMP, 10' DWELL	0822	MAX8734AEEI+	-65C TO 150C	800	CYS	80	0	J0BFJQ002EA
TEMP CYCLE, 5' RAMP, 10' DWELL	0825	MAX1790EUA+	-65C TO 150C	200	CYS	80	0	J8VAIQ003CA
TEMP CYCLE, 5' RAMP, 10' DWELL	0825	MAX1790EUA+	-65C TO 150C	200	CYS	80	0	J8VAIQ003CA

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	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	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
BIASED MOISTURE	0815	MAX8734EEI+	130C, 85% R.H.	2 HRS	48	0	J0BFJ3001C
BIASED MOISTURE	0822	MAX8734AEEI+	130C, 85% R.H.	96 HRS	50	0	J0BFJQ002EA

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	0724	MAX7500MUA+	130C, 85% R.H.	96 HRS	70	0	SRT0CQ003F#
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#
MOISTURE SOAK	0811	MAX6710EUT+	85 C/85% R.H.	500 HRS	80	0	D6O2DA007Q1
MOISTURE SOAK	0811	MAX6710EUT+	85 C/85% R.H.	1000 HRS	46	0	D6O2DA007Q1
MOISTURE SOAK	0811	MAX6710EUT+	85 C/85% R.H.	1000 HRS	45	0	D6O2DA007Q2

MOISTURE SOAK	0811	MAX6710EUT+	85 C/85% R.H.	500	HRS	50	0	D602DA007Q3
MOISTURE SOAK	0811	MAX6710EUT+	85 C/85% R.H.	1000	HRS	45	0	D6O2DA007Q3
						Total:	0	

FAILURE RATE: **MTTF (YRS): 215848** **FITS: 0.5**