



4/8/2009

**RELIABILITY MONITOR REPORT
FOR**

SVL 0.6 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:

MAX1037EKA+	MAX1076ETC+	MAX11014BGT	MAX11014BGT	MAX1139MEEE
MAX1308ECM+	MAX1312ECM+	MAX1313ECM+	MAX3001EEBP+	MAX3001EEBPT
MAX4209HAUA	MAX4791EUK+	MAX5048BAUT	MAX5383EZT+	MAX5383EZT+T
MAX5406EUM+	MAX5774UCB+	MAX5935CAX	MAX6737XKTG	MAX6864UK31
MAX7445EUD+	MAX7474EAE+	MAX9503MEEE	MAX9505ETE+	MAX9722AETE+
MAX9722AEUE	MAX9722EUE+	MAX9723DETE+	MAX9729ETI+	MAX9750AETI+
MAX9750CETI+	MAX9750CETI+	MAX9776ETJ+	MAX9789AETJ+	

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 182901** **FITS: 0.6**

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 0.6µm Silicon Gate CMOS

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0603	MAX9723DETE+	135C	192 HRS	48	0	SSB3DA020CQ
HIGH TEMP OP LIFE	0626	MAX5406EUM+	135C	192 HRS	55	0	SYQ0DQ003BQ
HIGH TEMP OP LIFE	0707	MAX9505ETE+	135C	1000 HRS	43	0	SU1CDA007A#
HIGH TEMP OP LIFE	0710	MAX9729ETI+	135C	192 HRS	48	0	S740CQ001EQ
HIGH TEMP OP LIFE	0710	MAX11014BGTM+	135C	500 HRS	45	0	NADTAAJ
HIGH TEMP OP LIFE	0712	MAX11014BGTM+	135C	1000 HRS	45	0	NADTAAKR
HIGH TEMP OP LIFE	0716	MAX1076ETC+	135C	192 HRS	48	0	SAG0EA010BQ
HIGH TEMP OP LIFE	0721	MAX11014BGTM+	135C	500 HRS	45	0	NADTAAND
HIGH TEMP OP LIFE	0721	MAX11014BGTM	135C	1000 HRS	45	0	NADTAAND
HIGH TEMP OP LIFE	0721	MAX9750AETI+	135C	1000 HRS	80	0	SHY0OA501AB
HIGH TEMP OP LIFE	0724	MAX9750CETI+	135C	1000 HRS	69	0	SHY3RZ005B
HIGH TEMP OP LIFE	0724	MAX9723DETE+	135C	1000 HRS	48	0	SSB3FZ005D
HIGH TEMP OP LIFE	0725	MAX5774UCB+	135C	1000 HRS	46	0	SU0ABZ005C
HIGH TEMP OP LIFE	0726	MAX5935CAX	135C	1000 HRS	77	0	SEG0DEJ
HIGH TEMP OP LIFE	0728	MAX4209HAUA+	135C	192 HRS	55	0	SVX2DA012FQ
HIGH TEMP OP LIFE	0730	MAX1308ECM+	135C	500 HRS	48	0	SHG1GQ002A#
HIGH TEMP OP LIFE	0734	MAX7445EUD+	135C	1000 HRS	10	0	IHN0AA009A#

HIGH TEMP OP LIFE	0734	MAX1037EKA+	135C	192	HRS	50	0	S1Q1HA025AQ
HIGH TEMP OP LIFE	0742	MAX7474EAE+	135C	192	HRS	55	0	SR00CA007AQ
HIGH TEMP OP LIFE	0747	MAX9789AETJ+	135C	1000	HRS	78	0	EZ00HQ001BC
HIGH TEMP OP LIFE	0752	MAX9776ETJ+	135C	1000	HRS	48	0	ET61FQ001BA
HIGH TEMP OP LIFE	0805	MAX9722AETE+	135C	192	HRS	48	0	SIY0JQ001A
HIGH TEMP OP LIFE	0806	MAX9789AETJ+	135C	1000	HRS	77	0	EZ00HQ002D
HIGH TEMP OP LIFE	0807	MAX9789AETJ+	135C	192	HRS	80	0	SZ00GA346E
HIGH TEMP OP LIFE	0816	MAX5383EZT+	135C	500	HRS	50	0	S3JAEA004Q1
HIGH TEMP OP LIFE	0816	MAX5383EZT+	135C	500	HRS	50	0	S3JAEA004Q2
HIGH TEMP OP LIFE	N/A	MAX3001EEBP+T	135C	1000	HRS	44	0	SKJ1F2037AB
HIGH TEMP OP LIFE	N/A	MAX3001EEBP+T	135C	1000	HRS	45	0	SKJ1F2037AC
Total:							0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	075	MAX9789AETJ+	150C	1000 HRS	80	0	EZ00HQ001BC
STORAGE LIFE	0621	MAX1139MEEE+	150C	1000 HRS	45	0	SHT4AQ001B#
STORAGE LIFE	0622	MAX6864UK31D3S+	150C	1000 HRS	80	0	SFJ0DQ002D#
STORAGE LIFE	0636	MAX9503MEEE+	150C	1000 HRS	78	0	SU1BDA006A#
STORAGE LIFE	0710	MAX11014BGTM+	150C	1000 HRS	77	0	NADTAAJ
STORAGE LIFE	0721	MAX11014BGTM+	150C	1000 HRS	77	0	NADTAAND
STORAGE LIFE	0721	MAX9750AETI+	150C	1000 HRS	80	0	SHY0OA501AB
STORAGE LIFE	0724	MAX9750CETI+	150C	1000 HRS	80	0	SHY3RZ005B
STORAGE LIFE	0724	MAX9723DETE+	150C	1000 HRS	80	0	SSB3FZ005D
STORAGE LIFE	0725	MAX5774UCB+	150C	1000 HRS	80	0	SU0ABZ005C
STORAGE LIFE	0726	MAX5935CAX	150C	1000 HRS	80	0	SEG0DEJ
STORAGE LIFE	0730	MAX9722AEUE+	150C	500 HRS	45	0	SIY0H144C#
STORAGE LIFE	0730	MAX9722AEUE+	150C	1000 HRS	45	0	SIY0HA144C#
STORAGE LIFE	0730	MAX1308ECM+	150C	1000 HRS	45	0	SHG1GQ002A#
STORAGE LIFE	0734	MAX9750CETI+C6Y	150C	500 HRS	80	0	SHY3QA513A#
STORAGE LIFE	0734	MAX9750CETI+C6Y	150C	1000 HRS	80	0	SHY3QA513A
STORAGE LIFE	0751	MAX4791EUK+T	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	0806	MAX9789AETJ+	150C	1000 HRS	80	0	EZ00HQ002D

STORAGE LIFE	N/A	MAX3001EEBP+T	150C	500	HRS	0	SKJ1F2037AB
					Total:	0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	0621	MAX1139MEEE+	-65C TO 150C	500	CYS	80	0 SHT4AQ001B#
TEMP CYCLE, 5' RAMP, 10' DWELL	0621	MAX1139MEEE+	-65C TO 150C	1000	CYS	80	0 SHT4AQ001B#
TEMP CYCLE, 5' RAMP, 10' DWELL	0632	MAX5048BAUT#G16	-65C TO 150C	100	CYS	320	0 SH71EA008BA
TEMP CYCLE, 5' RAMP, 10' DWELL	0636	MAX9503MEEE+	-65C TO 150C	1000	CYS	79	0 SU1BDA006A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0712	MAX11014BGTM	-65C TO 150C	1000	CYS	75	0 NADTAANC
TEMP CYCLE, 5' RAMP, 10' DWELL	0713	MAX5048BAUT#G16	-65C TO 150C	500	CYS	5	0 SH71EA025FA#
TEMP CYCLE, 5' RAMP, 10' DWELL	0714	MAX5048BAUT#G16	-65C TO 150C	100	CYS	2306	0 SH71EA026AA
TEMP CYCLE, 5' RAMP, 10' DWELL	0724	MAX9750CETI+	-65C TO 150C	1000	CYS	80	0 SHY3RZ005B
TEMP CYCLE, 5' RAMP, 10' DWELL	0724	MAX9723DETE+	-65C TO 150C	1000	CYS	80	0 SSB3FZ005D
TEMP CYCLE, 5' RAMP, 10' DWELL	0725	MAX5774UCB+	-65C TO 150C	1000	CYS	80	0 SU0ABZ005C
TEMP CYCLE, 5' RAMP, 10' DWELL	0726	MAX5935CAX	-65C TO 150C	1000	CYS	80	0 SEG0DEJ
TEMP CYCLE, 5' RAMP, 10' DWELL	0730	MAX9722AEUE+	-65C TO 150C	500	CYS	77	0 SIY0HA144C#
TEMP CYCLE, 5' RAMP, 10' DWELL	0730	MAX9722AEUE+	-65C TO 150C	1000	CYS	77	0 SIY0HA144C#B#
TEMP CYCLE, 5' RAMP, 10' DWELL	0730	MAX1308ECM+	-65C TO 150C	500	CYS	80	0 SHG1GQ002A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0736	MAX9722EUE+	-65C TO 150C	500	CYS	77	0 SIY0I4176A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0736	MAX9722AEUE+	-65C TO 150C	1000	CYS	77	0 SIY0IA176B#
TEMP CYCLE, 5' RAMP, 10' DWELL	0738	MAX9789AETJ+	-65C TO 150C	1000	CYS	998	0 SZ00EA206A
TEMP CYCLE, 5' RAMP, 10' DWELL	0741	MAX9722AEUE+	-65C TO 150C	1000	CYS	77	0 SIY0IA179B#
TEMP CYCLE, 5' RAMP, 10' DWELL	0747	MAX1313ECM+	-65C TO 150C	1000	CYS	80	0 SHG2GQ002D#
TEMP CYCLE, 5' RAMP, 10' DWELL	0750	MAX9789AETJ+	-65C TO 150C	1000	CYS	80	0 EZ00HQ001BC
TEMP CYCLE, 5' RAMP, 10' DWELL	0751	MAX1312ECM+	-65C TO 150C	1000	CYS	80	0 SHG2GQ002F#
TEMP CYCLE, 5' RAMP, 10' DWELL	0751	MAX4791EUK+T	-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	MAX9776ETJ+	-65C TO 150C	1000	CYS	80	0	ET61FQ001BA
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	100	CYS	676	0	SH71EA032AA
TEMP CYCLE, 5' RAMP, 10' DWELL	0806	MAX9789AETJ+	-65C TO 150C	500	CYS	80	0	EZ00HQ002D
TEMP CYCLE, 5' RAMP, 10' DWELL	0806	MAX9789AETJ+	-65C TO 150C	1000	CYS	80	0	EZ00HQ002D
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX3001EEBPT+	-40C TO +125C	1500	CYS	75	0	SKJ12037AB
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX3001EEBP+T	-40C TO +125C	800	CYS	77	0	SKJ1F2037AB
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX3001EEBP+T	-40C TO +125C	800	CYS	76	0	SKJ1F2037AC
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX3001EEBP+T	-65C TO 150C	500	CYS	77	0	SKJ1F2037AC
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX3001EEBP+T	-40C TO +125C	500	CYS	77	0	SKJ1FA054E
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX3001EEBP+T	-40C TO +125C	500	CYS	77	0	SKJ1FA054J
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	MAX3001EEBP+T	-40C TO +125C	300	CYS	100	0	N/A
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
BIASED MOISTURE	0621	MAX1139MEEE+	130C, 85% R.H.	96 HRS	33	0	SHT4AQ001B#
BIASED MOISTURE	0721	MAX9750AETI+	130C, 85% R.H.	96 HRS	50	0	SHY00A501AB
BIASED MOISTURE	0724	MAX9750CETI+	130C, 85% R.H.	100 HRS	48	0	SHY3RZ005B
BIASED MOISTURE	0724	MAX9723DETE+	130C, 85% R.H.	100 HRS	48	0	SSB3FZ005D
BIASED MOISTURE	0725	MAX5774UCB+	130C, 85% R.H.	100 HRS	48	0	SU0ABZ005C
BIASED MOISTURE	0726	MAX5935CAX	130C, 85% R.H.	100 HRS	45	0	SEG0DEJ
BIASED MOISTURE	0730	MAX1308ECM+	130C, 85% R.H.	96 HRS	19	0	SHG1GQ002A#
BIASED MOISTURE	0734	MAX9750CETI+C6Y	130C, 85% R.H.	96 HRS	50	0	SHY3QA513A
BIASED MOISTURE	0736	MAX9722EUE+	130C, 85% R.H.	96 HRS	37	0	SIY0I4176A#
BIASED MOISTURE	0741	MAX9722AEUE+	130C, 85% R.H.	96 HRS	38	0	SIY0IA179B#
BIASED MOISTURE	0747	MAX1313ECM+	130C, 85% R.H.	96 HRS	36	0	SHG2GQ002D#
BIASED MOISTURE	0750	MAX9789AETJ+	130C, 85% R.H.	96 HRS	48	0	EZ00HQ001BC
BIASED MOISTURE	0751	MAX1312ECM+	130C, 85% R.H.	96 HRS	34	0	SHG2GQ002F#

BIASED MOISTURE	0751	MAX4791EUK+T	130C, 85% R.H.	100	HRS	80	0	SKG2FA014A#
BIASED MOISTURE	0751	MAX6737XKTGD3+T	130C, 85% R.H.	96	HRS	46	0	SC711EA011Q1
BIASED MOISTURE	0751	MAX6737XKTGD3+T	130C, 85% R.H.	96	HRS	46	0	SC711EA011Q2
BIASED MOISTURE	0751	MAX6737XKTGD3+T	130C, 85% R.H.	96	HRS	46	0	SC711EA011Q3
BIASED MOISTURE	0752	MAX9776ETJ+	130C, 85% R.H.	100	HRS	48	0	ET61FQ001BA
BIASED MOISTURE	0805	MAX9722AETE+	130C, 85% R.H.	100	HRS	50	0	SIY0JQ001A
BIASED MOISTURE	0806	MAX9789AETJ+	130C, 85% R.H.	96	HRS	48	0	EZ00HQ002D
BIASED MOISTURE	0807	MAX9789AETJ+	130C, 85% R.H.	100	HRS	50	0	SZ00GA346E
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK	0621	MAX1139MEEE+	130C, 85% R.H.	96	HRS	80	0	SHT4AQ001B#
MOISTURE SOAK	0636	MAX9503MEEE+	130C, 85% R.H.	100	HRS	50	0	SU1BDA006A#
MOISTURE SOAK	0721	MAX11014BGTM+	85 C/85% R.H.	500	HRS	45	0	NADTAANB
MOISTURE SOAK	0722	MAX11014BGTM+	85 C/85% R.H.	1000	HRS	44	0	NADTAAKK
MOISTURE SOAK	0730	MAX9722AEUE+	130C, 85% R.H.	96	HRS	77	0	SIY0HA144C#
MOISTURE SOAK	0730	MAX1308ECM+	130C, 85% R.H.	100	HRS	80	0	SHG1GQ002A#
MOISTURE SOAK	0736	MAX9722EUE+	130C, 85% R.H.	96	HRS	77	0	SIY0I4176A#
MOISTURE SOAK	0741	MAX9722AEUE+	130C, 85% R.H.	96	HRS	77	0	SIY0IA179B#
MOISTURE SOAK	0747	MAX1313ECM+	130C, 85% R.H.	96	HRS	80	0	SHG2GQ002D#
MOISTURE SOAK	0751	MAX4791EUK+T	130C, 85% R.H.	100	HRS	80	0	SKG2FA014A#
Total:							0	

FAILURE RATE:

MTTF (YRS): 182901

FITS: 0.6