



5/9/2009

RELIABILITY MONITOR REPORT
FOR

MFN 1.2 μ m Silicon Gate CMOS

MAXIM Integrated Products

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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:

LM4040CEM3-5.	LM4040CIX3-5.0	LM4050AEM3-2.	LM4050BEM3-5.	LM4050CEM3-5.
MAX15033BAUI	MAX1617MEE	MAX16818ATI+	MAX4257ESA+	MAX5037AEMH
MAX525BCPP+	MAX6006BESA+	MAX6033AAUT	MAX6033AUI25	MAX6033AUT25
MAX668EUB+	MAX8863TEUK	MAX8877EZK29	MAX9928TAUA	

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 71909** **FITS: 1.6**

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 1/1/2008 and 12/31/2008.

Process Information:

Process Description: MFN 1.2µm Silicon Gate CMOS

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0727	MAX4257ESA+	135C	192 HRS	50	0	JL3BDQ001AQ
HIGH TEMP OP LIFE	0741	MAX525BCPP+	135C	1000 HRS	50	0	NKYADA165Q1
HIGH TEMP OP LIFE	0741	MAX525BCPP+	135C	1000 HRS	50	0	NKYADA165Q2
HIGH TEMP OP LIFE	0741	MAX525BCPP+	135C	1000 HRS	50	0	NKYADA165Q3
HIGH TEMP OP LIFE	0805	LM4040CIX3-5.0+	135C	500 HRS	90	0	J57FEA006B#
HIGH TEMP OP LIFE	0805	MAX1617MEE	135C	500 HRS	80	0	J4BAMA041A
HIGH TEMP OP LIFE	0806	LM4050CEM3-5.0+	135C	700 HRS	78	0	J57FEA006A#
HIGH TEMP OP LIFE	0808	MAX5037AEMH+	135C	1000 HRS	45	0	NIQ0BQ002Q3
HIGH TEMP OP LIFE	0811	MAX16818ATI+	135C	192 HRS	48	0	JPH0DA007AQ
HIGH TEMP OP LIFE	0813	MAX8863TEUK+T	135C	1000 HRS	48	0	NJZAGA123Q1
HIGH TEMP OP LIFE	0813	MAX8863TEUK+T	135C	1000 HRS	48	0	NJZAGA123Q2
HIGH TEMP OP LIFE	0813	MAX8863TEUK+T	135C	1000 HRS	48	0	NJZAGA123Q3
HIGH TEMP OP LIFE	0814	MAX15033BAUI+	135C	192 HRS	46	0	JMWZAQ001CQ
HIGH TEMP OP LIFE	0822	MAX9928TAUA+	135C	192 HRS	50	0	JHLXBQ001BQ
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	0741	MAX525BCPP+	150C	1000 HRS	77	0	NKYADA165Q1
STORAGE LIFE	0741	MAX525BCPP+	150C	1000 HRS	77	0	NKYADA165Q2

STORAGE LIFE	0741	MAX525BCPP+	150C	1000	HRS	77	0	NKYADA165Q3
STORAGE LIFE	0746	MAX668EUB+	150C	1000	HRS	80	0	NYGAKA045D#
STORAGE LIFE	0803	MAX8877EZK29+T	150C	1000	HRS	80	0	NM2AEA204Q1
STORAGE LIFE	0803	MAX8877EZK29+T	150C	1000	HRS	80	0	NM2AEA204Q2
STORAGE LIFE	0803	MAX8877EZK29+T	150C	1000	HRS	79	0	NM2AEA204Q3
STORAGE LIFE	0805	MAX1617MEE	150C	1000	HRS	80	0	J4BAMA041A
STORAGE LIFE	0808	MAX6006BESA+	150C	1000	HRS	80	0	N93ACU046Q1
STORAGE LIFE	0808	MAX6006BESA+	150C	1000	HRS	80	0	N93ACU046Q2
STORAGE LIFE	0808	MAX6006BESA+	150C	1000	HRS	80	0	N93ACU046Q3
STORAGE LIFE	0808	MAX5037AEMH+	150C	1000	HRS	79	0	NIQ0BQ002Q1
STORAGE LIFE	0808	MAX5037AEMH+	150C	1000	HRS	79	0	NIQ0BQ002Q2
STORAGE LIFE	0808	MAX5037AEMH+	150C	1000	HRS	75	0	NIQ0BQ002Q3
STORAGE LIFE	0813	MAX8863TEUK+T	150C	1000	HRS	80	0	NJZAGA123Q1
STORAGE LIFE	0813	MAX8863TEUK+T	150C	1000	HRS	80	0	NJZAGA123Q2
STORAGE LIFE	0813	MAX8863TEUK+T	150C	1000	HRS	80	0	NJZAGA123Q3
STORAGE LIFE	0819	MAX6033AAUT25+	150C	500	HRS	80	0	N5L0CA017H
STORAGE LIFE	0819	MAX6033AUI25+	150C	1000	HRS	80	0	N5L0CA017#
STORAGE LIFE	0819	MAX6033AAUT25+	150C	1000	HRS	80	0	N5L0CA017HA
STORAGE LIFE	0819	MAX6033AAUT25+	150C	1000	HRS	78	0	N5L0CA017HB
Total:							0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL	0741	MAX525BCPP+	-65C TO 150C	1000	CYS	77	0	NKYADA165Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0741	MAX525BCPP+	-65C TO 150C	1000	CYS	76	0	NKYADA165Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0741	MAX525BCPP+	-65C TO 150C	1000	CYS	75	0	NKYADA165Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	0746	MAX668EUB+	-65C TO 150C	500	CYS	80	0	NYGAKA045D#
TEMP CYCLE, 5' RAMP, 10' DWELL	0803	MAX8877EZK29+T	-65C TO 150C	500	CYS	80	0	NM2AEA204Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0803	MAX8877EZK29+T	-65C TO 150C	1000	CYS	79	0	NM2AEA204Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0803	MAX8877EZK29+T	-65C TO 150C	1000	CYS	80	0	NM2AEA204Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	0805	MAX1617MEE	-65C TO 150C	1000	CYS	80	0	J4BAMA041A
TEMP CYCLE, 5' RAMP, 10' DWELL	0806	LM4040CEM3-5.0+	-65C TO 150C	1000	CYS	76	0	J57FEA006C
TEMP CYCLE, 5' RAMP, 10' DWELL	0808	MAX6006BESA+	-65C TO 150C	1000	CYS	80	0	N93ACU046Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0808	MAX6006BESA+	-65C TO 150C	1000	CYS	80	0	N93ACU046Q2

TEMP CYCLE, 5' RAMP, 10' DWELL	0808	MAX6006BESA+	-65C TO 150C	1000	CYS	80	0	N93ACU046Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	0808	MAX5037AEMH+	-65C TO 150C	1000	CYS	80	0	NIQ0BQ002Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0808	MAX5037AEMH+	-65C TO 150C	1000	CYS	80	0	NIQ0BQ002Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0808	MAX5037AEMH+	-65C TO 150C	1000	CYS	74	0	NIQ0BQ002Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	0810	LM4050AEM3-2.1+	-65C TO 150C	500	CYS	80	0	J57BEQ003A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0810	LM4050AEM3-2.1+	-65C TO 150C	1000	CYS	80	1	J57BEQ003A
TEMP CYCLE, 5' RAMP, 10' DWELL	0810	LM4040CEM3-5.0+	-65C TO 150C	1000	CYS	249	0	J57FEA006A#
TEMP CYCLE, 5' RAMP, 10' DWELL	0810	LM4050BEM3-5.0+	-65C TO 150C	500	CYS	80	0	J57FEA006G#
TEMP CYCLE, 5' RAMP, 10' DWELL	0813	MAX8863TEUK+T	-65C TO 150C	500	CYS	80	0	NJZAGA123Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0813	MAX8863TEUK+T	-65C TO 150C	500	CYS	80	0	NJZAGA123Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0813	MAX8863TEUK+T	-65C TO 150C	500	CYS	80	0	NJZAGA123Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	0819	MAX6033AAUT25+	-65C TO 150C	1000	CYS	78	0	N5L0CA017H
TEMP CYCLE, 5' RAMP, 10' DWELL	0819	MAX6033AUT25+	-65C TO 150C	1000	CYS	79	0	N5L0CA017HB
Total:							1	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	0808	MAX6006BESA+	85 C/85% R.H.	1000 HRS	45	0	N93ACU046Q1
MOISTURE SOAK	0808	MAX6006BESA+	85 C/85% R.H.	1000 HRS	50	0	N93ACU046Q2
MOISTURE SOAK	0808	MAX6006BESA+	85 C/85% R.H.	1000 HRS	45	0	N93ACU046Q3
Total:						0	

FAILURE RATE: MTTF (YRS): 71909 FITS: 1.6