



4/17/2012

**RELIABILITY MONITOR REPORT
FOR**

X3 0.4 μ m Silicon Gate CMOS (S4)

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:

MAX15059ETE+	MAX16838AUP/	MAX16940AUI/	MAX17130ETL+	MAX17710
MAX44000GDT	MAX5971AETI+	MAX8901BETA	MAX9635EDT+	MAX9635EDT+

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 29295 QUANTITY: 461 FAILS: 0 FITS: 3.9

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 4/1/2011 and 3/31/2012 .

Process Information:

Process Description: X3 0.4µm Silicon Gate CMOS (S4)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE		MAX44000GDT+T	135C	192 HRS	80	0	SU1ZDQ003DA
HIGH TEMP OP LIFE		MAX44000GDT+T	135C	192 HRS	80	0	SU1ZDQ003DB
HIGH TEMP OP LIFE		MAX44000GDT+T	135C	192 HRS	80	0	SU1ZDQ003DC
HIGH TEMP OP LIFE	1025	MAX17130ETL+	135C	264 HRS	38	0	SD1ZDQ003DQ
HIGH TEMP OP LIFE	1107	MAX8901BETA+T	135C	1000 HRS	45	0	SFBZEA035Q1
HIGH TEMP OP LIFE	1107	MAX8901BETA+T	135C	1000 HRS	45	0	SFBZEA035Q2
HIGH TEMP OP LIFE	1107	MAX8901BETA+T	135C	1000 HRS	45	0	SFBZEA035Q3
HIGH TEMP OP LIFE	1113	MAX17710	125C, 5.5 VOLTS	240 HRS	48	0	ZJ156745BCA-NPI
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	0940	MAX16940AUI/V+	150C	500 HRS	45	0	SWYZCQ001BV
STORAGE LIFE	0940	MAX16940AUI/V+	150C	1000 HRS	45	0	SWYZCQ001BV
STORAGE LIFE	1025	MAX16838AUP/V+	150C	500 HRS	50	0	SWCZEA002A
STORAGE LIFE	1107	MAX8901BETA+T	150C	1000 HRS	77	0	SFBZEA035Q2
STORAGE LIFE	1107	MAX8901BETA+T	150C	1000 HRS	77	0	SFBZEA035Q3
STORAGE LIFE	1124	MAX16940AUI/V+	150C	1000 HRS	45	0	SWYZCQ001D
STORAGE LIFE	1142	MAX16838AUP/V+	150C	1048 HRS	77	0	SWCZEA004AA
STORAGE LIFE	N/A	MAX44000GDT+T	150C	1000 HRS	80	0	SU1ZDQ003DB
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX9635EDT+T	-65C TO 150C	1000 CYS	100	0	SF0VAA018J
TEMP CYCLE, 5' RAMP, 10' DWELL	0940	MAX16940AUI/V+	-65C TO 150C	500 CYS	77	0	SWYZCQ001BV
TEMP CYCLE, 5' RAMP, 10' DWELL	1005	MAX15059ETE+	-65C TO 150C	1000 CYS	77	0	SF2ZAQ001B
TEMP CYCLE, 5' RAMP, 10' DWELL	1103	MAX5971AETI+	-65C TO 150C	1000 CYS	77	0	SYZZCA004B
TEMP CYCLE, 5' RAMP, 10' DWELL	1107	MAX8901BETA+T	-65C TO 150C	1000 CYS	77	0	SFBZEA035Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	1107	MAX8901BETA+T	-65C TO 150C	1000 CYS	77	0	SFBZEA035Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	1119	MAX16838AUP/V+	-65C TO 150C	1000 CYS	77	0	SWCZEQ003CN
TEMP CYCLE, 5' RAMP, 10' DWELL	1124	MAX16940AUI/V+	-65C TO 150C	1000 CYS	77	0	SWYZCQ001D
TEMP CYCLE, 5' RAMP, 10' DWELL	1124	MAX16940AUI/V+	-65C TO 150C	500 CYS	77	0	SWYZCQ001E
TEMP CYCLE, 5' RAMP, 10' DWELL	1142	MAX16838AUP/V+	-65C TO 150C	1000 CYS	77	0	SWCZEA008AB
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX44000GDT+T	-65C TO 150C	1000 CYS	80	1	SU1ZDQ003DA
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX44000GDT+T	-65C TO 150C	1000 CYS	80	0	SU1ZDQ003DC
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX9635EDT+T	-40C TO +125C	500 CYS	100	0	SF0VAA018J
Total:						1	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	1124	MAX16940AUI/V+	130C, 85% R.H.	100 HRS	77	0	SWYZCQ001D
MOISTURE SOAK	1124	MAX16940AUI/V+	130C, 85% R.H.	100 HRS	77	0	SWYZCQ001E
MOISTURE SOAK	1131	MAX44000GDT+T	85 C/85% R.H.	1000 HRS	76	0	SU1ZDQ003DA
MOISTURE SOAK	1131	MAX44000GDT+T	85 C/85% R.H.	1000 HRS	77	0	SU1ZDQ003
MOISTURE SOAK	1131	MAX9635EDT+	85 C/85% R.H.	1000 HRS	29	0	SF0VAA018MA
MOISTURE SOAK	1131	MAX9635EDT+	85 C/85% R.H.	1000 HRS	29	0	SF0VAA018MB
MOISTURE SOAK	1131	MAX9635EDT+	85 C/85% R.H.	1000 HRS	29	0	SF0VAA018MC
Total:						0	

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