



7/19/2012

**RELIABILITY MONITOR REPORT
FOR**

MFN Silicon Gate 0.8 μ m CMOS (B8)

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:

MAX13485EESA	MAX1818EUT25	MAX44269EWL	MAX4845DEYT	MAX4845DEYT
MAX6414UK46+	MAX6418UK46+	MAX6421XS48+	MAX6422XS26+	MAX6423XS29+
MAX6753KA29+	MAX6753KA30/	MAX6753KA31+	MAX8520ETP+	MAX8655ETN+
MAX8880EUT+				

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 50856 QUANTITY: 793 FAILS: 1 FITS: 2.2

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 7/1/2011 and 6/30/2012 .

Process Information:

Process Description: MFN Silicon Gate 0.8µm CMOS (B8)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1122	MAX44269EWL+T	135C	192 HRS	48	0	J2MSAQ001BQ
HIGH TEMP OP LIFE	1127	MAX1818EUT25#G16	135C	1000 HRS	50	0	JOLAG3044Q1
HIGH TEMP OP LIFE	1127	MAX1818EUT25#G16	135C	1000 HRS	50	0	JOLAG3044Q2
HIGH TEMP OP LIFE	1127	MAX1818EUT25#G16	135C	1000 HRS	50	0	JOLAG3044Q3
HIGH TEMP OP LIFE	1133	MAX8520ETP+	135C	1000 HRS	48	0	JMX0FA040Q1
HIGH TEMP OP LIFE	1133	MAX8520ETP+	135C	1000 HRS	48	0	JMX0FA040Q2
HIGH TEMP OP LIFE	1133	MAX8520ETP+	135C	1000 HRS	48	0	JMX0FA040Q3
HIGH TEMP OP LIFE	1144	MAX8655ETN+	135C	1000 HRS	76	1	BA1TABTA
HIGH TEMP OP LIFE	1144	MAX8655ETN+	135C	500 HRS	45	0	BA1TABTB
HIGH TEMP OP LIFE	1150	MAX8655ETN+	135C	500 HRS	77	0	BA1TABQ7
HIGH TEMP OP LIFE	1150	MAX8655ETN+	135C	500 HRS	77	0	BA1TABQ8
HIGH TEMP OP LIFE	1151	MAX4845DEYT+T	135C	1000 HRS	44	0	JYW7BA033Q1
HIGH TEMP OP LIFE	1151	MAX4845DEYT+T	135C	1000 HRS	44	0	JYW7BA033Q2
HIGH TEMP OP LIFE	1151	MAX4845DEYT+T	135C	500 HRS	44	0	JYW7BA033Q3
HIGH TEMP OP LIFE	1210	MAX4845DEYT+	135C	500 HRS	44	0	JYW7BA036Q1
Total:						1	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1033	MAX6423XS29+	150C	1000 HRS	50	0	J612EA005F#

STORAGE LIFE	1113	MAX6414UK46+	150C	500	HRS	50	0	J8K2EA046C#
STORAGE LIFE	1133	MAX8520ETP+	150C	1048	HRS	30	0	JMX0FA040Q1
STORAGE LIFE	1133	MAX8520ETP+	150C	1048	HRS	30	0	JMX0FA040Q2
STORAGE LIFE	1133	MAX8520ETP+	150C	1000	HRS	30	0	JMX0FA040Q3
STORAGE LIFE	1133	MAX6753KA30/V+	150C	1000	HRS	49	0	JLZ7D3038CX
STORAGE LIFE	1136	MAX13485EESA+	150C	500	HRS	77	0	JY32EA030Q1
STORAGE LIFE	1136	MAX13485EESA+	150C	500	HRS	77	0	JY32EA030Q2
STORAGE LIFE	1144	MAX8655ETN+	150C	1000	HRS	78	0	BA1TABTB
STORAGE LIFE	1147	MAX6753KA30/V+	150C	1000	HRS	50	0	JLZ7DA046AA
STORAGE LIFE	1148	MAX6421XS48+T	150C	1000	HRS	50	0	J610EA015G#
STORAGE LIFE	1150	MAX8655ETN+	150C	1000	HRS	78	0	BA1TABQ7
STORAGE LIFE	1150	MAX8655ETN+	150C	1000	HRS	78	0	BA1TABQ8
STORAGE LIFE	1201	MAX8880EUT+	150C	1000	HRS	50	0	J7GAIA075DA
STORAGE LIFE	1201	MAX6422XS26+T	150C	1000	HRS	50	0	J611EA017C#
STORAGE LIFE	1211	MAX4845DEYT+T	150C	1000	HRS	80	0	JYW7BA036Q4
STORAGE LIFE	1211	MAX4845DEYT+T	150C	1000	HRS	80	0	JYW7BA036Q5
STORAGE LIFE	1211	MAX4845DEYT+T	150C	1000	HRS	80	0	JYW7BA036Q6
Total:							0	0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL	1013	MAX6418UK46+	-65C TO 150C	500	CYS	80	0	J8K6EA005E#
TEMP CYCLE, 5' RAMP, 10' DWELL	1017	MAX6753KA31+	-65C TO 150C	500	CYS	80	0	JLZ7DA013A#
TEMP CYCLE, 5' RAMP, 10' DWELL	1033	MAX6423XS29+	-65C TO 150C	500	CYS	80	0	J612EA005F#
TEMP CYCLE, 5' RAMP, 10' DWELL	1113	MAX6414UK46+	-65C TO 150C	500	CYS	80	0	J8K2EA046C#
TEMP CYCLE, 5' RAMP, 10' DWELL	1133	MAX8520ETP+	-65C TO 150C	1000	CYS	77	0	JMX0FA040Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	1133	MAX8520ETP+	-65C TO 150C	1000	CYS	77	0	JMX0FA040Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	1133	MAX8520ETP+	-65C TO 150C	1000	CYS	77	0	JMX0FA040Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	1133	MAX6753KA30/V+	-65C TO 150C	500	CYS	80	0	JLZ7D3038CX
TEMP CYCLE, 5' RAMP, 10' DWELL	1136	MAX13485EESA+	-65C TO 150C	1000	CYS	77	0	JY32EA030Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	1136	MAX13485EESA+	-65C TO 150C	500	CYS	77	0	JY32EA030Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	1144	MAX8655ETN+	-65C TO 150C	1000	CYS	78	0	BA1TABTB

TEMP CYCLE, 5' RAMP, 10' DWELL	1146	MAX6753KA29+	-65C TO 150C	500	CYS	80	0	JLZ7D3038F#
TEMP CYCLE, 5' RAMP, 10' DWELL	1146	MAX4845DEYT+T	-65C TO 150C	1000	CYS	85	0	JYW7BA032KA
TEMP CYCLE, 5' RAMP, 10' DWELL	1147	MAX6753KA30/V+	-65C TO 150C	500	CYS	80	0	JLZ7DA046AA
TEMP CYCLE, 5' RAMP, 10' DWELL	1147	MAX6753KA30/V+	-65C TO 150C	500	CYS	80	0	JLZ7DA046HA
TEMP CYCLE, 5' RAMP, 10' DWELL	1147	MAX6753KA30/V+	-65C TO 150C	500	CYS	80	0	JLZ7DA046GA
TEMP CYCLE, 5' RAMP, 10' DWELL	1148	MAX6421XS48+T	-65C TO 150C	500	CYS	80	0	J610EA015G#
TEMP CYCLE, 5' RAMP, 10' DWELL	1150	MAX8655ETN+	-65C TO 150C	1000	CYS	78	0	BA1TABQ7
TEMP CYCLE, 5' RAMP, 10' DWELL	1150	MAX8655ETN+	-65C TO 150C	1000	CYS	78	0	BA1TABQ8
TEMP CYCLE, 5' RAMP, 10' DWELL	1201	MAX8880EUT+	-65C TO 150C	500	CYS	80	0	J7GAIA075DA
TEMP CYCLE, 5' RAMP, 10' DWELL	1201	MAX6422XS26+T	-65C TO 150C	500	CYS	79	0	J611EA017C#
TEMP CYCLE, 5' RAMP, 10' DWELL	1204	MAX8880EUT+	-65C TO 150C	500	CYS	80	0	J7GAIA079EA
TEMP CYCLE, 5' RAMP, 10' DWELL	1211	MAX4845DEYT+T	-65C TO 150C	1000	CYS	80	0	JYW7BA036Q4
TEMP CYCLE, 5' RAMP, 10' DWELL	1211	MAX4845DEYT+	-65C TO 150C	1000	CYS	80	0	JYW7BA036Q5
TEMP CYCLE, 5' RAMP, 10' DWELL	1211	MAX4845DEYT+T	-65C TO 150C	1000	CYS	80	0	JYW7BA036Q6
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1013	MAX6418UK46+	130C, 85% R.H.	100	HRS	80	0	J8K6EA005E#
BIASED MOISTURE	1017	MAX6753KA31+	130C, 85% R.H.	100	HRS	33	0	JLZ7DA013A#
BIASED MOISTURE	1113	MAX6414UK46+	130C, 85% R.H.	100	HRS	80	0	J8K2EA046C#
BIASED MOISTURE	1146	MAX6753KA29+	130C, 85% R.H.	100	HRS	47	0	JLZ7D3038F#
BIASED MOISTURE	1147	MAX6753KA30/V+	130C, 85% R.H.	96	HRS	37	0	JLZ7DA046AA
BIASED MOISTURE	1147	MAX6753KA30/V+	130C, 85% R.H.	96	HRS	32	0	JLZ7DA046HA
BIASED MOISTURE	1147	MAX6753KA30/V+	130C, 85% R.H.	96	HRS	32	0	JLZ7DA046GA
BIASED MOISTURE	1150	MAX8655ETN+	130C, 85% R.H.	100	HRS	38	0	BA1TABQ7
BIASED MOISTURE	1150	MAX8655ETN+	130C, 85% R.H.	100	HRS	39	0	BA1TABQ8
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK	1013	MAX6418UK46+	130C, 85% R.H.	100	HRS	80	0	J8K6EA005E#
MOISTURE SOAK	1017	MAX6753KA31+	130C, 85% R.H.	100	HRS	80	0	JLZ7DA013A#
MOISTURE SOAK	1113	MAX6414UK46+	130C, 85% R.H.	100	HRS	80	0	J8K2EA046C#
MOISTURE SOAK	1144	MAX8655ETN+	130C, 85% R.H.	100	HRS	77	0	BA1TABTB
MOISTURE SOAK	1146	MAX6753KA29+	130C, 85% R.H.	100	HRS	80	0	JLZ7D3038F#
MOISTURE SOAK	1147	MAX6753KA30/V+	130C, 85% R.H.	96	HRS	80	0	JLZ7DA046AA
MOISTURE SOAK	1147	MAX6753KA30/V+	130C, 85% R.H.	96	HRS	80	0	JLZ7DA046HA
MOISTURE SOAK	1147	MAX6753KA30/V+	130C, 85% R.H.	96	HRS	80	0	JLZ7DA046GA
MOISTURE SOAK	1150	MAX8655ETN+	130C, 85% R.H.	100	HRS	77	0	BA1TABQ7
MOISTURE SOAK	1150	MAX8655ETN+	130C, 85% R.H.	100	HRS	77	0	BA1TABQ8

Total: 0

FAILURE RATE: MTTF (YRS): 50856 QUANTITY: 793 FAILS: 1 FITS: 2.2