

10/23/2014



**RELIABILITY MONITOR REPORT
FOR**

MFN 3 μ m Silicon Gate (S3)

MAXIM INTEGRATED

**160 RIO ROBLES
SAN JOSE, CA 95134**

**This Report was prepared by
MAXIM INTEGRATED 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:

MAX125CEAX+	MAX128BCAI+	MAX16945TGU#	MAX16945TGU	MAX1697TEUT
MAX186CCWP+	MAX4551CEE+	MAX604ESA+	MAX6175BASA/	

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 33579 QUANTITY: 384 FAILS: 0 FITS: 3.4

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 10/1/2013 and 9/30/2014 .

Process Information:

Process Description: MFN 3µm Silicon Gate (S3)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1212	MAX604ESA+	135°C	500 HRS	80	0	R26013BI2
HIGH TEMP OP LIFE	1403	MAX6175BASA/V+	135°C	1000 HRS	77	0	NI53B3180C#
HIGH TEMP OP LIFE	1403	MAX6175BASA/V+	135°C	1000 HRS	68	0	NI53BA162M#
HIGH TEMP OP LIFE	1405	MAX6175BASA/V+	135°C	1000 HRS	79	0	NI53B3178E#
HIGH TEMP OP LIFE	1424	MAX125CEAX+D	135°C	192 HRS	80	0	NKXafa475B
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1403	MAX4551CEE+	150°C	1000 HRS	80	0	NK4AF2007A
STORAGE LIFE	1403	MAX6175BASA/V+	150°C	1000 HRS	80	0	NI53B3180C#
STORAGE LIFE	1403	MAX6175BASA/V+	150°C	1000 HRS	78	0	NI53BA162M#
STORAGE LIFE	1404	MAX186CCWP+	150°C	1000 HRS	80	0	NTKAL26A6CB
STORAGE LIFE	1404	MAX128BCAI+	150°C	500 HRS	80	0	NQICE2328DA
STORAGE LIFE	1405	MAX16945TGU#TG16	150°C	1000 HRS	80	0	NACX62094BA
STORAGE LIFE	1405	MAX6175BASA/V+	150°C	1000 HRS	80	0	NI53B3178E#
STORAGE LIFE	1406	MAX1697TEUT+T	150°C	1000 HRS	80	0	NACX42095AC
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
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TEMP CYCLE, 5' RAMP, 10' DWELL	1403	MAX4551CEE+	-65C TO +150C (Condition C)	1000	CYS	79	0	NK4AF2007A
TEMP CYCLE, 5' RAMP, 10' DWELL	1403	MAX6175BASA/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	NI53B3180C#
TEMP CYCLE, 5' RAMP, 10' DWELL	1403	MAX6175BASA/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	NI53BA162M#
TEMP CYCLE, 5' RAMP, 10' DWELL	1404	MAX186CCWP+	-65C TO +150C (Condition C)	1000	CYS	80	0	NTKAL26A6CB
TEMP CYCLE, 5' RAMP, 10' DWELL	1404	MAX128BCAI+	-65C TO +150C (Condition C)	500	CYS	80	0	NQICE2328DA
TEMP CYCLE, 5' RAMP, 10' DWELL	1405	MAX16945TGUT#TG16	-65C TO +150C (Condition C)	1000	CYS	79	0	NACX62094BA
TEMP CYCLE, 5' RAMP, 10' DWELL	1406	MAX1697TEUT+T	-65C TO +150C (Condition C)	1000	CYS	74	0	NACX42095AC
TEMP CYCLE, 5' RAMP, 10' DWELL	1406	MAX1697TEUT+T	-65C TO +150C (Condition C)	1000	CYS	79	0	NACX42095AD
TEMP CYCLE, 5' RAMP, 10' DWELL	1421	MAX16945TGUT#TG16	-65C TO +150C (Condition C)	700	CYS	79	0	NACX6A104AA
TEMP CYCLE, 5' RAMP, 10' DWELL	1424	MAX125CEAX+D	-65C TO +150C (Condition C)	500	CYS	80	0	NKXAFA475B
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE	TEST CODE VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1403	MAX4551CEE+	130C, 85% R.H.	100	HRS	78	0	NK4AF2007A
BIASED MOISTURE	1403	MAX6175BASA/V+	130C, 85% R.H.	96	HRS	80	0	NI53B3180C#
BIASED MOISTURE	1403	MAX6175BASA/V+	130C, 85% R.H.	96	HRS	80	0	NI53BA162M#
BIASED MOISTURE	1404	MAX186CCWP+	130C, 85% R.H.	100	HRS	26	0	NTKAL26A6CB
BIASED MOISTURE	1404	MAX128BCAI+	130C, 85% R.H.	100	HRS	48	0	NQICE2328DA
BIASED MOISTURE	1405	MAX16945TGU#TG16	130C, 85% R.H.	100	HRS	80	0	NACX62094BA
BIASED MOISTURE	1405	MAX6175BASA/V+	130C, 85% R.H.	96	HRS	80	0	NI53B3178E#
BIASED MOISTURE	1406	MAX1697TEUT+T	130C, 85% R.H.	100	HRS	80	0	NACX42095AC
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE	TEST CODE VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
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MOISTURE SOAK	1403	MAX4551CEE+	130C, 85% R.H.	100	HRS	80	0	NK4AF2007A
MOISTURE SOAK	1403	MAX6175BASA/V+	130C, 85% R.H.	400	HRS	80	1	NI53B3180C#
MOISTURE SOAK	1403	MAX6175BASA/V+	130C, 85% R.H.	400	HRS	80	0	NI53BA162M#
MOISTURE SOAK	1404	MAX186CCWP+	130C, 85% R.H.	100	HRS	80	0	NTKAL26A6CB
MOISTURE SOAK	1404	MAX128BCAI+	130C, 85% R.H.	100	HRS	80	0	NQICE2328DA
MOISTURE SOAK	1405	MAX16945TGU#TG16	130C, 85% R.H.	100	HRS	80	0	NACX62094BA
MOISTURE SOAK	1405	MAX6175BASA/V+	130C, 85% R.H.	400	HRS	76	0	NI53B3178E#
MOISTURE SOAK	1406	MAX1697TEUT+T	130C, 85% R.H.	100	HRS	80	0	NACX42095AC

Total: 1

FAILURE RATE: MTTF (YRS): 33579 QUANTITY: 384 FAILS: 0 FITS: 3.4