

4/23/2015



**RELIABILITY MONITOR REPORT  
FOR**

**MFN 0.8 $\mu$ m Silicon Gate (B8)**

**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:

MAX1793EUE33	MAX1793EUE33	MAX1818EUT25	MAX1951ESA+	MAX4364ESA/V
MAX5961ETM+	MAX5961ETM+	MAX8869EUE25	MAX8880EUT+	MAX8888EZK18
MAX9015AEKA	MAX9017AEKA	MAX9646EBS+T	MAX9646EBS+T	MAX9646EUK+
MAX9646EWS+				

The calculated failure rate for devices using this process is:

**FAILURE RATE:    MTTF (YRS): 57190    QUANTITY: 1579    FAILS: 1    FITS: 2.0**

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 4/1/2014 and 3/31/2015 .

**Process Information:**

Process Description:            MFN 0.8µm Silicon Gate (B8)

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1110	MAX8888EZK18+	135°C	192 HRS	77	0	JUK1BA005BA
HIGH TEMP OP LIFE	1333	MAX8880EUT+T	135°C	1000 HRS	76	1	J7GAIA1111Q1
HIGH TEMP OP LIFE	1351	MAX8888EZK18+	135°C	192 HRS	79	0	JUK1BA014BA
HIGH TEMP OP LIFE	1351	MAX8888EZK18+	135°C	192 HRS	80	0	JUK1BA011JA
HIGH TEMP OP LIFE	1409	MAX8869EUE25+	135°C	1000 HRS	80	0	J4JAF116GL
HIGH TEMP OP LIFE	1423	MAX1793EUE33+	135°C	192 HRS	80	0	J2HAE3044F#
HIGH TEMP OP LIFE	1427	MAX1793EUE33+	135°C	192 HRS	80	0	J2HAE038T#
HIGH TEMP OP LIFE	1429	MAX1793EUE33+	135°C	192 HRS	80	0	J2HAE042E#
HIGH TEMP OP LIFE	1432	MAX4364ESA+	135°C	192 HRS	80	0	JAVD3A049A#
HIGH TEMP OP LIFE	1435	MAX9017AEKA+T	135°C	192 HRS	79	0	JER0CA129B#
HIGH TEMP OP LIFE	1435	MAX9017AEKA+T	135°C	192 HRS	80	0	JER0CA129D#
HIGH TEMP OP LIFE	1437	MAX1951ESA+	135°C	1000 HRS	76	0	JF00G2244I
HIGH TEMP OP LIFE	1437	MAX1951ESA+	135°C	1000 HRS	76	0	JF00G2244H
HIGH TEMP OP LIFE	1437	MAX1951ESA+	135°C	1000 HRS	76	0	JF00G2244G
HIGH TEMP OP LIFE	1441	MAX4364ESA+	135°C	192 HRS	80	0	JAVD3A058A#
HIGH TEMP OP LIFE	1442	MAX4364ESA+	135°C	192 HRS	80	0	JAVD33055A#
HIGH TEMP OP LIFE	1447	MAX9646EBS+TCKO	135°C	1000 HRS	80	0	JKZVCA066B#
HIGH TEMP OP LIFE	1449	MAX9646EUK+	135°C	1000 HRS	80	0	JKZVCA066A#
HIGH TEMP OP LIFE	1450	MAX9646EBS+TCK0	135°C	192 HRS	80	0	JKZVCA067A\$

HIGH TEMP OP LIFE	1452	MAX9646EUK+	135°C	192	HRS	80	0	JKZVCA067A#
							<b>Total:</b>	<b>1</b>

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**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
STORAGE LIFE	1333	MAX8880EUT+T	150°C	1000	HRS	80	0	J7GAIA111Q1
STORAGE LIFE	1409	MAX8869EUE25+	150°C	1000	HRS	80	0	J4JAF116GL
STORAGE LIFE	1423	MAX1793EUE33+T	150°C	500	HRS	50	0	J2HAE3044F#
STORAGE LIFE	1435	MAX9015AEKA+T	150°C	500	HRS	50	0	JER2DA124F#
STORAGE LIFE	1442	MAX4364ESA+	150°C	500	HRS	50	0	JAVD33055A#
STORAGE LIFE	1447	MAX9646EBS+TCKO	150°C	1000	HRS	80	0	JKZVCA066B#
STORAGE LIFE	1448	MAX9646EWS+T	150°C	500	HRS	80	0	JKZVCA065D#
STORAGE LIFE	1451	MAX9646EBS+TCKO	150°C	500	HRS	80	0	JKZVCA068B
							<b>Total:</b>	<b>0</b>

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**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL	1333	MAX8880EUT+T	-65C TO +150C (Condition C)	1000	CYS	45	0	J7GAIA111Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	1409	MAX8869EUE25+	-65C TO +150C (Condition C)	500	CYS	80	0	J4JAF116GL
TEMP CYCLE, 5' RAMP, 10' DWELL	1423	MAX1793EUE33+T	-65C TO +150C (Condition C)	500	CYS	80	0	J2HAE3044F#
TEMP CYCLE, 5' RAMP, 10' DWELL	1427	MAX1793EUE33+	-65C TO +150C (Condition C)	500	CYS	80	0	J2HAEA038T#
TEMP CYCLE, 5' RAMP, 10' DWELL	1429	MAX1793EUE33+T	-65C TO +150C (Condition C)	500	CYS	80	0	J2HAEA042E#
TEMP CYCLE, 5' RAMP, 10' DWELL	1435	MAX9015AEKA+T	-65C TO +150C (Condition C)	500	CYS	80	0	JER2DA124F#
TEMP CYCLE, 5' RAMP, 10' DWELL	1435	MAX9015AEKA+T	-65C TO +150C (Condition C)	500	CYS	80	0	JER2DA124K#
TEMP CYCLE, 5' RAMP, 10' DWELL	1435	MAX9015AEKA+T	-65C TO +150C (Condition C)	500	CYS	80	0	JER2DA124L#
TEMP CYCLE, 5' RAMP, 10' DWELL	1435	MAX5961ETM+	-65C TO +150C (Condition C)	500	CYS	80	0	JADL9A116Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	1436	MAX5961ETM+	-65C TO +150C (Condition C)	500	CYS	80	0	JADL9A116Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	1437	MAX5961ETM+	-65C TO +150C (Condition C)	500	CYS	80	0	JADL9A116Q3

TEMP CYCLE, 5' RAMP, 10' DWELL	1442	MAX4364ESA+	-65C TO +150C (Condition C)	500	CYS	80	0	JAVD33055A#
TEMP CYCLE, 5' RAMP, 10' DWELL	2014	MAX1818EUT25#TG16	-65C TO +150C (Condition C)	1000	CYS	77	0	JOLAGA099A#
TEMP CYCLE, 5' RAMP, 10' DWELL	2014	MAX1818EUT25#TG16	-65C TO +150C (Condition C)	1000	CYS	77	0	JOLAGA100A#
TEMP CYCLE, 5' RAMP, 10' DWELL	2014	MAX1818EUT25#TG16	-65C TO +150C (Condition C)	1000	CYS	77	0	JOLAGA100B#
<b>Total:</b>							<b>0</b>	

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#### TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1435	MAX9015AEKA+T	130C, 85% R.H.	96	HRS	79	0	JER2DA124F#
BIASED MOISTURE	1435	MAX9015AEKA+T	130C, 85% R.H.	96	HRS	80	0	JER2DA124K#
BIASED MOISTURE	1435	MAX9015AEKA+T	130C, 85% R.H.	96	HRS	80	0	JER2DA124L#
BIASED MOISTURE	1442	MAX4364ESA+	130C, 85% R.H.	100	HRS	80	0	JAVD33055A#
<b>Total:</b>							<b>0</b>	

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#### UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK	1333	MAX8880EUT+T	85 C/85% R.H.	1000	HRS	45	0	J7GAIA111Q1
MOISTURE SOAK	1423	MAX1793EUE33+T	130C, 85% R.H.	96	HRS	80	0	J2HAE3044F#
MOISTURE SOAK	1427	MAX1793EUE33+	130C, 85% R.H.	96	HRS	80	0	J2HAEA038T#
MOISTURE SOAK	1429	MAX1793EUE33+T	130C, 85% R.H.	100	HRS	80	0	J2HAEA042E#
MOISTURE SOAK	1435	MAX9015AEKA+T	130C, 85% R.H.	96	HRS	80	0	JER2DA124F#
MOISTURE SOAK	1435	MAX9015AEKA+T	130C, 85% R.H.	96	HRS	80	0	JER2DA124K#
MOISTURE SOAK	1435	MAX9015AEKA+T	130C, 85% R.H.	96	HRS	80	0	JER2DA124L#
MOISTURE SOAK	1435	MAX5961ETM+	130C, 85% R.H.	96	HRS	80	0	JADL9A119Q1
MOISTURE SOAK	1436	MAX5961ETM+	130C, 85% R.H.	96	HRS	80	0	JADL9A119Q2
MOISTURE SOAK	1437	MAX5961ETM+	130C, 85% R.H.	96	HRS	80	0	JADL9A119Q3
MOISTURE SOAK	1442	MAX4364ESA+	130C, 85% R.H.	100	HRS	80	0	JAVD33055A#
MOISTURE SOAK	1447	MAX9646EBS+TCK0	130C, 85% R.H.	100	HRS	80	0	JKZVCA066B\$

MOISTURE SOAK      1449    MAX9646EBS+TCK0    130C, 85%    96    HRS      80    0    JKZVCA068B\$  
R.H.

**Total:**      **0**

**FAILURE RATE:**    **MTTF (YRS): 57190**    **QUANTITY: 1579**    **FAILS: 1**    **FITS: 2.0**