

7/10/2017



**RELIABILITY MONITOR REPORT  
FOR**

**MFN 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:

MAX13089EESD	MAX1531ETJ	MAX1954AEUB	MAX5073ETI+	MAX6414UK31/
MAX6425UK23+	MAX6896AAZT/	MAX9017AEKA/	MAX9017AEKA/	MAX9027EWT+
MAX9028EBT+T	MAX9938FELT+			

The calculated failure rate for devices using this process is:

**FAILURE RATE:    MTTF (YRS): 148243    QUANTITY: 846    FAILS: 0    FITS: 0.8**

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 4/1/2017 and 6/30/2017 .

**Process Information:**

Process Description:            MFN B8

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1414	MAX9938FELT+	135°C	500 HRS	80	0	JMKYCA086FA
HIGH TEMP OP LIFE	1414	MAX9938FELT+	135°C	1000 HRS	80	0	JMKYCA086FA
HIGH TEMP OP LIFE	1617	MAX9017AEKA/V+	135°C	1000 HRS	78	0	JER0CA212Q1
HIGH TEMP OP LIFE	1617	MAX9017AEKA/V+	135°C	1000 HRS	78	0	JER0CA212Q2
HIGH TEMP OP LIFE	1617	MAX9017AEKA/V+	135°C	1000 HRS	79	0	JER0CA212Q3
HIGH TEMP OP LIFE	1627	MAX13089EESD+	135°C	1000 HRS	80	0	JAP9EA454CX
HIGH TEMP OP LIFE	1645	MAX1954AEUB+	135°C	1000 HRS	45	0	JHK1DA239DX
HIGH TEMP OP LIFE	1651	MAX9017AEKA/V+T	135°C	1000 HRS	81	0	JER0CA226QA
HIGH TEMP OP LIFE	1651	MAX9017AEKA/V+T	135°C	1000 HRS	82	0	JER0CA226QB
HIGH TEMP OP LIFE	1651	MAX9017AEKA/V+T	135°C	1000 HRS	83	0	JER0CA226QC
HIGH TEMP OP LIFE	1703	MAX13089EESD+	135°C	1000 HRS	80	0	JAP9EA541CX
<b>Total:</b>						<b>0</b>	

**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1414	MAX9938FELT+	150°C	1000 HRS	80	0	JMKYCA086FA
STORAGE LIFE	1422	MAX9938FELT+	150°C	1000 HRS	80	0	JMKYCA089AA
STORAGE LIFE	1505	MAX9938FELT+	150°C	1000 HRS	80	0	JMKYCA096DA
STORAGE LIFE	1616	MAX6425UK23+	150°C	1000 HRS	80	0	J612E3045IA (PQ)
STORAGE LIFE	1616	MAX6425UK23+	150°C	500 HRS	41	0	J612E3045IB (PQ)
STORAGE LIFE	1616	MAX6425UK23+	150°C	1000 HRS	79	0	J612E3045JB (PQ)

STORAGE LIFE	1617	MAX9017AEKA/V+	150°C	1000	HRS	90	0	JER0CA212Q1
STORAGE LIFE	1617	MAX9017AEKA/V+	150°C	1000	HRS	87	0	JER0CA212Q2
STORAGE LIFE	1617	MAX9017AEKA/V+	150°C	1000	HRS	80	0	JER0CA212Q3
STORAGE LIFE	1619	MAX5073ETI+	150°C	1000	HRS	80	0	JRJ1EA043E
STORAGE LIFE	1621	MAX6896AAZT/V+	150°C	1000	HRS	77	0	JIABBA082GA
STORAGE LIFE	1621	MAX6896AAZT/V+	150°C	1000	HRS	78	0	JIABBA082HA
STORAGE LIFE	1621	MAX6896AAZT/V+	150°C	1000	HRS	79	0	JIABBA082IA
STORAGE LIFE	1622	MAX6414UK31/V+	150°C	1000	HRS	80	0	J8K2EA241GA
STORAGE LIFE	1627	MAX13089EESD+	150°C	1000	HRS	80	0	JAP9EA454CX
STORAGE LIFE	1645	MAX1954AEUB+	150°C	1000	HRS	80	0	JHK1DA239DX
STORAGE LIFE	1703	MAX13089EESD+	150°C	1000	HRS	80	0	JAP9EA541CX
<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	1414	MAX9938FELT+	-65C TO +150C (Condition C)	500	CYS	80	0	JMKYCA086FA
TEMP CYCLE, 5' RAMP, 10' DWELL	1422	MAX9938FELT+	-65C TO +150C (Condition C)	500	CYS	80	0	JMKYCA089AA
TEMP CYCLE, 5' RAMP, 10' DWELL	1505	MAX9938FELT+	-65C TO +150C (Condition C)	500	CYS	80	0	JMKYCA096DA
TEMP CYCLE, 5' RAMP, 10' DWELL	1611	MAX1531ETJ	-65C TO +150C (Condition C)	500	CYS	250	0	JBL0EA038L/C/G
TEMP CYCLE, 5' RAMP, 10' DWELL	1616	MAX6425UK23+	-65C TO +150C (Condition C)	500	CYS	80	0	J612E3045IA (PQ)
TEMP CYCLE, 5' RAMP, 10' DWELL	1616	MAX6425UK23+	-65C TO +150C (Condition C)	500	CYS	71	0	J612E3045IB (PQ)
TEMP CYCLE, 5' RAMP, 10' DWELL	1616	MAX6425UK23+	-65C TO +150C (Condition C)	500	CYS	80	0	J612E3045JB (PQ)
TEMP CYCLE, 5' RAMP, 10' DWELL	1619	MAX5073ETI+	-65C TO +150C (Condition C)	1000	CYS	80	0	JRJ1EA043E
TEMP CYCLE, 5' RAMP, 10' DWELL	1622	MAX6414UK31/V+	-65C TO +150C (Condition C)	1000	CYS	120	0	J8K2EA241GH
TEMP CYCLE, 5' RAMP, 10' DWELL	1627	MAX13089EESD+	-65C TO +150C (Condition C)	1000	CYS	80	0	JAP9EA454CX
TEMP CYCLE, 15' RAMP, 15' DWELL	1636	MAX9027EWT+	-40C TO +125C (Condition G)	850	CYS	80	0	JOY2CA147I#

TEMP CYCLE, 15' RAMP, 15' DWELL	1636	MAX9027EWT+	-40C TO +125C (Condition G)	850	CYS	80	0	JOY2CA147F#
TEMP CYCLE, 5' RAMP, 10' DWELL	1642	MAX6896AAZT/V+	-65C TO +150C (Condition C)	1000	CYS	84	0	JIABBA062IA
TEMP CYCLE, 5' RAMP, 10' DWELL	1642	MAX6896AAZT/V+	-65C TO +150C (Condition C)	1000	CYS	85	0	JIABBA062I
TEMP CYCLE, 5' RAMP, 10' DWELL	1642	MAX6896AAZT/V+	-65C TO +150C (Condition C)	1000	CYS	85	0	JIABBA062IB
TEMP CYCLE, 15' RAMP, 15' DWELL	1643	MAX9028EBT+TCHE	-40C TO +125C (Condition G)	100	CYS	80	0	JOY3CA167AE
TEMP CYCLE, 15' RAMP, 15' DWELL	1644	MAX9028EBT+TCHE	-40C TO +125C (Condition G)	100	CYS	80	0	JOY3CA161AE
TEMP CYCLE, 15' RAMP, 15' DWELL	1644	MAX9028EBT+TCHE	-40C TO +125C (Condition G)	100	CYS	80	0	JOY3CA166AC
TEMP CYCLE, 5' RAMP, 10' DWELL	1645	MAX1954AEUB+	-65C TO +150C (Condition C)	1000	CYS	80	0	JHK1DA239DX
TEMP CYCLE, 15' RAMP, 15' DWELL	1647	MAX9028EBT+TCHE	-40C TO +125C (Condition G)	100	CYS	80	0	JOY3CA162BB
TEMP CYCLE, 15' RAMP, 15' DWELL	1649	MAX9028EBT+TCHE	-40C TO +125C (Condition G)	100	CYS	80	0	JOY3CA163AB
TEMP CYCLE, 15' RAMP, 15' DWELL	1650	MAX9028EBT+TCHE	-40C TO +125C (Condition G)	100	CYS	80	0	JOY3CA165AB
TEMP CYCLE, 15' RAMP, 15' DWELL	1651	MAX9028EBT+TCHE	-40C TO +125C (Condition G)	100	CYS	80	0	JOY3CA169AE
TEMP CYCLE, 5' RAMP, 10' DWELL	1651	MAX9017AEKA/V+T	-65C TO +150C (Condition C)	500	CYS	120	0	JER0CA226QA
TEMP CYCLE, 5' RAMP, 10' DWELL	1651	MAX9017AEKA/V+T	-65C TO +150C (Condition C)	500	CYS	120	0	JER0CA226QB
TEMP CYCLE, 5' RAMP, 10' DWELL	1651	MAX9017AEKA/V+T	-65C TO +150C (Condition C)	500	CYS	120	0	JER0CA226QC
TEMP CYCLE, 5' RAMP, 10' DWELL	1703	MAX13089EESD+	-65C TO +150C (Condition C)	1000	CYS	80	0	JAP9EA541CX
<b>Total:</b>							<b>0</b>	

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#### TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1414	MAX9938FELT+	130C, 85%	96	HRS	80	0	JMKYCA086FA
BIASED MOISTURE	1422	MAX9938FELT+	130C, 85%	96	HRS	20	0	JMKYCA089AA
BIASED MOISTURE	1505	MAX9938FELT+	130C, 85%	96	HRS	79	0	JMKYCA096DA

BIASED MOISTURE	1619	MAX5073ETI+	130C, 85%	100	HRS	43	0	JRJ1EA043E
BIASED MOISTURE	1619	MAX5073ETI+	130C, 85%	100	HRS	37	0	JRJ1EA043E
BIASED MOISTURE	1627	MAX13089EESD+	130C, 85%	96	HRS	80	0	JAP9EA454CX
BIASED MOISTURE	1645	MAX1954AEUB+	130C, 85%	96	HRS	80	0	JHK1DA239DX
BIASED MOISTURE	1703	MAX13089EESD+		96	HRS	80	0	JAP9EA541CX
<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	1414	MAX9938FELT+	130C, 85%	96	HRS	80	0	JMKYCA086FA
MOISTURE SOAK	1422	MAX9938FELT+	130C, 85%	96	HRS	80	0	JMKYCA089AA
MOISTURE SOAK	1505	MAX9938FELT+	130C, 85%	96	HRS	80	0	JMKYCA096DA
MOISTURE SOAK	1616	MAX6425UK23+	130C, 85%	96	HRS	79	0	J612E3045IA (PQ)
MOISTURE SOAK	1616	MAX6425UK23+	130C, 85%	96	HRS	33	0	J612E3045IB (PQ)
MOISTURE SOAK	1616	MAX6425UK23+	130C, 85%	96	HRS	80	0	J612E3045JB (PQ)
MOISTURE SOAK	1636	MAX9027EWT+	130C, 85%	96	HRS	80	0	JOY2CA147I#
MOISTURE SOAK	1642	MAX6896AAZT/V+	130C, 85%	96	HRS	80	0	JIABBA062IA
MOISTURE SOAK	1642	MAX6896AAZT/V+	130C, 85%	96	HRS	79	0	JIABBA062I
MOISTURE SOAK	1642	MAX6896AAZT/V+	130C, 85%	96	HRS	80	0	JIABBA062IB
MOISTURE SOAK	1651	MAX9017AEKA/V+T	130C, 85%	96	HRS	80	0	JER0CA226QA
MOISTURE SOAK	1651	MAX9017AEKA/V+T	130C, 85%	96	HRS	80	0	JER0CA226QB
MOISTURE SOAK	1651	MAX9017AEKA/V+T	130C, 85%	96	HRS	80	0	JER0CA226QC
<b>Total:</b>							<b>0</b>	

**FAILURE RATE: MTTF (YRS): 148243      QUANTITY: 846      FAILS: 0      FITS: 0.8**