

7/10/2017



**RELIABILITY MONITOR REPORT  
FOR**

**MFN M5**

**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:

MAX1480AEPI+	MAX1480BEPI+	MAX221CAE+	MAX232EEPE+	MAX253ESA+
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The calculated failure rate for devices using this process is:

**FAILURE RATE:    MTTF (YRS): 154638    QUANTITY: 798    FAILS: 0    FITS: 0.7**

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 M5

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1528	MAX1480AEPI+	135°C	1000 HRS	80	0	8FDPBNSQ4
HIGH TEMP OP LIFE	1528	MAX1480AEPI+	135°C	1000 HRS	80	0	8FDPBNSQ5
HIGH TEMP OP LIFE	1528	MAX1480BEPI+	135°C	1000 HRS	80	0	8FEPBMTQ4
HIGH TEMP OP LIFE	1528	MAX1480BEPI+	135°C	1000 HRS	80	0	8FEPBMTQ5
HIGH TEMP OP LIFE	1544	MAX1480AEPI+	135°C	1000 HRS	80	0	8FDPBNSQ1
HIGH TEMP OP LIFE	1544	MAX1480BEPI+	135°C	1000 HRS	80	0	8FEPBMTQ1
HIGH TEMP OP LIFE	1621	MAX253ESA+	135°C	1000 HRS	80	0	NCVACA927B
HIGH TEMP OP LIFE	1641	MAX221CAE+	135°C	1000 HRS	78	0	NX6AC3133BX
HIGH TEMP OP LIFE	1643	MAX232EEPE+	135°C	1000 HRS	80	0	NDOAC28S4F
HIGH TEMP OP LIFE	1709	MAX253ESA+	135°C	1000 HRS	80	0	NCVAC3982BX
<b>Total:</b>						<b>0</b>	

**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1528	MAX1480AEPI+	150°C	1000 HRS	80	0	8FDPBNSQ4
STORAGE LIFE	1528	MAX1480AEPI+	150°C	1000 HRS	80	0	8FDPBNSQ5
STORAGE LIFE	1528	MAX1480BEPI+	150°C	1000 HRS	80	0	8FEPBMTQ4
STORAGE LIFE	1528	MAX1480BEPI+	150°C	1000 HRS	80	0	8FEPBMTQ5
STORAGE LIFE	1544	MAX1480AEPI+	150°C	1000 HRS	80	0	8FDPBNSQ1
STORAGE LIFE	1544	MAX1480BEPI+	150°C	1000 HRS	80	0	8FEPBMTQ1
STORAGE LIFE	1621	MAX253ESA+	150°C	1000 HRS	80	0	NCVACA927B
STORAGE LIFE	1631	MAX253ESA+	150°C	1000 HRS	80	0	NCVACA944BA

STORAGE LIFE	1641	MAX221CAE+	150°C	1000	HRS	80	0	NX6AC3133BX
STORAGE LIFE	1709	MAX253ESA+	150°C	1000	HRS	80	0	NCVAC3982BX
<b>Total:</b>							<b>0</b>	

**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL	1528	MAX1480AEPI+	-65C TO +150C (Condition C)	1000	CYS	80	0 8FDPBNSQ4	
TEMP CYCLE, 5' RAMP, 10' DWELL	1528	MAX1480AEPI+	-65C TO +150C (Condition C)	1000	CYS	80	0 8FDPBNSQ5	
TEMP CYCLE, 5' RAMP, 10' DWELL	1528	MAX1480BEPI+	-65C TO +150C (Condition C)	1000	CYS	80	0 8FEPBMTQ4	
TEMP CYCLE, 5' RAMP, 10' DWELL	1528	MAX1480BEPI+	-65C TO +150C (Condition C)	1000	CYS	80	0 8FEPBMTQ5	
TEMP CYCLE, 5' RAMP, 10' DWELL	1544	MAX1480AEPI+	-65C TO +150C (Condition C)	500	CYS	80	0 8FDPBNSQ1	
TEMP CYCLE, 5' RAMP, 10' DWELL	1544	MAX1480BEPI+	-65C TO +150C (Condition C)	1000	CYS	80	0 8FEPBMTQ1	
TEMP CYCLE, 5' RAMP, 10' DWELL	1621	MAX253ESA+	-65C TO +150C (Condition C)	1000	CYS	80	0 NCVACA927B	
TEMP CYCLE, 5' RAMP, 10' DWELL	1631	MAX253ESA+	-65C TO +150C (Condition C)	1000	CYS	80	0 NCVACA944BA	
TEMP CYCLE, 5' RAMP, 10' DWELL	1641	MAX221CAE+	-65C TO +150C (Condition C)	1000	CYS	80	0 NX6AC3133BX	
TEMP CYCLE, 5' RAMP, 10' DWELL	1709	MAX253ESA+	-65C TO +150C (Condition C)	1000	CYS	80	0 NCVAC3982BX	
<b>Total:</b>							<b>0</b>	

**TEMPERATURE HUMIDITY BIAS**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1621	MAX253ESA+	130C, 85%	100	HRS	80	0 NCVACA927B	
BIASED MOISTURE	1631	MAX253ESA+	130C, 85%	96	HRS	80	0 NCVACA944BA	
BIASED MOISTURE	1641	MAX221CAE+	130C, 85%	96	HRS	80	0 NX6AC3133BX	
BIASED MOISTURE	1709	MAX253ESA+	130C, 85%	96	HRS	80	0 NCVAC3982BX	
<b>Total:</b>							<b>0</b>	

**FAILURE RATE: MTTF (YRS): 154638      QUANTITY: 798      FAILS: 0      FITS: 0.7**