

**8/1/2019**



**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:

MAX211CAI+	MAX221ECUE+	MAX233CPP+G3	MAX253CSA+	MAX253ESA+
MAX845ESA+				

The calculated failure rate for devices using this process is:

**FAILURE RATE: MTTF (YRS): 108130 QUANTITY: 558 FAILS: 0 FITS: 1.1**

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 4/1/2019 and 8/1/2019 .

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### Process Information:

Process Description: MFN M5

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#### OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1819	MAX211CAI+	125°C	1000 HRS	79	0	NKOB2876A
HIGH TEMP OP LIFE	1819	MAX253ESA+	125°C	1000 HRS	79	0	NCVAC27A7A
HIGH TEMP OP LIFE	1822	MAX253ESA+	125°C	1000 HRS	80	0	NCVACA8A1AX
HIGH TEMP OP LIFE	1835	MAX253CSA+	125°C	1000 HRS	80	0	NCVAC27A7CD
HIGH TEMP OP LIFE	1836	MAX233CPP+G36	125°C	1000 HRS	80	0	NHUBBAE0HA
HIGH TEMP OP LIFE	1836	MAX233CPP+G36	125°C	1000 HRS	80	0	NHUBBAE0HAA
HIGH TEMP OP LIFE	1912	MAX845ESA+	125°C	1000 HRS	80	0	NCVBCA3B5AX
<b>Total:</b>						<b>0</b>	

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#### STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1822	MAX253ESA+	150°C	1000 HRS	80	0	NCVACA8A1AX
STORAGE LIFE	1835	MAX221ECUE+	150°C	1000 HRS	79	0	R40368AX2
STORAGE LIFE	1835	MAX253CSA+	150°C	1000 HRS	78	0	NCVAC27A7CD
STORAGE LIFE	1836	MAX233CPP+G36	150°C	1000 HRS	85	0	NHUBBAE0HA
STORAGE LIFE	1836	MAX233CPP+G36	150°C	1000 HRS	85	0	NHUBBAE0HAA
STORAGE LIFE	1912	MAX845ESA+	150°C	1000 HRS	80	0	NCVBCA3B5AX
<b>Total:</b>						<b>0</b>	

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#### TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
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TEMP CYCLE, 5' RAMP, 10' DWELL	1822	MAX253ESA+	-65C TO +150C (Condition C)	1000	CYS	80	0	NCVACA8A1AX
TEMP CYCLE, 5' RAMP, 10' DWELL	1835	MAX221ECUE+	-65C TO +150C (Condition C)	1000	CYS	80	0	R40368AT2
TEMP CYCLE, 5' RAMP, 10' DWELL	1835	MAX253CSA+	-65C TO +150C (Condition C)	1000	CYS	80	0	NCVAC27A7CD
TEMP CYCLE, 5' RAMP, 10' DWELL	1836	MAX233CPP+G36	-65C TO +150C (Condition C)	1000	CYS	85	0	NHUBBAE0HA
TEMP CYCLE, 5' RAMP, 10' DWELL	1836	MAX233CPP+G36	-65C TO +150C (Condition C)	1000	CYS	85	0	NHUBBAE0HAA
TEMP CYCLE, 5' RAMP, 10' DWELL	1912	MAX845ESA+	-65C TO +150C (Condition C)	1000	CYS	80	0	NCVBCA3B5AX
<b>Total:</b>							<b>0</b>	

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**TEMPERATURE HUMIDITY BIAS**

DESCRIPTION	DATE	TEST CODE	VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
BIASED MOISTURE	1822	MAX253ESA+		130C, 85% R.H.	96 HRS	80	0	NCVACA8A1AX
BIASED MOISTURE	1835	MAX221ECUE+		130C, 85% R.H.	96 HRS	80	0	R40368AH1
BIASED MOISTURE	1835	MAX253CSA+		130C, 85% R.H.	96 HRS	80	0	NCVAC27A7CD
BIASED MOISTURE	1912	MAX845ESA+		130C, 85% R.H.	96 HRS	80	0	NCVBCA3B5AX
<b>Total:</b>							<b>0</b>	

**FAILURE RATE: MTTF (YRS): 108130      QUANTITY: 558      FAILS: 0      FITS: 1.1**