

6/25/2020



**RELIABILITY MONITOR REPORT
FOR**

MFN B12

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:

LM4040AEM3-2.	MAX1709ESE+	MAX4477AUA/V	MAX4478AUD+	MAX669EUB/V+
---------------	-------------	--------------	-------------	--------------

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 76931 QUANTITY: 397 FAILS: 0 FITS: 1.5

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 1/1/2020 and 3/31/2020 .

Process Information:

Process Description: MFN B12

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1846	MAX4477AUA/V+	125°C	1000 HRS	78	0	J290EA277AA
HIGH TEMP OP LIFE	1846	MAX4477AUA/V+	125°C	1000 HRS	79	0	J290EA277AB
HIGH TEMP OP LIFE	1846	MAX4477AUA/V+	125°C	1000 HRS	80	0	J290EA277AC
HIGH TEMP OP LIFE	1922	MAX1709ESE+	125°C	1000 HRS	80	0	JQ3AHA063DX
HIGH TEMP OP LIFE	1948	MAX4478AUD+	125°C	1000 HRS	80	0	J2P0EA237AX
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1846	MAX4477AUA/V+	150°C	1000 HRS	80	0	J290EA277AA
STORAGE LIFE	1846	MAX4477AUA/V+	150°C	1000 HRS	80	0	J290EA277AB
STORAGE LIFE	1846	MAX4477AUA/V+	150°C	1000 HRS	80	0	J290EA277AC
STORAGE LIFE	1847	LM4040AEM3-2.5+T	150°C	1000 HRS	79	0	J57CEA342CB
STORAGE LIFE	1948	MAX4478AUD+	150°C	1000 HRS	80	0	J2P0EA237AX
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	1846	MAX4477AUA/V+	-65C TO +150C (Condition C)	1000 CYS	100	0	J290EA277AA
TEMP CYCLE, 5' RAMP, 10' DWELL	1846	MAX4477AUA/V+	-65C TO +150C (Condition C)	1000 CYS	100	0	J290EA277AB

TEMP CYCLE, 5' RAMP, 10' DWELL	1846	MAX4477AUA/V+	-65C TO +150C (Condition C)	1000	CYS	100	0	J290EA277AC
TEMP CYCLE, 5' RAMP, 10' DWELL	1847	LM4040AEM3-2.5+T	-65C TO +150C (Condition C)	1000	CYS	77	0	J57CEA342CB
TEMP CYCLE, 5' RAMP, 10' DWELL	1911	MAX669EUB/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	JYGBLA224BX
TEMP CYCLE, 5' RAMP, 10' DWELL	1948	MAX4478AUD+	-65C TO +150C (Condition C)	1000	CYS	80	0	J2P0EA237AX
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
BIASED MOISTURE	1846	MAX4477AUA/V+	130C, 85% R.H. 96	HRS	80	0	J290EA277AA
BIASED MOISTURE	1846	MAX4477AUA/V+	130C, 85% R.H. 96	HRS	80	0	J290EA277AB
BIASED MOISTURE	1846	MAX4477AUA/V+	130C, 85% R.H. 96	HRS	40	0	J290EA277AB
BIASED MOISTURE	1846	MAX4477AUA/V+	130C, 85% R.H. 96	HRS	80	0	J290EA277AC
BIASED MOISTURE	1846	MAX4477AUA/V+	130C, 85% R.H. 96	HRS	40	0	J290EA277AC
BIASED MOISTURE	1911	MAX669EUB/V+	130C, 85% R.H. 96	HRS	77	0	JYGBLA224BX
Total:							0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	1846	MAX4477AUA/V+	130C, 85% R.H. 96	HRS	80	0	J290EA277AA
MOISTURE SOAK	1846	MAX4477AUA/V+	130C, 85% R.H. 96	HRS	80	0	J290EA277AB
MOISTURE SOAK	1846	MAX4477AUA/V+	130C, 85% R.H. 96	HRS	80	0	J290EA277AC
MOISTURE SOAK	1847	LM4040AEM3-2.5+T	130C, 85% R.H. 96	HRS	75	0	J57CEA342CB
MOISTURE SOAK	1948	MAX4478AUD+	130C, 85% R.H. 96	HRS	80	0	J2P0EA237AX
Total:							0

FAILURE RATE: MTF (YRS): 76931 QUANTITY: 397 FAILS: 0 FITS: 1.5