

7/10/2017



**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.	LM4040AEM3-2.	MA985EBT+	MAX1281BCUP	MAX1281BEUP
MAX15034BAUI	MAX1617MEE+	MAX1709ESE+	MAX4475AUA+	MAX4478AUD+
MAX6394US480	MAX6414UK31/	MAX985EBT+		

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 120339 QUANTITY: 683 FAILS: 0 FITS: 0.9

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 B12

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1443	MAX1281BCUP+	135°C	1000 HRS	79	0	J4DAIA195B
HIGH TEMP OP LIFE	1606	MAX6394US480D3/V+T	135°C	1000 HRS	80	0	JNMBLA099CA
HIGH TEMP OP LIFE	1606	MAX6394US480D3/V+T	135°C	1000 HRS	80	0	JNMBLA099CB
HIGH TEMP OP LIFE	1606	MAX6394US480D3/V+T	135°C	1000 HRS	80	0	JNMBLA099CC
HIGH TEMP OP LIFE	1622	MAX6414UK31/V+	135°C	1000 HRS	45	0	J8K2EA241GA
HIGH TEMP OP LIFE	1630	MAX1617MEE+	135°C	1000 HRS	80	0	J4BAMA303CX
HIGH TEMP OP LIFE	1644	MAX4475AUA+	135°C	1000 HRS	80	0	J3J0E3158BX
HIGH TEMP OP LIFE	1701	MAX4478AUD+	135°C	1000 HRS	80	0	J2P0EA173BX
HIGH TEMP OP LIFE	1711	MAX1281BEUP+	135°C	500 HRS	79	0	J4DAIA239I
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1443	MAX1281BCUP+	150°C	1000 HRS	80	0	J4DAIA195B
STORAGE LIFE	1606	MAX6394US480D3/V+T	150°C	1000 HRS	80	0	JNMBLA099CA
STORAGE LIFE	1606	MAX6394US480D3/V+T	150°C	1000 HRS	80	0	JNMBLA099CB
STORAGE LIFE	1606	MAX6394US480D3/V+T	150°C	1000 HRS	80	0	JNMBLA099CC
STORAGE LIFE	1615	MAX1709ESE+	150°C	1000 HRS	80	0	JQ3AHA017Q1
STORAGE LIFE	1616	LM4040AEM3-2.5+T	150°C	500 HRS	78	0	J57CEA247HB
STORAGE LIFE	1616	LM4040AEM3-2.5+T	150°C	500 HRS	80	0	J57CEA247CB

STORAGE LIFE	1618	MA985EBT+	150°C	1000	HRS	77	0	JKN0BA816C#
STORAGE LIFE	1618	MAX985EBT+	150°C	1000	HRS	77	0	JKN0BA816D\$
STORAGE LIFE	1618	MAX985EBT+	150°C	1000	HRS	77	0	JKN0BA816E#
STORAGE LIFE	1625	MAX15034BAUI/V+	150°C	500	HRS	80	0	JMWYAA010E
STORAGE LIFE	1625	MAX15034BAUI/V+	150°C	500	HRS	80	0	JMWYAA010EA
STORAGE LIFE	1625	MAX15034BAUI/V+	150°C	500	HRS	80	0	JMWYAA010EB
STORAGE LIFE	1630	MAX1617MEE+	150°C	1000	HRS	80	0	J4BAMA303CX
STORAGE LIFE	1644	MAX4475AUA+	150°C	1000	HRS	80	0	J3J0E3158BX
STORAGE LIFE	1701	MAX4478AUD+	150°C	1000	HRS	80	0	J2P0EA173BX
STORAGE LIFE	1711	MAX1281BEUP+	150°C	500	HRS	90	0	J4DAIA239F
STORAGE LIFE	1711	MAX1281BEUP+	150°C	500	HRS	90	0	J4DAIA239G
Total:							0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL	1443	MAX1281BCUP+	-65C TO +150C (Condition C)	1000	CYS	80	0	J4DAIA195B
TEMP CYCLE, 5' RAMP, 10' DWELL	1615	MAX1709ESE+	-65C TO +150C (Condition C)	500	CYS	93	0	JQ3AHA017Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	1616	LM4040AEM3-2.5+T	-65C TO +150C (Condition C)	1000	CYS	149	0	J57CEA247HB
TEMP CYCLE, 5' RAMP, 10' DWELL	1616	LM4040AEM3-2.5+T	-65C TO +150C (Condition C)	1000	CYS	148	0	J57CEA247CB
TEMP CYCLE, 5' RAMP, 10' DWELL	1616	LM4040AEM3-2.5+T	-65C TO +150C (Condition C)	500	CYS	149	0	J57CEA247GA
TEMP CYCLE, 15' RAMP, 15' DWELL	1618	MA985EBT+	-40C TO +125C (Condition G)	1000	CYS	77	0	JKN0BA816C#
TEMP CYCLE, 15' RAMP, 15' DWELL	1618	MAX985EBT+	-40C TO +125C (Condition G)	1000	CYS	77	0	JKN0BA816D\$
TEMP CYCLE, 15' RAMP, 15' DWELL	1618	MAX985EBT+	-40C TO +125C (Condition G)	1000	CYS	77	0	JKN0BA816E#
TEMP CYCLE, 5' RAMP, 10' DWELL	1625	MAX15034BAUI/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	JMWYAA010E
TEMP CYCLE, 5' RAMP, 10' DWELL	1625	MAX15034BAUI/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	JMWYAA010EA
TEMP CYCLE, 5' RAMP, 10' DWELL	1625	MAX15034BAUI/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	JMWYAA010EB

TEMP CYCLE, 5' RAMP, 10' DWELL	1630	MAX1617MEE+	-65C TO +150C (Condition C)	1000	CYS	80	0	J4BAMA303CX
TEMP CYCLE, 5' RAMP, 10' DWELL	1644	MAX4475AUA+	-65C TO +150C (Condition C)	1000	CYS	80	0	J3J0E3158BX
TEMP CYCLE, 5' RAMP, 10' DWELL	1701	MAX4478AUD+	-65C TO +150C (Condition C)	1000	CYS	80	0	J2P0EA173BX
TEMP CYCLE, 5' RAMP, 10' DWELL	1711	MAX1281BEUP+	-65C TO +150C (Condition C)	500	CYS	90	0	J4DAIA239I
TEMP CYCLE, 5' RAMP, 10' DWELL	1711	MAX1281BEUP+	-65C TO +150C (Condition C)	500	CYS	110	0	J4DAIA239F
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1443	MAX1281BCUP+	130C, 85%	100	HRS	80	0	J4DAIA195B
BIASED MOISTURE	1630	MAX1617MEE+	130C, 85%	96	HRS	80	0	J4BAMA303CX
BIASED MOISTURE	1644	MAX4475AUA+	130C, 85%	96	HRS	80	0	J3J0E3158BX
BIASED MOISTURE	1701	MAX4478AUD+	130C, 85%	96	HRS	80	0	J2P0EA173BX
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK	1616	LM4040AEM3-2.5+T	130C, 85%	96	HRS	80	0	J57CEA247HB
MOISTURE SOAK	1616	LM4040AEM3-2.5+	130C, 85%	96	HRS	19	0	J57CEA247CB
MOISTURE SOAK	1616	LM4040AEM3-2.5+T	130C, 85%	96	HRS	80	0	J57CEA247GA
MOISTURE SOAK	1711	MAX1281BEUP+	130C, 85%	96	HRS	80	0	J4DAIA239F
MOISTURE SOAK	1711	MAX1281BEUP+	130C, 85%	96	HRS	80	0	J4DAIA239I
Total:							0	

FAILURE RATE: MTTF (YRS): 120339 QUANTITY: 683 FAILS: 0 FITS: 0.9