

7/10/2017



**RELIABILITY MONITOR REPORT
FOR**

MFN S12

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:

MAX1932ETC+	MAX5150BCPE+	MAX5170BEEE+	MAX535BCPA+	MAX6126BASA
MAX6126BASA	MAX995ESD+			

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 155413 QUANTITY: 844 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 S12

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1611	MAX1932ETC+	135°C	1000 HRS	44	0	NJ60AA147B
HIGH TEMP OP LIFE	1611	MAX1932ETC+	135°C	1000 HRS	36	0	NJ60AA147B
HIGH TEMP OP LIFE	1625	MAX995ESD+	135°C	1000 HRS	80	0	N1HCB2571C
HIGH TEMP OP LIFE	1628	MAX6126BASA41/V+	135°C	1000 HRS	80	0	NAI3BA165K
HIGH TEMP OP LIFE	1628	MAX6126BASA41/V+	135°C	500 HRS	80	0	NAI3BA165L
HIGH TEMP OP LIFE	1628	MAX6126BASA41/V+	135°C	1000 HRS	80	0	NAI3BA165M
HIGH TEMP OP LIFE	1641	MAX5170BEEE+	135°C	1000 HRS	80	0	NAEZ1A113CB
HIGH TEMP OP LIFE	1703	MAX535BCPA+	135°C	1000 HRS	80	0	NBFD5A192BA
HIGH TEMP OP LIFE	1703	MAX535BCPA+	135°C	1000 HRS	80	0	NBFD5A192BB
HIGH TEMP OP LIFE	1703	MAX535BCPA+	135°C	500 HRS	80	0	NBFD5A192BD
HIGH TEMP OP LIFE	1703	MAX535BCPA+	135°C	1000 HRS	80	0	NBFD5A192BC
HIGH TEMP OP LIFE	1703	MAX1932ETC+	135°C	1000 HRS	44	0	NJ60AA157BG
				Total:		0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1611	MAX1932ETC+	150°C	1000 HRS	80	0	NJ60AA147B
STORAGE LIFE	1628	MAX6126BASA41/V+	150°C	1000 HRS	88	0	NAI3BA165K
STORAGE LIFE	1628	MAX6126BASA41/V+	150°C	1000 HRS	90	0	NAI3BA165L
STORAGE LIFE	1628	MAX6126BASA41/V+	150°C	1000 HRS	90	0	NAI3BA165M
STORAGE LIFE	1631	MAX6126BASA25+	150°C	1000 HRS	80	0	NAI1BA189IB

STORAGE LIFE	1641	MAX5170BEEE+	150°C	1000	HRS	80	0	NAEZ1A113CB
STORAGE LIFE	1652	MAX5150BCPE+	150°C	500	HRS	80	0	NBFC6A188EA
STORAGE LIFE	1652	MAX5150BCPE+	150°C	1000	HRS	80	0	NBFC6A188EA
STORAGE LIFE	1652	MAX5150BCPE+	150°C	1000	HRS	80	0	NBFC6A188EB
STORAGE LIFE	1652	MAX5150BCPE+	150°C	500	HRS	80	0	NBFC6A188EC
STORAGE LIFE	1652	MAX5150BCPE+	150°C	1000	HRS	80	0	NBFC6A188EC
STORAGE LIFE	1703	MAX535BCPA+	150°C	1000	HRS	80	0	NBFD5A192BA
STORAGE LIFE	1703	MAX535BCPA+	150°C	1000	HRS	80	0	NBFD5A192BB
STORAGE LIFE	1703	MAX535BCPA+	150°C	500	HRS	80	0	NBFD5A192BD
STORAGE LIFE	1703	MAX535BCPA+	150°C	1000	HRS	80	0	NBFD5A192BC
STORAGE LIFE	1703	MAX1932ETC+	150°C	1000	HRS	80	0	NJ60AA157BG
Total:							0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL	1611	MAX1932ETC+	-65C TO +150C (Condition C)	1000	CYS	80	0	NJ60AA147B
TEMP CYCLE, 5' RAMP, 10' DWELL	1628	MAX6126BASA41/V+	-65C TO +150C (Condition C)	500	CYS	114	0	NAI3BA165K
TEMP CYCLE, 5' RAMP, 10' DWELL	1628	MAX6126BASA41/V+	-65C TO +150C (Condition C)	1000	CYS	117	0	NAI3BA165L
TEMP CYCLE, 5' RAMP, 10' DWELL	1628	MAX6126BASA41/V+	-65C TO +150C (Condition C)	1000	CYS	118	0	NAI3BA165M
TEMP CYCLE, 5' RAMP, 10' DWELL	1631	MAX6126BASA25+	-65C TO +150C (Condition C)	1000	CYS	80	0	NAI1BA189IB
TEMP CYCLE, 5' RAMP, 10' DWELL	1641	MAX5170BEEE+	-65C TO +150C (Condition C)	1000	CYS	80	0	NAEZ1A113CB
TEMP CYCLE, 5' RAMP, 10' DWELL	1652	MAX5150BCPE+	-65C TO +150C (Condition C)	1000	CYS	20	0	NBFC6A188EA
TEMP CYCLE, 5' RAMP, 10' DWELL	1652	MAX5150BCPE+	-65C TO +150C (Condition C)	1000	CYS	20	0	NBFC6A188EA
TEMP CYCLE, 5' RAMP, 10' DWELL	1652	MAX5150BCPE+	-65C TO +150C (Condition C)	1000	CYS	80	0	NBFC6A188EB
TEMP CYCLE, 5' RAMP, 10' DWELL	1652	MAX5150BCPE+	-65C TO +150C (Condition C)	1000	CYS	80	0	NBFC6A188EC
TEMP CYCLE, 5' RAMP, 10' DWELL	1703	MAX535BCPA+	-65C TO +150C (Condition C)	500	CYS	80	0	NBFD5A192BA
TEMP CYCLE, 5' RAMP, 10' DWELL	1703	MAX535BCPA+	-65C TO +150C (Condition C)	1000	CYS	80	0	NBFD5A192BA

TEMP CYCLE, 5' RAMP, 10' DWELL	1703	MAX535BCPA+	-65C TO +150C (Condition C)	500	CYS	80	0	NBFD5A192BB
TEMP CYCLE, 5' RAMP, 10' DWELL	1703	MAX535BCPA+	-65C TO +150C (Condition C)	1000	CYS	80	0	NBFD5A192BB
TEMP CYCLE, 5' RAMP, 10' DWELL	1703	MAX535BCPA+	-65C TO +150C (Condition C)	1000	CYS	80	0	NBFD5A192BC
TEMP CYCLE, 5' RAMP, 10' DWELL	1703	MAX1932ETC+	-65C TO +150C (Condition C)	1000	CYS	80	0	NJ60AA157BG
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
BIASED MOISTURE	1611	MAX1932ETC+	130C, 85%	100	HRS	46	0 NJ60AA147B
BIASED MOISTURE	1631	MAX6126BASA25+	130C, 85%	96	HRS	80	0 NAI1BA189IB
BIASED MOISTURE	1641	MAX5170BEEE+	130C, 85%	96	HRS	80	0 NAEZ1A113CB
BIASED MOISTURE	1703	MAX1932ETC+	130C, 85%	96	HRS	40	0 NJ60AA157BG
BIASED MOISTURE	1703	MAX1932ETC+	130C, 85%	96	HRS	40	0 NJ60AA157BG
Total:							0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	1628	MAX6126BASA41/V+	130C, 85%	96	HRS	80	0 NAI3BA165L
MOISTURE SOAK	1628	MAX6126BASA41/V+	130C, 85%	96	HRS	80	0 NAI3BA165M
Total:							0

FAILURE RATE: MTTF (YRS): 155413 QUANTITY: 844 FAILS: 0 FITS: 0.7