

10/27/2017



**RELIABILITY MONITOR REPORT
FOR**

Fab 102 S90

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:

MAX77057AEN	MAX77057AEN	MAX77057AEN	MAX77057ENV	MAX77833EWM
MAX77833EWM	MAX77838EWO	MAX9808ENA+	MAX98512EWX	MAX98708AEN
MAX98708BEN	MAX98708ENA	MAX98723AEN	MAX98723BEN	MAX98723BEN
MAX98740AEN				

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 177076 QUANTITY: 1216 FAILS: 0 FITS: 0.6

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 7/1/2017 and 9/30/2017 .

Process Information:

Process Description: Fab 102 S90

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1316	MAX77833EWM+T	135°C	1000 HRS	80	0	HBEX2A131BD
HIGH TEMP OP LIFE	1416	MAX77833EWM+T	135°C	1000 HRS	80	0	HBEX2A131B#
HIGH TEMP OP LIFE	1632	MAX77057ENV+T	135°C	1000 HRS	80	0	HBLG1Q001AC
HIGH TEMP OP LIFE	1634	MAX98723BENX+	135°C	1000 HRS	80	0	HBLW2A006AA
HIGH TEMP OP LIFE	1636	MAX77057ENV+T	135°C	1000 HRS	80	0	HBLG1Q002B#
HIGH TEMP OP LIFE	1636	MAX77057ENV+T	135°C	1000 HRS	80	0	HBLG1Q003B#
HIGH TEMP OP LIFE	1643	MAX98723BENX+	135°C	500 HRS	80	0	HBLW2A004AK
HIGH TEMP OP LIFE	1643	MAX98723BENX+	135°C	500 HRS	80	0	HBLW2A005AG
HIGH TEMP OP LIFE	1717	MAX98708BENA+T	135°C	192 HRS	80	0	HBRR1Q001EC
HIGH TEMP OP LIFE	1722	MAX98740AENL+T	135°C	1000 HRS	80	0	HBPZ3Q002B
HIGH TEMP OP LIFE	1722	MAX98740AENL+T	135°C	1000 HRS	80	0	HBPZ3Q003B
HIGH TEMP OP LIFE	1722	MAX98740AENL+T	135°C	500 HRS	46	0	HBPZ3A004B
HIGH TEMP OP LIFE	1722	MAX98740AENL+T	135°C	500 HRS	46	0	HBPZ3A004B
HIGH TEMP OP LIFE	1722	MAX98740AENL+T	135°C	500 HRS	34	0	HBPZ3A004B
HIGH TEMP OP LIFE	1722	MAX98740AENL+T	135°C	500 HRS	34	0	HBPZ3A004B
HIGH TEMP OP LIFE	1722	MAX98740AENL+T	135°C	192 HRS	10	0	HBPZ3A004B
HIGH TEMP OP LIFE	1722	MAX98740AENL+T	135°C	192 HRS	38	0	HBPZ3A004B
HIGH TEMP OP LIFE	1723	MAX98740AENL+T	135°C	1000 HRS	80	0	HBPZ3Q001G
HIGH TEMP OP LIFE	1725	MAX98512EWX+	135°C	192 HRS	48	0	HBSO9Q002CH

Total: 0

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1632	MAX77057ENV+T	150°C	1000 HRS	50	0	HBLG1Q001AC
STORAGE LIFE	1634	MAX98723BENX+	150°C	1000 HRS	50	0	HBLW2A006A#
STORAGE LIFE	1636	MAX77057ENV+T	150°C	1000 HRS	50	0	HBLG1Q002B#
STORAGE LIFE	1643	MAX98723BENX+	150°C	1000 HRS	50	0	HBLW2A004AK
STORAGE LIFE	1653	MAX98708AENA+T	150°C	1000 HRS	50	0	HBOM2Q003A\$
STORAGE LIFE	1705	MAX98708AENA+T	150°C	500 HRS	50	0	HBOM2A006BC
STORAGE LIFE	1705	MAX98708AENA+T	150°C	1000 HRS	50	0	HBOM2A006BC
STORAGE LIFE	1717	MAX98708BENA+T	150°C	500 HRS	80	0	HBRR1Q001EC
STORAGE LIFE	1717	MAX98708BENA+T	150°C	1000 HRS	80	0	HBRR1Q001EC
STORAGE LIFE	1722	MAX98740AENL+T	150°C	668 HRS	50	0	HBPZ3Q002B
STORAGE LIFE	1722	MAX98740AENL+T	150°C	1000 HRS	50	0	HBPZ3Q002B
STORAGE LIFE	1722	MAX98740AENL+T	150°C	500 HRS	50	0	HBPZ3Q003B
STORAGE LIFE	1722	MAX98740AENL+T	150°C	1000 HRS	50	0	HBPZ3Q003B
STORAGE LIFE	1723	MAX98740AENL+T	150°C	500 HRS	50	0	HBPZ3Q001G
STORAGE LIFE	1723	MAX98740AENL+T	150°C	1000 HRS	50	0	HBPZ3Q001G
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX98723BENX+TG7	-40C TO +125C (Condition G)	500 CYS	80	0	HBLW2A004E#
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX98723BENX+TG7	-40C TO +125C (Condition G)	850 CYS	80	0	HBLW2A004F#
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX98723BENX+TG7	-40C TO +125C (Condition G)	850 CYS	80	0	HBLW2A004G#
TEMP CYCLE, 5' RAMP, 10' DWELL	1520	MAX77838EWO+	-65C TO +150C (Condition C)	144 CYS	100	0	HBBR0Q001#
TEMP CYCLE, 15' RAMP, 15' DWELL	1606	MAX77833EWM+	-40C TO +125C (Condition G)	250 CYS	80	0	HBVM6A258#
TEMP CYCLE, 15' RAMP, 15' DWELL	1606	MAX77833EWM+	-40C TO +125C (Condition G)	500 CYS	80	0	HBVM6A258#
TEMP CYCLE, 15' RAMP, 15' DWELL	1631	MAX98723AENX+	-40C TO +125C (Condition G)	850 CYS	80	0	HBX0Q003A\$
TEMP CYCLE, 15' RAMP, 15' DWELL	1631	MAX98723AENX+	-40C TO +125C (Condition G)	850 CYS	80	0	HBX0Q003AB
TEMP CYCLE, 15' RAMP, 15' DWELL	1631	MAX98723AENX+	-40C TO +125C (Condition G)	850 CYS	80	0	HBX0Q003A#

TEMP CYCLE, 15' RAMP, 15' DWELL	1632	MAX77057AENV+T	-40C TO +125C (Condition G)	850	CYS	80	0	HBLG1Q001A#
TEMP CYCLE, 15' RAMP, 15' DWELL	1636	MAX77057AENV+	-40C TO +125C (Condition G)	850	CYS	80	0	HBLG1Q002BA
TEMP CYCLE, 15' RAMP, 15' DWELL	1636	MAX77057AENV+TG7	-40C TO +125C (Condition G)	850	CYS	80	0	HBLG1Q003BA
TEMP CYCLE, 15' RAMP, 15' DWELL	1652	MAX98708ENA+T	-40C TO +125C (Condition G)	850	CYS	80	0	HBNJ1Q002B
TEMP CYCLE, 15' RAMP, 15' DWELL	1653	MAX98708ENA+T	-40C TO +125C (Condition G)	850	CYS	80	0	HBNJ1Q002C
TEMP CYCLE, 15' RAMP, 15' DWELL	1701	MAX98708ENA+T	-40C TO +125C (Condition G)	850	CYS	80	0	HBNJ1Q002D
TEMP CYCLE, 5' RAMP, 10' DWELL	1718	MAX77833EWM+	-65C TO +150C (Condition C)	500	CYS	80	0	JBVM6A258
TEMP CYCLE, 5' RAMP, 10' DWELL	1718	MAX77833EWM+	-55C TO +125C (Condition B)	800	CYS	80	0	JBVM6A258
TEMP CYCLE, 5' RAMP, 10' DWELL	1718	MAX77833EWM+	-65C TO +150C (Condition C)	1000	CYS	80	0	JBVM6A258
TEMP CYCLE, 15' RAMP, 15' DWELL	1722	MAX98740AENL+T	-40C TO +125C (Condition G)	500	CYS	80	0	HBPZ3Q002B
TEMP CYCLE, 15' RAMP, 15' DWELL	1722	MAX98740AENL+T	-40C TO +125C (Condition G)	900	CYS	80	0	HBPZ3Q002B
TEMP CYCLE, 15' RAMP, 15' DWELL	1722	MAX98740AENL+T	-40C TO +125C (Condition G)	500	CYS	80	0	HBPZ3Q003B
TEMP CYCLE, 15' RAMP, 15' DWELL	1722	MAX98740AENL+T	-40C TO +125C (Condition G)	850	CYS	80	0	HBPZ3Q003B
TEMP CYCLE, 15' RAMP, 15' DWELL	1723	MAX98740AENL+T	-40C TO +125C (Condition G)	500	CYS	80	0	HBPZ3Q001G
TEMP CYCLE, 15' RAMP, 15' DWELL	1723	MAX98740AENL+T	-40C TO +125C (Condition G)	924	CYS	80	0	HBPZ3Q001G
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE	TEST CODE	VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
BIASED MOISTURE			MAX98723BENX+	130C, 85%	100 HRS	80	0	HBLW2A004E#
BIASED MOISTURE			MAX98723BENX+	130C, 85%	100 HRS	23	0	HBLW2A004F#
BIASED MOISTURE			MAX98723BENX+	130C, 85%	100 HRS	29	0	HBLW2A004G#
BIASED MOISTURE			MAX98723BENX+	130C, 85%	96 HRS	29	0	HBLW2A004G#
BIASED MOISTURE			MAX98723BENX+	130C, 85%	96 HRS	22	0	HBLW2A004G#
BIASED MOISTURE	1632		MAX77057AENV+T	130C, 85%	264 HRS	80	0	HBLG1Q001A#

BIASED MOISTURE	1636	MAX77057AENV+	130C, 85%	264	HRS	80	0	HBLG1Q002BA
BIASED MOISTURE	1636	MAX77057AENV+TG7	130C, 85%	264	HRS	80	0	HBLG1Q003BA
BIASED MOISTURE	1652	MAX98708ENA+T	130C, 85%	264	HRS	80	0	HBNJ1Q002B
BIASED MOISTURE	1701	MAX98708ENA+T	130C, 85%	264	HRS	80	0	HBNJ1Q002D
BIASED MOISTURE	1722	MAX98740AENL+T	130C, 85%	264	HRS	80	0	HBPZ3Q002B
BIASED MOISTURE	1722	MAX98740AENL+T	130C, 85%	264	HRS	80	0	HBPZ3Q003B
BIASED MOISTURE	1723	MAX98740AENL+T	130C, 85%	24	HRS	24	0	HBPZ3Q001G
BIASED MOISTURE	1723	MAX98740AENL+T	130C, 85%	264	HRS	80	0	HBPZ3Q001G
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK		MAX77057AENV+	130C, 85%	264	HRS	80	0	HBLG1Q0031A#
MOISTURE SOAK		MAX77057AENV+	130C, 85%	264	HRS	80	0	HBLG1Q003B#
MOISTURE SOAK		MAX98723BENX+	130C, 85%	96	HRS	80	0	HBLW2A004E#
MOISTURE SOAK		MAX98723BENX+	130C, 85%	96	HRS	80	0	HBLW2A004F#
MOISTURE SOAK		MAX98723BENX+	130C, 85%	96	HRS	80	0	HBLW2A004G#
MOISTURE SOAK	1632	MAX77057AENV+T	130C, 85%	96	HRS	80	0	HBLG1Q001A#
MOISTURE SOAK	1636	MAX77057AENV+TG7	130C, 85%	110	HRS	79	0	HBLG1Q002BA
MOISTURE SOAK	1636	MAX77057AENV+TG7	130C, 85%	96	HRS	80	0	HBLG1Q003BA
MOISTURE SOAK	1652	MAX98708ENA+T	130C, 85%	96	HRS	80	0	HBNJ1Q002B
MOISTURE SOAK	1653	MAX9808ENA+T	130C, 85%	96	HRS	79	0	HBNJ1Q002C
MOISTURE SOAK	1701	MAX98708ENA+T	130C, 85%	96	HRS	80	0	HBNJ1Q002D
MOISTURE SOAK	1722	MAX98740AENL+T	130C, 85%	96	HRS	80	0	HBPZ3Q002B
MOISTURE SOAK	1722	MAX98740AENL+T	130C, 85%	96	HRS	80	0	HBPZ3Q003B
MOISTURE SOAK	1723	MAX98740AENL+T	130C, 85%	96	HRS	80	0	HBPZ3Q001G
Total:							0	

FAILURE RATE: MTTF (YRS): 177076 QUANTITY: 1216 FAILS: 0 FITS: 0.6