

**1/24/2019**



**RELIABILITY MONITOR REPORT  
FOR**

**Fab 103 P90**

**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:

MAX16604CFN	MAX16604GFN	MAX16604GFN+	MAX20779	MAX30208
MAX3523ETP+	MAX77503DEW	MAX77503DEW	MAX77503EEW	MAX77511SEW
MAX77705CEW	MAX77705CEW	MAX77705FEW	MAX77705FEW	MAX77711AEW
MAX77705FE	MAX77930EFV+	MAXQ699		

The calculated failure rate for devices using this process is:

**FAILURE RATE: MTTF (YRS): 155084 QUANTITY: 1203 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 10/1/2018 and 12/31/2018.

**Process Information:**

Process Description: Fab 103 P90

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1744	MAX77705FEWN+	135°C	192 HRS	62	0	CBTR7A009F
HIGH TEMP OP LIFE	1744	MAX77705FEWN+	135°C	192 HRS	18	0	CBTR7A009E
HIGH TEMP OP LIFE	1747	MAX3523ETP+	125°C	500 HRS	79	0	CBUI7Q001
HIGH TEMP OP LIFE	1802	MAX77511SEWB+T	125°C	1000 HRS	32	0	CBYH9Q002
HIGH TEMP OP LIFE	1802	MAX77511SEWB+T	125°C	1000 HRS	47	0	CBYH9Q002
HIGH TEMP OP LIFE	1805	MAX77705FEWN+T	135°C	500 HRS	80	0	CBTR7A085D
HIGH TEMP OP LIFE	1809	MAX77503DEWC+T	135°C	1000 HRS	80	0	CBUP2Q002B
HIGH TEMP OP LIFE	1810	MAX77503DEWC+T	125°C	1000 HRS	80	0	CBUP2Q003B
HIGH TEMP OP LIFE	1811	MAX77503DEWC+T	125°C	1000 HRS	79	0	CBUP2Q004B
HIGH TEMP OP LIFE	1813	MAX77503DEWC+T	125°C	1000 HRS	48	0	CBUP2A006BB
HIGH TEMP OP LIFE	1813	MAX77503DEWC+T	125°C	1000 HRS	48	0	CBUP2A006CB
HIGH TEMP OP LIFE	1813	MAX77503DEWC+T	125°C	1000 HRS	36	0	CBUP2A006DB
HIGH TEMP OP LIFE	1813	MAX77503DEWC+T	125°C	1000 HRS	35	0	CBUP2A006EB
HIGH TEMP OP LIFE	1826	MAX77503EEWC+T	125°C	192 HRS	80	0	CCTX6A004C#
HIGH TEMP OP LIFE	1826	MAX77705CEWN+T	125°C	192 HRS	80	0	CCTT0Q003H
HIGH TEMP OP LIFE	1833	MAX77705CEWN+	125°C	192 HRS	80	0	HCUD9Q001E#
HIGH TEMP OP LIFE	1838	MAXQ699	125°C	192 HRS	80	0	HBYG7Z009
HIGH TEMP OP LIFE	1838	MAXQ699	125°C	1000 HRS	80	0	HBYG7Z010
HIGH TEMP OP LIFE	1938	MAXQ699	125°C	1000 HRS	79	0	HBYG7Z011

Total: 0

---

**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE		MAX30208	150°C	96 HRS	42	0	PB320XHH0E
STORAGE LIFE	1809	MAX77503DEWC+T	150°C	1000 HRS	80	0	CBUP2Q002B
STORAGE LIFE	1810	MAX77503DEWC+T	150°C	1000 HRS	79	0	CBUP2Q003B
STORAGE LIFE	1811	MAX77503DEWC+T	150°C	1000 HRS	80	0	CBUP2Q004B
STORAGE LIFE	1838	MAXQ699	150°C	1000 HRS	80	0	HBYG7Z009
STORAGE LIFE	1838	MAXQ699	150°C	1000 HRS	80	0	HBYG7Z010
STORAGE LIFE	1838	MAXQ699	150°C	1000 HRS	79	0	HBYG7Z011
STORAGE LIFE	1838	MAXQ699	150°C	1000 HRS	80	0	HBYG7Z011
<b>Total:</b>						<b>0</b>	

---

**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	1731	MAXQ699	-65C TO +150C (Condition C)	1000 CYS	80	0	ZX172583AB
TEMP CYCLE, 5' RAMP, 10' DWELL	1732	MAXQ699	-65C TO +150C (Condition C)	1000 CYS	80	0	ZX172712AB
TEMP CYCLE, 15' RAMP, 15' DWELL	1804	MAX77705FEWN+T	-40C TO +125C (Condition G)	500 CYS	80	0	CBTR7A085C
TEMP CYCLE, 15' RAMP, 15' DWELL	1805	MAX77705FEWN+T	-40C TO +125C (Condition G)	500 CYS	80	0	CBTR7A085D
TEMP CYCLE, 15' RAMP, 15' DWELL	1809	MAX77503DEWC+T	-40C TO +125C (Condition G)	1000 CYS	80	0	CBUP2Q002B\$
TEMP CYCLE, 15' RAMP, 15' DWELL	1810	MAX77503DEWC+T	-40C TO +125C (Condition G)	1000 CYS	79	0	CBUP2Q003B
TEMP CYCLE, 5' RAMP, 10' DWELL	1810	MAX77503DEWC+T	-65C TO +150C (Condition C)	CYS	2	0	CBUP2Q003B
TEMP CYCLE, 15' RAMP, 15' DWELL	1811	MAX77503DEWC+T	-40C TO +125C (Condition G)	1000 CYS	80	0	CBUP2A004BD
TEMP CYCLE, 5' RAMP, 10' DWELL	1832	MAX16604GFN+	-55C TO +125C (Condition B)	1000 CYS	80	0	CCUD2Q002
TEMP CYCLE, 15' RAMP, 15' DWELL	1833	MAX77503DEWC+TG7	-40C TO +125C (Condition G)	500 CYS	80	0	CBUP2A008AJ
TEMP CYCLE, 15' RAMP, 15' DWELL	1833	MAX77503DEWC+TG7	-40C TO +125C (Condition G)	500 CYS	80	0	CBUP2A008EK

TEMP CYCLE, 15' RAMP, 15' DWELL	1835	MAX77503DEWC+TG7	-40C TO +125C (Condition G)	500	CYS	80	0	CBUP2A008F#
TEMP CYCLE, 5' RAMP, 10' DWELL	1836	MAX16604CFN	-65C TO +150C (Condition C)	1000	CYS	79	0	CCUD2Z006A
TEMP CYCLE, 5' RAMP, 10' DWELL	1836	MAX16604GFN	-65C TO +150C (Condition C)	1000	CYS	80	0	CCUD2Z006B
TEMP CYCLE, 5' RAMP, 10' DWELL	1846	MAX77930EFV+	-55C TO +125C (Condition B)	500	CYS	79	0	CBZU2Q002A
<b>Total:</b>							<b>0</b>	

### TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1731	MAXQ699	85 C/85% R.H.	96	HRS	80	0 ZX172583AB	
BIASED MOISTURE	1732	MAXQ699	85 C/85% R.H.	96	HRS	80	0 ZX172712AB	
BIASED MOISTURE	1809	MAX77503DEWC+T	110C, 85% R.H.	264	HRS	79	0 CBUP2Q002B\$	
BIASED MOISTURE	1810	MAX77503DEWC+T	110C, 85% R.H.	96	HRS	66	0 CBUP2Q003BC	
BIASED MOISTURE	1810	MAX77503DEWC+T	110C, 85% R.H.		HRS	80	0 CBUP2Q003BC	
BIASED MOISTURE	1810	MAX77503DEWC+T	110C, 85% R.H.	96	HRS	74	0 CBUP2Q003BC	
BIASED MOISTURE	1810	MAX77503DEWC+T	85 C/85% R.H.	1000	CYS	79	0 CBUP2Q003BL	
BIASED MOISTURE	1811	MAX77503DEWC+T	110C, 85% R.H.	264	HRS	79	0 CBUP2A004BD	
BIASED MOISTURE	1811	MAX77503DEWC+T	130C, 85% R.H.	96	HRS	9	0 CBUP2A004BD	
BIASED MOISTURE	1811	MAX77503DEWC+T	85 C/85% R.H.	1000	CYS	78	0 CBUP2A004BC	
BIASED MOISTURE	1833	MAX77503DEWC+TG7	110C, 85% R.H.	264	HRS	80	0 CBUP2A008AJ	
BIASED MOISTURE	1833	MAX77503DEWC+TG7	110C, 85% R.H.	264	HRS	80	0 CBUP2A008J	
BIASED MOISTURE	1833	MAX77503DEWC+TG7	130C, 85% R.H.	200	HRS	75	0 CBUP2A008AJ	
BIASED MOISTURE	1834	MAX77503DEWC+TG7	110C, 85% R.H.	264	HRS	80	0 CBUP2A008EK	
BIASED MOISTURE	1835	MAX77503DEWC+TG7	110C, 85% R.H.	264	HRS	80	0 CBUP2A008F	
BIASED MOISTURE	1835	MAX77503DEWC+TG7	130C, 85% R.H.	200	HRS	74	0 CBUP2A008F	
BIASED MOISTURE	1836	MAX16604CFN	130C, 85% R.H.	96	HRS	80	0 CCUD2Z006A	
BIASED MOISTURE	1836	MAX16604GFN+	85C, 85% R.H.	96	HRS	36	0 CCUD2Z006A	
BIASED MOISTURE	1836	MAX16604GFN+	85C, 85% R.H.	96	HRS	40	0 CCUD2Z006B	
BIASED MOISTURE	1838	MAX777705FEWN+	110C, 85% R.H.	264	HRS	75	0 CBTR7A640CL	
BIASED MOISTURE	1838	MAX777705FEWN+	110C, 85% R.H.	264	HRS	52	0 CBTR7A640D/Wfr#6	
BIASED MOISTURE	1838	MAX777705FEWN+	110C, 85% R.H.	264	HRS	58	0 CBTR7A640E/Wfr#7	
BIASED MOISTURE	1838	MAX777705FEWN+	110C, 85% R.H.	264	HRS	78	0 CBTR7A640E/Wfr#7	
BIASED MOISTURE	1838	MAX77705FEWN+T	110C, 85% R.H.	264	HRS	74	0 CBTR7A640E\$	
<b>Total:</b>							<b>0</b>	

---

**UNBIASED MOISTURE RESISTANCE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	1731	MAXQ699	130C, 85% R.H. 96	HRS	80	0	ZX172583AB
MOISTURE SOAK	1732	MAXQ699	130C, 85% R.H. 96	HRS	80	0	ZX172712AB
MOISTURE SOAK	1809	MAX77503DEWC+T	130C, 85% R.H. 96	HRS	80	0	CBUP2Q002B\$
MOISTURE SOAK	1810	MAX77503DEWC+T	130C, 85% R.H. 96	HRS	80	0	CBUP2Q003B
MOISTURE SOAK	1811	MAX77503DEWC+T	130C, 85% R.H. 96	HRS	80	0	CBUP2A004BD
MOISTURE SOAK	1833	MAX77503DEWC+TG7	130C, 85% R.H. 96	HRS	80	0	CBUP2A008AJ
MOISTURE SOAK	1835	MAX77503DEWC+TG7	130C, 85% R.H. 96	HRS	80	0	CBUP2A008F
MOISTURE SOAK	1846	MAX77930EFV+	130C, 85% R.H. 96	HRS	80	0	CBZU2Q002A
				<b>Total:</b>		<b>0</b>	
<b>FAILURE RATE:</b>	<b>MTTF (YRS):</b>	<b>155084</b>	<b>QUANTITY:</b>	<b>1203</b>	<b>FAILS:</b>	<b>0</b>	<b>FITS: 0.7</b>