

6/25/2020



**RELIABILITY MONITOR REPORT  
FOR**

**Fab 101 S18**

**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:

MAX17270ENE+	MAX17302	MAX20002ATPA	MAX20003ATPB	MAX20021ATIA/
MAX20022ATIB/	MAX20333ENL+	MAX77812EWB	MAX77812EXJ+	MAX77825EWP
MAX77827BEFD	MAX77827BEW	MAX98357AEW	MAX98360BENL	

The calculated failure rate for devices using this process is:

**FAILURE RATE: MTTF (YRS): 137115 QUANTITY: 811 FAILS: 0 FITS: 0.8**

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: Fab 101 S18

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE		MAX17302	125°C	1000 HRS	79	0	VBZR6Q002B
HIGH TEMP OP LIFE	1905	MAX20333ENL+T	125°C	192 HRS	80	0	VCAP7Q001EA
HIGH TEMP OP LIFE	1912	MAX77827BEWC+T	125°C	192 HRS	48	0	VCBF2Q001DM
HIGH TEMP OP LIFE	1920	MAX77825EWP+T	125°C	1000 HRS	79	0	VBPE6A014BB
HIGH TEMP OP LIFE	1924	MAX77812EXJ+	125°C	1000 HRS	50	0	VBRO3Q002HA
HIGH TEMP OP LIFE	1925	MAX77812EXJ+	125°C	1000 HRS	50	0	VBRO3A004DA
HIGH TEMP OP LIFE	1926	MAX77812EXJ+	125°C	1000 HRS	50	0	VBRO3A005DA
HIGH TEMP OP LIFE	1933	MAX98360BENL+T	125°C	1000 HRS	80	0	VCDE4Q001I
HIGH TEMP OP LIFE	1942	MAX98360BENL+T	125°C	1000 HRS	80	0	VCDE4Q003C
HIGH TEMP OP LIFE	1943	MAX77827BEFD+T	125°C	1000 HRS	45	0	VCBZ7Q003AA
HIGH TEMP OP LIFE	1943	MAX77827BEFD+T	125°C	1000 HRS	45	0	VCBZ7Q003BA
HIGH TEMP OP LIFE	1943	MAX77827BEFD+T	125°C	1000 HRS	45	0	VCBZ7Q003CA
HIGH TEMP OP LIFE	1946	MAX98360BENL+T	125°C	1000 HRS	80	0	VCDE4Q002C
<b>Total:</b>						<b>0</b>	

**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1915	MAX20021ATIA/V+	150°C	500 HRS	80	0	VCAE0Q001GC
STORAGE LIFE	1917	MAX17270ENE+T	150°C	1000 HRS	80	0	VCBQ4Q001DM
STORAGE LIFE	1917	MAX20022ATIB/V+	150°C	500 HRS	80	0	VCAE0Q002AC

STORAGE LIFE	1920	MAX77825EWP+T	150°C	1000	HRS	80	0	VBPE6A014BB
STORAGE LIFE	1922	MAX77825EWP+T	150°C	1000	HRS	80	0	VBPE6A066A
STORAGE LIFE	1924	MAX77812EXJ+	150°C	1000	HRS	80	0	VBRO3Q002HA
STORAGE LIFE	1925	MAX77812EXJ+	150°C	1000	HRS	80	0	VBRO3A004DA
STORAGE LIFE	1927	MAX20003ATPB/V+	150°C	1000	HRS	80	0	VCAH1Q001F
STORAGE LIFE	1933	MAX98360BENL+T	150°C	1000	HRS	80	0	VCDE4Q001I
STORAGE LIFE	1942	MAX98360BENL+T	150°C	1000	HRS	80	0	VCDE4Q003C
STORAGE LIFE	1943	MAX77827BEFD+T	150°C	1000	HRS	80	0	VCBZ7Q003AA
STORAGE LIFE	1943	MAX77827BEFD+T	150°C	1000	HRS	79	0	VCBZ7Q003BA
STORAGE LIFE	1943	MAX77827BEFD+T	150°C	1000	HRS	80	0	VCBZ7Q003CA
STORAGE LIFE	1946	MAX98360BENL+T	150°C	1000	HRS	80	0	VCDE4Q002C
<b>Total:</b>							<b>0</b>	

### TEMPERATURE CYCLE

DESCRIPTION	DATE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX77812EWP+	-40C TO +125C (Condition G)	500	CYS	80	0	VBRO3A109C
TEMP CYCLE, 15' RAMP, 15' DWELL	1912	MAX98357AEWL+T	-65C TO +150C (Condition C)	1000	CYS	80	0	VBUG4A004DK
TEMP CYCLE, 15' RAMP, 15' DWELL	1917	MAX17270ENE+T	-65C TO +150C (Condition C)	1000	CYS	80	0	VCBQ4Q001DM
TEMP CYCLE, 15' RAMP, 15' DWELL	1920	MAX77825EWP+T	-65C TO +150C (Condition C)	1000	CYS	80	0	VBPE6A014BB
TEMP CYCLE, 5' RAMP, 10' DWELL	1924	MAX77812EXJ+	-65C TO +150C (Condition C)	1000	CYS	80	0	VBRO3Q002HA
TEMP CYCLE, 5' RAMP, 10' DWELL	1925	MAX77812EXJ+	-65C TO +150C (Condition C)	1000	CYS	80	0	VBRO3A004DA
TEMP CYCLE, 5' RAMP, 10' DWELL	1926	MAX77812EXJ+	-65C TO +150C (Condition C)	1000	CYS	80	0	VBRO3A005DA
TEMP CYCLE, 15' RAMP, 15' DWELL	1933	MAX98360BENL+T	-40C TO +125C (Condition G)	1000	CYS	80	0	VCDE4Q001I
TEMP CYCLE, 15' RAMP, 15' DWELL	1942	MAX98360BENL+T	-40C TO +125C (Condition G)	1000	CYS	80	0	VCDE4Q003C
TEMP CYCLE, 5' RAMP, 10' DWELL	1943	MAX77827BEFD+T	-65C TO +150C (Condition C)	1000	CYS	80	0	VCBZ7Q003AA
TEMP CYCLE, 5' RAMP, 10' DWELL	1943	MAX77827BEFD+T	-65C TO +150C (Condition C)	1000	CYS	80	0	VCBZ7Q003BA

TEMP CYCLE, 5' RAMP, 10' DWELL	1943	MAX77827BEFD+T	-65C TO +150C (Condition C)	1000	CYS	80	0	VCBZ7Q003CA
TEMP CYCLE, 15' RAMP, 15' DWELL	1946	MAX98360BENL+T	-40C TO +125C (Condition G)	1000	CYS	80	0	VCDE4Q002C

**Total: 0**

**TEMPERATURE HUMIDITY BIAS**

DESCRIPTION	DATE	TEST CODE	VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE			MAX77812EWB+	130C, 85% R.H.	264	HRS	45	0	VBRO3A109C
BIASED MOISTURE			MAX98357AEWL+T	130C, 85% R.H.	264	HRS	80	0	VBUG4A004DK
BIASED MOISTURE	1915		MAX20021ATIA/V+	130C, 85% R.H.	96	HRS	79	0	VCAE0Q001GC
BIASED MOISTURE	1917		MAX17270ENE+T	130C, 85% R.H.	264	HRS	80	0	VCBQ4Q001DM
BIASED MOISTURE	1917		MAX20022ATIB/V+	130C, 85% R.H.	96	HRS	80	0	VCAE0Q002AC
BIASED MOISTURE	1920		MAX77825EWP+T	130C, 85% R.H.	96	HRS	80	0	VBPE6A014BB
BIASED MOISTURE	1923		MAX17270ENE+T	130C, 85% R.H.	264	HRS	80	0	VCBQ4A004AF
BIASED MOISTURE	1924		MAX77812EXJ+	130C, 85% R.H.	96	HRS	50	0	VBRO3Q002HA
BIASED MOISTURE	1924		MAX17270ENE+T	130C, 85% R.H.	264	HRS	80	0	VCBQ4A005BN
BIASED MOISTURE	1925		MAX77812EXJ+	130C, 85% R.H.	96	HRS	50	0	VBRO3A004DA
BIASED MOISTURE	1926		MAX20002ATPA/V+	130C, 85% R.H.	96	HRS	80	0	VCAH1Q003EQ
BIASED MOISTURE	1926		MAX20003ATPB/V+	130C, 85% R.H.	96	HRS	80	0	VCAH1Q003GB
BIASED MOISTURE	1942		MAX98360BENL+T	130C, 85% R.H.	264	HRS	80	0	VCDE4Q003C
BIASED MOISTURE	1943		MAX77827BEFD+T	130C, 85% R.H.	96	HRS	80	0	VCBZ7Q003AA
BIASED MOISTURE	1943		MAX77827BEFD+T	130C, 85% R.H.	96	HRS	80	0	VCBZ7Q003BA
BIASED MOISTURE	1943		MAX77827BEFD+T	130C, 85% R.H.	96	HRS	80	0	VCBZ7Q003CA
BIASED MOISTURE	1946		MAX98360BENL+T	130C, 85% R.H.	264	HRS	80	0	VCDE4Q002C
<b>Total:</b>							<b>0</b>		

**UNBIASED MOISTURE RESISTANCE**

DESCRIPTION	DATE	TEST CODE	VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK			MAX98357AEWL+T	130C, 85% R.H.	96	HRS	80	0	VBUG4A004DK
MOISTURE SOAK	1911		MAX77812EXJ+	130C, 85% R.H.	96	HRS	100	0	VBRO3Q002G
MOISTURE SOAK	1915		MAX20021ATIA/V+	130C, 85% R.H.	96	HRS	80	0	VCAE0Q001GC
MOISTURE SOAK	1917		MAX17270ENE+T	130C, 85% R.H.	96	HRS	80	0	VCBQ4Q001DM
MOISTURE SOAK	1917		MAX20022ATIB/V+	130C, 85% R.H.	96	HRS	80	0	VCAE0Q002AC
MOISTURE SOAK	1920		MAX77825EWP+T	130C, 85% R.H.	96	HRS	80	0	VBPE6A014BB
MOISTURE SOAK	1923		MAX17270ENE+T	130C, 85% R.H.	96	HRS	80	0	VCBQ4A004AF
MOISTURE SOAK	1924		MAX77812EXJ+	130C, 85% R.H.	96	HRS	80	0	VBRO3Q002HA
MOISTURE SOAK	1924		MAX17270ENE+T	130C, 85% R.H.	96	HRS	80	0	VCBQ4A005BN

MOISTURE SOAK	1925	MAX77812EXJ+	130C, 85% R.H.	96	HRS	80	0	VBRO3A004DA
MOISTURE SOAK	1926	MAX77812EXJ+	130C, 85% R.H.	96	HRS	80	0	VBRO3A005DA
MOISTURE SOAK	1926	MAX20002ATPA/V+	130C, 85% R.H.	96	HRS	80	0	VCAH1Q003EQ
MOISTURE SOAK	1926	MAX20003ATPB/V+	130C, 85% R.H.	96	HRS	80	0	VCAH1Q006B
MOISTURE SOAK	1942	MAX98360BENL+T	130C, 85% R.H.	96	HRS	80	0	VCDE4Q003C
MOISTURE SOAK	1943	MAX77827BEFD+T	130C, 85% R.H.	96	HRS	80	0	VCBZ7Q003AA
MOISTURE SOAK	1943	MAX77827BEFD+T	130C, 85% R.H.	96	HRS	80	0	VCBZ7Q003BA
MOISTURE SOAK	1943	MAX77827BEFD+T	130C, 85% R.H.	96	HRS	80	0	VCBZ7Q003CA

**Total:** 0

**FAILURE RATE:**      **MTTF (YRS): 137115**      **QUANTITY: 811**      **FAILS: 0**      **FITS: 0.8**