



7/19/2012

**RELIABILITY MONITOR REPORT
FOR**

FAB-101 Silicon Gate 0.18 μ m CMOS (S18)

MAXIM Integrated Products

**120 San Gabriel Dr.
Sunnyvale, CA 94086**

**This Report was prepared by
Maxim 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:

MAX7370ATG+	MAX77686EWE	MAX8957TEWI+	MAX8959EWG+	MAX8968EWL+
MAX8971EWP+	MAX8971EWP+	MAX8997EWW+	MAX98095EWG	MAX98096EWF
MAXEXP7ETE+				

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 38908 QUANTITY: 497 FAILS: 0 FITS: 2.9

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 7/1/2011 and 6/30/2012 .

Process Information:

Process Description: FAB-101 Silicon Gate 0.18µm CMOS (S18)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1114	MAX7370ATG+	135C	192 HRS	79	0	VY0ZAQ001DQ
HIGH TEMP OP LIFE	1133	MAX8959EWG+T	135C	500 HRS	45	0	VR2ZG2144AC
HIGH TEMP OP LIFE	1139	MAX8968EWL+CBF	135C	500 HRS	48	0	VX2YBA006AQ
HIGH TEMP OP LIFE	1143	MAX8971EWP+T	135C	192 HRS	50	0	VAAU8A006AQ
HIGH TEMP OP LIFE	1145	MAX8959EWG+T	135C	192 HRS	45	0	VR2ZG2238AC
HIGH TEMP OP LIFE	1146	MAX8959EWG+T	135C	192 HRS	45	0	VR2ZG2239AG
HIGH TEMP OP LIFE	1149	MAX8971EWP+	135C	192 HRS	48	0	VADF6A005AQ
HIGH TEMP OP LIFE	1205	MAX77686EWE+T	135C	240 HRS	48	0	VAEC0Q003BQ
HIGH TEMP OP LIFE	N/A	MAX8959EWG+T	135C	1000 HRS	44	0	VR2ZGQ001I
HIGH TEMP OP LIFE	N/A	MAX8959EWG+T	135C	1000 HRS	45	0	VR2ZGA231CB
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1242	MAX98096EWF+T	150C	500 HRS	77	0	VAEK8Q001B
STORAGE LIFE	1242	MAX98096EWF+T	150C	500 HRS	77	0	VAEK8Q001C
STORAGE LIFE	1242	MAX98096EWF+T	150C	500 HRS	77	0	VAEK8Q001D
STORAGE LIFE	N/A	MAX8997EWW+T	150C	1000 HRS	75	0	VW3ZDA034AF
STORAGE LIFE	N/A	MAX8997EWW+T	150C	500 HRS	77	0	VW3ZDA034AG
STORAGE LIFE	N/A	MAX8997EWW+T	150C	500 HRS	77	0	VW3ZDA034AH

STORAGE LIFE	N/A	MAX8997EWW+T	150C	1000 HRS	77	0	VW3ZEA556B
STORAGE LIFE	N/A	MAX8997EWW+T	150C	1000 HRS	77	0	VW3ZEA556C
STORAGE LIFE	N/A	MAX8997EWW+T	150C	1000 HRS	77	0	VW3ZEA556D
STORAGE LIFE	N/A	MAX8959EWG+T	150C	1000 HRS	77	0	VR2ZGA231BB
STORAGE LIFE	N/A	MAX8959EWG+T	150C	1024 HRS	77	0	VR2ZGA231CB
STORAGE LIFE	N/A	MAX8959EWG+T	150C	1024 HRS	77	0	VR2ZGA231DB
STORAGE LIFE	N/A	MAX98095EWG	150C	1048 HRS	77	0	V0VZBQ003AG
STORAGE LIFE	N/A	MAX98095EWG	150C	1048 HRS	77	0	V0VZBQ003AI
STORAGE LIFE	N/A	MAX98095EWG	150C	1048 HRS	77	0	V0VZBQ003AK
STORAGE LIFE	N/A	MAX98095EWG	150C	1000 HRS	77	0	V5AZAQ002CA
STORAGE LIFE	N/A	MAX98095EWG	150C	1000 HRS	77	0	V5AZAQ002AA
STORAGE LIFE	N/A	MAX98095EWG	150C	1000 HRS	77	0	V5AZAQ002BA
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX8957TEWI+T	-40C TO +125C	410 CYS	77	0	VADE0Q002A
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX8957TEWI+T	-40C TO +125C	410 CYS	77	0	VADE0Q002C
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX8957TEWI+T	-40C TO +125C	500 CYS	77	1	VADE0Q002C#
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX8957TEWI+T	-40C TO +125C	410 CYS	77	1	VADE0Q002D
TEMP CYCLE, 5' RAMP, 10' DWELL	1127	MAXEXP7ETE+	-65C TO 150C	1000 CYS	80	0	S23W8Z061A#
TEMP CYCLE, 5' RAMP, 10' DWELL	1127	MAXEXP7ETE+	-65C TO 150C	1000 CYS	78	0	S23W8Z062A#
TEMP CYCLE, 5' RAMP, 10' DWELL	1127	MAXEXP7ETE+	-65C TO 150C	1000 CYS	78	0	S23W8Z076A#
TEMP CYCLE, 15' RAMP, 15' DWELL	1242	MAX98096EWF+T	-40C TO +125C	250 CYS	77	1	VAEK8Q001B
TEMP CYCLE, 15' RAMP, 15' DWELL	1242	MAX98096EWF+T	-40C TO +125C	250 CYS	77	1	VAEK8Q001C
TEMP CYCLE, 15' RAMP, 15' DWELL	1242	MAX98096EWF+T	-40C TO +125C	250 CYS	77	0	VAEK8Q001D
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8959EWG+T	-40C TO +125C	1000 CYS	77	0	VR2ZGQ001K
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8997EWW+T	-40C TO +125C	500 CYS	77	0	VW3ZEA556B
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8997EWW+T	-40C TO +125C	500 CYS	77	0	VW3ZEA556C
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX8997EWW+T	-65C TO 150C	500 CYS	77	0	VW3ZEA556C
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8997EWW+T	-40C TO +125C	500 CYS	77	0	VW3ZEA556D

TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX8997EWW+T	-65C TO 150C	500	CYS	77	0	VW3ZEA556D
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8959EWG+T	-40C TO +125C	500	CYS	77	0	VR2ZGA231BB
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8959EWG+T	-40C TO +125C	500	CYS	77	0	VR2ZGA231CB
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8959EWG+T	-40C TO +125C	500	CYS	77	0	VR2ZGA231DB
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX98095EWG	-40C TO +125C	500	CYS	77	0	V0VZBQ003AI
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX98095EWG	-40C TO +125C	500	CYS	77	0	V5AZAQ002CA
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX98095EWG	-40C TO +125C	500	CYS	77	0	V5AZAQ002AA
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX98095EWG	-65C TO 150C	500	CYS	77	0	V5AZAQ002AA
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX98095EWG	-40C TO +125C	500	CYS	77	0	V5AZAQ002BA
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX98095EWG	-65C TO 150C	500	CYS	77	0	V5AZAQ002BA

Total: 4

FAILURE RATE: **MTTF (YRS): 38908** **QUANTITY: 497** **FAILS: 0** **FITS: 2.9**