

4/16/2014



**RELIABILITY MONITOR REPORT
FOR**

Fab101 0.18 μ m Silicon Gate CMOS (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:

MAX77660AEW	MAX77686EWE	MAX77693EWQ	MAX77696AEW	MAX77696EWI+
MAX77803EWJ+	MAX77804EWJ+	MAX77804KEW	MAX77888EWJ+	MAX8986EWG+
MAX8997EWW	MAX8997EWW+	MAX98096EWF	MAX98711EWW	MAX98721EWW
MAX98721EWW				

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 10409 QUANTITY: 636 FAILS: 2 FITS: 11.0

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 4/1/2013 and 3/31/2014 .

Process Information:

Process Description: Fab101 0.18µm Silicon Gate CMOS (S18)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1303	MAX77696AEWI+T	135°C	192 HRS	48	1	VAKO4Q002BQ
HIGH TEMP OP LIFE	1323	MAX98721EWW+T	135°C	500 HRS	78	0	VANJ9Q001EQ
HIGH TEMP OP LIFE	1327	MAX77696EWI+T	135°C	192 HRS	38	0	VAKO4A030BQ
HIGH TEMP OP LIFE	1327	MAX77696EWI+T	135°C	192 HRS	43	1	VAKO4A030AQ
HIGH TEMP OP LIFE	1331	MAX77804EWJ+T	135°C	192 HRS	46	0	VANF5A004AQ
HIGH TEMP OP LIFE	1334	MAX77888EWJ+T	135°C	192 HRS	34	0	VAOU3Q002CQ
HIGH TEMP OP LIFE	1334	MAX77888EWJ+T	135°C	192 HRS	46	0	VAOU3Q002BQ
HIGH TEMP OP LIFE	1335	MAX77660AEVV+T	135°C	192 HRS	48	0	VAOU9A004DQ
HIGH TEMP OP LIFE	1350	MAX77804KEWJ+T	135°C	192 HRS	46	0	VAQX8Q003BQ
HIGH TEMP OP LIFE	1350	MAX98721EWW+	135°C	192 HRS	80	0	VAQP3Q001BC
HIGH TEMP OP LIFE	N/A	MAX77803EWJ+T	135°C	192 HRS	42	0	VALE4A142AA
HIGH TEMP OP LIFE	N/A	MAX77803EWJ+T	135°C	1000 HRS	42	0	VALE4A142A#
HIGH TEMP OP LIFE	N/A	MAX8997EWW	135°C	500 HRS	45	0	VW3ZEA7A8Q001
Total:						2	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1350	MAX98721EWW+	150°C	500 HRS	80	0	VAQP3Q001BC
STORAGE LIFE	1352	MAX98721EWW+	150°C	500 HRS	80	0	VAQP3Q002AF
STORAGE LIFE	1401	MAX98721EWW+	150°C	500 HRS	80	0	VAQP3Q003AA
STORAGE LIFE	N/A	MAX77803EWJ+T	150°C	500 HRS	77	0	VALE4A142A#

STORAGE LIFE	N/A	MAX77803EWJ+T	150°C	1000 HRS	77	0	VALE4A235A#
STORAGE LIFE	N/A	MAX77803EWJ+T	150°C	1000 HRS	77	0	VALE4A270A#
STORAGE LIFE	N/A	MAX8997EWW+	150°C	1000 HRS	77	0	VW3ZEA7A8Q001
STORAGE LIFE	N/A	MAX8997EWW+	150°C	1000 HRS	77	0	VW3ZEA7A8Q002
STORAGE LIFE	N/A	MAX8997EWW+	150°C	1000 HRS	77	0	VW3ZEA7A8Q003
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX77693EWQ+	-40C TO +125C	1000 CYS	327	0	VAKX5A889A#
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX77803EWJ+T	-40C TO +125C	500 CYS	75	0	VAKI7A005E
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX77803EWJ+T	-40C TO +125C	750 CYS	77	0	VALE4A142A
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX77686EWE+T	-40C TO +125C	500 CYS	77	0	VAEC0A0C6A
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX77686EWE+T	-40C TO +125C	500 CYS	77	0	VAEC0A8B1A
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX77686EWE+T	-40C TO +125C	500 CYS	77	0	VAEC0A1C4A
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX8986EWG+T	-40C TO +125C	250 CYS	77	0	VR2XIA4D2AC
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX8986EWG+T	-40C TO +125C	250 CYS	77	0	VR2XIA4D7AB
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX77803EWJ+T	-40C TO +125C	500 CYS	77	0	VALE4A142A#
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX77803EWJ+T	-40C TO +125C	500 CYS	77	0	VALE4A235A#
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX77803EWJ+T	-40C TO +125C	500 CYS	77	0	VALE4A270A#
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX98096EWF+T	-40C TO +125C	500 CYS	70	0	VAHH8A011A#
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX98096EWF+T	-40C TO +125C	500 CYS	77	0	VAHH8A011B#
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX98096EWF+T	-40C TO +125C	500 CYS	77	0	VAHH8A011C#
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX77696AEWI+T	-40C TO +125C	450 CYS	77	0	VAKO4A006A#
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8997EWW+	-40C TO +125C	250 CYS	77	0	VW3ZEA7A8Q001
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX8997EWW+	-65C TO 150C	500 CYS	77	0	VW3ZEA7A8Q001
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8997EWW+	-40C TO +125C	500 CYS	77	0	VW3ZEA7A8002
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX8997EWW+	-40C TO +125C	500 CYS	77	0	VW3ZEA7A8Q003
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX77660AEWV+T	-40C TO +125C	500 CYS	76	0	VAOU9A004D#

TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX77660AEWV+T	-40C TO +125C	500	CYS	76	0	VAOU9A005A#
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX77660AEWV+T	-40C TO +125C	500	CYS	75	0	VAOU9A006B#
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	N/A	MAX98711EWV+T	85 C/85% R.H.	1000	HRS	76	1 VAJ17Q001C#
MOISTURE SOAK	N/A	MAX98711EWV+T	85 C/85% R.H.	1000	HRS	76	1 VAJ17Q002A#
MOISTURE SOAK	N/A	MAX8997EWW+	130C, 85% R.H.	200	HRS	45	0 VW3ZEA7A8Q001
MOISTURE SOAK	N/A	MAX8997EWW+	130C, 85% R.H.	200	HRS	45	1 VW3ZEA7A8Q002

Total: 3

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