



7/19/2012

**RELIABILITY MONITOR REPORT
FOR**

San Antonio Silicon Gate 0.6 μ m CMOS (E6)

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:

DS1347	DS1886	DS18S20	DS1922S	DS2501
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The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 53937 QUANTITY: 548 FAILS: 0 FITS: 2.1

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: San Antonio Silicon Gate 0.6µm CMOS (E6)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1127	DS2501	125C, 6.0 VOLTS	1164 HRS	77	0	QE168668AB-QUAL
HIGH TEMP OP LIFE	1127	DS2501	125C, 6.0 VOLTS	1164 HRS	77	0	QE168668AC-QUAL
HIGH TEMP OP LIFE	1127	DS2501	125C, 6.0 VOLTS	1164 HRS	77	0	QE168668AD-QUAL
HIGH TEMP OP LIFE	1128	DS18S20	125C, 5.5 VOLTS	1000 HRS	80	0	FH167920AB
HIGH TEMP OP LIFE	1129	DS1347	125C, 5.5 VOLTS	192 HRS	77	0	ZS167344ADA-NPI
HIGH TEMP OP LIFE	1138	DS18S20	125C, 5.5 VOLTS	1000 HRS	80	0	FD271756AB
HIGH TEMP OP LIFE	1207	DS1886	125C, 3.6 VOLTS	192 HRS	80	0	ZJ276689AA-NPI
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1127	DS2501	150C	1000 HRS	77	0	QE168668AD-QUAL
STORAGE LIFE	1127	DS2501	150C	1000 HRS	77	0	QE168668AC-QUAL
STORAGE LIFE	1127	DS2501	150C	1000 HRS	77	0	QE168668AB-QUAL
STORAGE LIFE	1128	DS18S20	150C	1000 HRS	80	0	FH167920AB
STORAGE LIFE	1133	DS1922S	85 C	1000 HRS	77	0	MG378725AAB-QAL
STORAGE LIFE	1134	DS1922S	85 C	1000 HRS	77	0	MG378726AAB-QAL
STORAGE LIFE	1134	DS1922S	85 C	1000 HRS	77	0	MG378727AAB-QAL
STORAGE LIFE	1138	DS18S20	150C	1000 HRS	80	0	FD271756AB

Total: 0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	1127	DS2501	-55C TO 125C	1000 CYS	77	0	QE168668AB-QUAL
TEMP CYCLE, 5' RAMP, 10' DWELL	1127	DS2501	-55C TO 125C	1000 CYS	77	0	QE168668AC-QUAL
TEMP CYCLE, 5' RAMP, 10' DWELL	1127	DS2501	-55C TO 125C	1000 CYS	77	0	QE168668AD-QUAL
TEMP CYCLE, 5' RAMP, 10' DWELL	1128	DS18S20	-55C TO 125C	1000 CYS	80	0	FH167920AB
TEMP CYCLE, 5' RAMP, 10' DWELL	1133	DS1922S	-40 TO 85C	1000 CYS	77	0	MG378725AAB-QAL
TEMP CYCLE, 5' RAMP, 10' DWELL	1134	DS1922S	-40 TO 85C	1000 CYS	77	0	MG378726AAB-QAL
TEMP CYCLE, 5' RAMP, 10' DWELL	1134	DS1922S	-40 TO 85C	1000 CYS	77	0	MG378727AAB-QAL
TEMP CYCLE, 5' RAMP, 10' DWELL	1138	DS18S20	-55C TO 125C	1000 CYS	80	0	FD271756AB
Total:						0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HAST	1127	DS2501	130C, 85%R.H., 5.5V	96 HRS	77	0	QE168668AB-QUAL
HAST	1127	DS2501	130C, 85%R.H., 5.5V	96 HRS	77	0	QE168668AC-QUAL
HAST	1127	DS2501	130C, 85%R.H., 5.5V	96 HRS	77	0	QE168668AD-QUAL
BIASED MOISTURE	1128	DS18S20	85/85, 5.5 VOLTS	1000 HRS	80	0	FH167920AB
HAST	1138	DS18S20	130C, 85%R.H., 5.5V	96 HRS	80	0	FD271756AB
Total:						0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	1133	DS1922S	60C/90% R.H., BATTERY BIAS	1000 HRS	51	0	MG378725AAB-QAL
MOISTURE SOAK	1134	DS1922S	60C/90% R.H., BATTERY BIAS	1000 HRS	77	0	MG378726AAB-QAL
MOISTURE SOAK	1134	DS1922S	60C/90% R.H., BATTERY BIAS	1000 HRS	77	0	MG378727AAB-QAL
Total:						0	

FAILURE RATE: MTTF (YRS): 53937 QUANTITY: 548 FAILS: 0 FITS: 2.1