

10/23/2014



**RELIABILITY MONITOR REPORT
FOR**

San Antonio 0.6 μ m Silicon Gate (E6)

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:

DS1922L	DS2433	DS2502
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The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 56402 QUANTITY: 480 FAILS: 0 FITS: 2.0

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 10/1/2013 and 9/30/2014 .

Process Information:

Process Description: San Antonio 0.6µm Silicon Gate (E6)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1346	DS2433	125C, 6.0 VOLTS	1000 HRS	80	0	FW495512ACA
HIGH TEMP OP LIFE	1346	DS2433	125C, 6.0 VOLTS	1000 HRS	80	0	FW495512ACB
HIGH TEMP OP LIFE	1346	DS2433	125C, 6.0 VOLTS	1000 HRS	80	0	FW495512ACC
HIGH TEMP OP LIFE	1346	DS2433	125C, 6.0 VOLTS	1000 HRS	80	0	FW495512ABA
HIGH TEMP OP LIFE	1346	DS2433	125C, 6.0 VOLTS	1000 HRS	80	0	FW495512ABB
HIGH TEMP OP LIFE	1346	DS2433	125C, 6.0 VOLTS	1000 HRS	80	0	FW495512ABC
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1337	DS1922L	85°C	1048 HRS	77	0	MG389432AAB
STORAGE LIFE	1338	DS1922L	85°C	1048 HRS	77	0	MG389433AAA
STORAGE LIFE	1339	DS1922L	85°C	1000 HRS	77	0	MG389434AAA
STORAGE LIFE	1346	DS2433	150°C	1000 HRS	80	0	FW495512ACA
STORAGE LIFE	1346	DS2433	150°C	1000 HRS	80	0	FW495512ACB
STORAGE LIFE	1346	DS2433	150°C	1000 HRS	80	0	FW495512ACC
STORAGE LIFE	1346	DS2433	150°C	1000 HRS	80	0	FW495512ABA
STORAGE LIFE	1346	DS2433	150°C	1000 HRS	80	0	FW495512ABB
STORAGE LIFE	1346	DS2433	150°C	1000 HRS	80	0	FW495512ABC

STORAGE LIFE	1403	DS2502	150°C	1000 HRS	80	0	FW392681ACA
STORAGE LIFE	1403	DS2502	150°C	1000 HRS	80	0	FW493802ADA
STORAGE LIFE	1403	DS2502	150°C	1000 HRS	80	0	FW493802AEA
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	1337	DS1922L	-40C TO +85C (Condition N)	1100 CYS	77	0	MG389432AAB
TEMP CYCLE, 5' RAMP, 10' DWELL	1338	DS1922L	-40C TO +85C (Condition N)	1100 CYS	77	0	MG389433AAA
TEMP CYCLE, 5' RAMP, 10' DWELL	1339	DS1922L	-40C TO +85C (Condition N)	1100 CYS	77	0	MG389434AAA
TEMP CYCLE, 5' RAMP, 10' DWELL	1346	DS2433	-40C TO +125C (Condition G)	1000 CYS	80	0	FW495512ACA
TEMP CYCLE, 5' RAMP, 10' DWELL	1346	DS2433	-40C TO +125C (Condition G)	1000 CYS	80	0	FW495512ACB
TEMP CYCLE, 5' RAMP, 10' DWELL	1346	DS2433	-40C TO +125C (Condition G)	1000 CYS	80	0	FW495512ACC
TEMP CYCLE, 5' RAMP, 10' DWELL	1346	DS2433	-40C TO +125C (Condition G)	1500 CYS	80	0	FW495512ACD
TEMP CYCLE, 5' RAMP, 10' DWELL	1346	DS2433	-40C TO +125C (Condition G)	1500 CYS	80	0	FW495512ACE
TEMP CYCLE, 5' RAMP, 10' DWELL	1346	DS2433	-40C TO +125C (Condition G)	1500 CYS	80	0	FW495512ACF
TEMP CYCLE, 5' RAMP, 10' DWELL	1346	DS2433	-40C TO +125C (Condition G)	1000 CYS	80	0	FW495512ABA
TEMP CYCLE, 5' RAMP, 10' DWELL	1346	DS2433	-40C TO +125C (Condition G)	1000 CYS	80	0	FW495512ABB
TEMP CYCLE, 5' RAMP, 10' DWELL	1346	DS2433	-40C TO +125C (Condition G)	1000 CYS	80	0	FW495512ABC
TEMP CYCLE, 5' RAMP, 10' DWELL	1346	DS2433	-40C TO +125C (Condition G)	1500 CYS	80	0	FW495512ABD
TEMP CYCLE, 5' RAMP, 10' DWELL	1346	DS2433	-40C TO +125C (Condition G)	1500 CYS	80	0	FW495512ABE
TEMP CYCLE, 5' RAMP, 10' DWELL	1346	DS2433	-40C TO +125C (Condition G)	1500 CYS	80	0	FW495512ABF
TEMP CYCLE, 5' RAMP, 10' DWELL	1403	DS2502	-40C TO +85C (Condition N)	1000 CYS	80	0	FW392681ACA
TEMP CYCLE, 5' RAMP, 10' DWELL	1403	DS2502	-40C TO +85C (Condition N)	1000 CYS	80	0	FW493802ADA

TEMP CYCLE, 5' RAMP, 10' DWELL	1403	DS2502	-40C TO +85C (Condition N)	1000	CYS	80	0	FW493802AEA
TEMP CYCLE, 5' RAMP, 10' DWELL	1403	DS2502	-40C TO +125C (Condition G)	1000	CYS	80	0	FW392681ACA
TEMP CYCLE, 5' RAMP, 10' DWELL	1403	DS2502	-40C TO +125C (Condition G)	1000	CYS	80	0	FW493802ADA
TEMP CYCLE, 5' RAMP, 10' DWELL	1403	DS2502	-40C TO +125C (Condition G)	1000	CYS	80	0	FW493802AEA
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1346	DS2433	85/85, 5.5 VOLTS	1000	HRS	80	0	FW495512ACA
BIASED MOISTURE	1346	DS2433	85/85, 5.5 VOLTS	1000	HRS	80	0	FW495512ACB
BIASED MOISTURE	1346	DS2433	85/85, 5.5 VOLTS	1000	HRS	80	0	FW495512ACC
BIASED MOISTURE	1346	DS2433	85/85, 5.5 VOLTS	1000	HRS	80	0	FW495512ABA
BIASED MOISTURE	1346	DS2433	85/85, 5.5 VOLTS	1000	HRS	80	0	FW495512ABB
BIASED MOISTURE	1346	DS2433	85/85, 5.5 VOLTS	1000	HRS	80	0	FW495512ABC
BIASED MOISTURE	1403	DS2502	85/85, 5.5 VOLTS	1000	HRS	80	0	FW392681ACA
BIASED MOISTURE	1403	DS2502	85/85, 5.5 VOLTS	1000	HRS	80	0	FW493802ADA
BIASED MOISTURE	1403	DS2502	85/85, 5.5 VOLTS	1000	HRS	80	0	FW493802AEA
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK	1337	DS1922L	60C/90% R.H., BATTERY BIAS	1000	HRS	77	0	MG389432AAB
STORAGE LIFE	1337	DS1922L	60°C	1004	HRS	77	0	MG389432AAB
MOISTURE SOAK	1338	DS1922L	60C/90% R.H., BATTERY BIAS	1000	HRS	77	0	MG389433AAA
STORAGE LIFE	1338	DS1922L	60°C	1004	HRS	73	0	MG389433AAA
MOISTURE SOAK	1339	DS1922L	60C/90% R.H., BATTERY BIAS	1000	HRS	77	0	MG389434AAA
STORAGE LIFE	1339	DS1922L	60°C	1004	HRS	77	0	MG389434AAA
HAST, NO BIAS	1346	DS2433	110C, 85% R.H.	264	HRS	80	0	FW495512ACA
HAST, NO BIAS	1346	DS2433	110C, 85% R.H.	264	HRS	80	0	FW495512ACB

HAST, NO BIAS	1346	DS2433	110C, 85% R.H.	264	HRS	80	0	FW495512ACC
HAST, NO BIAS	1346	DS2433	110C, 85% R.H.	264	HRS	80	0	FW495512ABA
HAST, NO BIAS	1346	DS2433	110C, 85% R.H.	264	HRS	80	0	FW495512ABB
HAST, NO BIAS	1346	DS2433	110C, 85% R.H.	264	HRS	80	0	FW495512ABC
HAST, NO BIAS	1403	DS2502	110C, 85% R.H.	264	HRS	80	0	FW392681ACA
HAST, NO BIAS	1403	DS2502	110C, 85% R.H.	264	HRS	80	0	FW493802ADA
HAST, NO BIAS	1403	DS2502	110C, 85% R.H.	264	HRS	80	0	FW493802AEA

Total: 0

FAILURE RATE: **MTTF (YRS): 56402** **QUANTITY: 480** **FAILS: 0** **FITS: 2.0**