



10/8/10

**RELIABILITY MONITOR REPORT
FOR**

San Antonio 0.35 μ m Silicon Gate CMOS (E35)

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:

DS1091L	DS1624	DS1876	DS1877	DS2430A
DS2431	DS2784	DS28EC20	DS3882	MAX36051
MAX66140				

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 78497 QUANTITY: 928 FAILS: 0 FITS: 1.5

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 10/1/2009 and 9/30/2010 .

Process Information:

Process Description: San Antonio 0.35µm Silicon Gate CMOS (E35)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0846	DS28EC20	125C, 5.25 VOLTS	408 HRS	80	0	WJ942984PB-REL
HIGH TEMP OP LIFE	0937	DS2784	125C, 5.5 V (PSA) & 15.0 V (PSB)	1000 HRS	77	0	WJ046898JCA-QUA
HIGH TEMP OP LIFE	0940	DS2784	125C, 5.5 V (PSA) & 15.0 V (PSB)	1000 HRS	80	0	WJ048759AC-IME
HIGH TEMP OP LIFE	0946	DS1876	125C, 4.2 VOLTS	192 HRS	77	0	WJ048840AA-NPI
HIGH TEMP OP LIFE	0948	DS1091L	150C, 3.6 VOLTS	408 HRS	45	0	WJ946344EA-QUAL
HIGH TEMP OP LIFE	0948	DS1091L	150C, 3.6 VOLTS	408 HRS	45	0	WJ946344EA-QUAL
HIGH TEMP OP LIFE	0951	DS2784	125C, 5.5 V (PSA) & 15.0 V (PSB)	1000 HRS	80	0	WJ049559ABA-IME
HIGH TEMP OP LIFE	0951	DS1877	125C, 4.2 VOLTS	192 HRS	77	0	WJ048842AAA-NPI
HIGH TEMP OP LIFE	0951	DS2430A	125C, 5.25 VOLTS	192 HRS	50	0	WH048838ADA
HIGH TEMP OP LIFE	1004	MAX66140	125C, 3.3 VOLTS	192 HRS	45	0	WJ050342AB-NPI
HIGH TEMP OP LIFE	1009	DS1624	125C, 5.5 VOLTS	192 HRS	77	0	WJ048844BB-NPI
HIGH TEMP OP LIFE	1012	MAX36051	125C, 3.6 VOLTS	192 HRS	45	0	WS048836AA-NPI
HIGH TEMP OP LIFE	1013	DS2431	150C, 5.25 VOLTS	408 HRS	50	0	WJ052466ABA

HIGH TEMP OP LIFE	1013	DS2431	150C, 5.25 VOLTS	408	HRS	50	0	WJ052268ABA
HIGH TEMP OP LIFE	1014	DS2431	150C, 5.25 VOLTS	408	HRS	50	0	WJ052527ABA
Total:							0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
STORAGE LIFE	0940	DS3882	150C	1000 HRS	80	0	WJ946345ACA	
STORAGE LIFE	0940	DS2784	150C	1000 HRS	80	0	WJ048759AC-IME	
STORAGE LIFE	0948	DS1091L	150C	2000 HRS	80	0	WJ946344EA-QUAL	
STORAGE LIFE	0951	DS2784	150C	1000 HRS	80	0	WJ049559ABA-IME	
STORAGE LIFE	1013	DS2431	150C	1000 HRS	77	0	WJ052466ABA	
STORAGE LIFE	1013	DS2431	150C	1000 HRS	77	0	WJ052268ABA	
STORAGE LIFE	1014	DS2431	150C	1000 HRS	77	0	WJ052527ABA	
Total:							0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL	0940	DS3882	-55C TO 125C	1000 CYS	80	0	WJ946345ACA	
TEMP CYCLE, 5' RAMP, 10' DWELL	0940	DS2784	-55C TO 125C	1000 CYS	80	0	WJ048759AC-IME	
TEMP CYCLE, 5' RAMP, 10' DWELL	0948	DS1091L	-55C TO 125C	1000 CYS	77	0	WJ946344EA-QUAL	
TEMP CYCLE, 5' RAMP, 10' DWELL	0951	DS2784	-55C TO 125C	1000 CYS	80	0	WJ049559ABA-IME	
TEMP CYCLE, 5' RAMP, 10' DWELL	1013	DS2431	-55C TO 125C	500 CYS	77	0	WJ052466ABA	
TEMP CYCLE, 5' RAMP, 10' DWELL	1013	DS2431	-55C TO 125C	1000 CYS	77	0	WJ052268ABA	
TEMP CYCLE, 5' RAMP, 10' DWELL	1014	DS2431	-55C TO 125C	1000 CYS	77	0	WJ052527ABA	
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
BIASED MOISTURE	0940	DS3882	85/85, 5.5 VOLTS	1000 HRS	80	0	WJ946345ACA
HAST	0940	DS2784	130C, 85%R.H.,5.5V	96 HRS	80	0	WJ048759AC-IME
HAST	0948	DS1091L	130C, 85%R.H.,3.5V	96 HRS	77	0	WJ946344EA-QUAL
HAST	0951	DS2784	130C, 85%R.H.,5.5V	96 HRS	80	0	WJ049559ABA-IME
HAST	1013	DS2431	130C, 85%R.H.,5.5V	96 HRS	77	0	WJ052466ABA

HAST	1013	DS2431	130C, 85%R.H.,5.5V	96	HRS	77	0	WJ052268ABA
HAST	1014	DS2431	130C, 85%R.H.,5.5V	96	HRS	77	0	WJ052527ABA
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
HAST, NO BIAS	0846	DS28EC20	130C, 85% R.H.	96	HRS	80	0	WJ942984PB-REL
HAST, NO BIAS	0940	DS3882	130C, 85% R.H.	96	HRS	80	0	WJ946345ACA
HAST, NO BIAS	0948	DS1091L	130C, 85% R.H.	96	HRS	77	0	WJ946344EA-QUAL
HAST, NO BIAS	1013	DS2431	130C, 85% R.H.	96	HRS	77	0	WJ052466ABA
HAST, NO BIAS	1013	DS2431	130C, 85% R.H.	96	HRS	77	0	WJ052268ABA
HAST, NO BIAS	1014	DS2431	130C, 85% R.H.	96	HRS	77	0	WJ052527ABA
Total:							0	

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
WRITE CYCLE STRESS (KCYS)	0940	DS3882	85 C, 5.25 VOLTS	30	KCYS	77	0	WJ946345ACA
STORAGE LIFE	0940	DS3882	150C	1000	HRS	77	0	WJ946345ACA
STORAGE LIFE	0951	DS2430A	150C	96	HRS	77	0	WH048838ADA
WRITE CYCLE STRESS (KCYS)	0951	DS2430A	25 C, 5.25 VOLTS	200	KCYS	77	0	WH048838ADA
WRITE CYCLE STRESS (KCYS)	1009	DS1624	85 C, 5.5 VOLTS	25	KCYS	77	0	WJ048844BB-NPI
STORAGE LIFE	1009	DS1624	150C	96	HRS	77	0	WJ048844BB-NPI
Total:							0	

W/E ENDURANCE AND OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
WRITE CYCLE STRESS (KCYS)	0940	DS3882	85 C, 5.25 VOLTS	30	KCYS	77	0	WJ946345ACA
HIGH TEMP OP LIFE	0940	DS3882	125C, 5.25 VOLTS	1000	HRS	77	0	WJ946345ACA
Total:							0	

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