



4/20/2008

RELIABILITY MONITOR REPORT
FOR

TSMC 0.18 μ m Silicon Gate CMOS

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:

DS3100	DS3104	DS32504	DS32506	DS32512
DS33R41	DS33X162			

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 32079** **FITS: 3.6**

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 4/1/2007 and 3/31/2008 .

Process Information:

Process Description: TSMC 0.18µm Silicon Gate CMOS

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0642	DS32504	125C, 2.0V (PSA) & 3.5V (PSB)	1000 HRS	45	0	
HIGH TEMP OP LIFE	0649	DS33X162	125C, 2.0V (PSB) & 3.5V (PSA)	1000 HRS	45	0	
HIGH TEMP OP LIFE	0705	DS3100	125C, 3.5V (PSA) & 2.0V (PSB)	1000 HRS	48	0	
HIGH TEMP OP LIFE	0708	DS32512	125C, 2.0V (PSA) & 3.5V (PSB)	1000 HRS	45	0	
HIGH TEMP OP LIFE	0731	DS3104	125C, 3.5V (PSA) & 2.0V (PSB)	1000 HRS	45	0	
HIGH TEMP OP LIFE	0743	DS32506	125C, 2.0V (PSA) & 3.5V (PSB)	1000 HRS	45	0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0743	DS32506	150C	1000 HRS	77	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL	0708	DS33R41	-40C TO +125C	1000 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0726	DS3100	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0743	DS32506	-55C TO 125C	1000 CYS	77	0	
Total:						0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
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BIASED MOISTURE	0726	DS3100	85/85, 2.0 VOLTS	1000 HRS	44	0
BIASED MOISTURE	0743	DS32506	85/85, 2.0 VOLTS	1000 HRS	45	0
Total:					0	0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST, NO BIAS	0726	DS3100	130C, 85% R.H.	96 HRS	77	0	
HAST, NO BIAS	0743	DS32506	110C, 85% R.H.	264 HRS	74	0	
Total:					0	0	

FAILURE RATE: MTTF (YRS): 32079 FITS: 3.6