



5/9/2009

**RELIABILITY MONITOR REPORT
FOR**

Dallas 0.35 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:

DS1091L	DS1099	DS1875	DS2432	DS2776
DS2780	DS2784	DS3610	DS3655	DS4424
DS7505	MAX3816ACUE	MAX4760EWX+t	MAX5417LETA+	MAX5418META
MAX5418NETA	MAX5423ETA+	MAX5477HETE	MAX5478ETE+	MAX7456EUI+

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 113532** **FITS: 1.0**

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 1/1/2008 and 12/31/2008.

Process Information:

Process Description: Dallas 0.35µm Silicon Gate CMOS

DATA RETENTION

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	0747	DS3655	150C	1000 HRS	77	0	QS709624AB-NPI
STORAGE LIFE	0827	DS3610	150C	1000 HRS	77	0	QK813039AB-NPI
Total:						0	

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE		MAX5478ETE+	135C	1000 HRS	45	0	DRI1F4013I
HIGH TEMP OP LIFE		MAX4760EWX+T	135C	1000 HRS	45	0	DIB2DA044Q1
HIGH TEMP OP LIFE		MAX4760EWX+T	135C	1000 HRS	45	0	DIB2DA044Q2
HIGH TEMP OP LIFE		MAX4760EWX+T	135C	1000 HRS	45	0	DIB2DA044Q3
HIGH TEMP OP LIFE	0719	DS1091L	125C, 3.6 VOLTS	1000 HRS	45	0	QJ721459ADA
HIGH TEMP OP LIFE	0719	DS1091L	125C, 3.6 VOLTS	1000 HRS	32	0	QJ721459ADA
HIGH TEMP OP LIFE	0730	MAX7456EUI+	135C	192 HRS	55	0	DXI0EQ002AQ
HIGH TEMP OP LIFE	0745	DS1099	125C, 5.5 VOLTS	240 HRS	45	0	VD736413AC
HIGH TEMP OP LIFE	0746	DS7505	125C, 3.7 VOLTS	1000 HRS	77	0	QJ805646BC-NPI
HIGH TEMP OP LIFE	0747	DS3655	125C, 3.6V (PSA) & 3.0V (PSB)	1000 HRS	45	0	QS709624AB-NPI
HIGH TEMP OP LIFE	0804	DS2780	125C, 5.5 VOLTS	1000 HRS	77	0	QK752167ADA

HIGH TEMP OP LIFE	0804	DS4424	125C, 5.5 VOLTS	1000	HRS	45	0	QJ804645AC-NPI
HIGH TEMP OP LIFE	0809	MAX3816ACUE+	135C	192	HRS	48	0	DK0AFA001DQ
HIGH TEMP OP LIFE	0810	DS1875	125C, 5.5 VOLTS	192	HRS	77	0	QJ751639AAA-NPI
HIGH TEMP OP LIFE	0816	MAX5418META+	135C	192	HRS	48	0	DNS4DA004DQ
HIGH TEMP OP LIFE	0823	MAX5417LETA+	135C	192	HRS	48	0	DNS0EQ003CQ
HIGH TEMP OP LIFE	0827	DS3610	125C, 3.6 VOLTS	1000	HRS	45	0	QK813039AB-NPI
HIGH TEMP OP LIFE	0832	DS2776	125C, 8.4V (PSB) & 4.2V (PSA)	192	HRS	77	0	QJ823626BC-NPI
HIGH TEMP OP LIFE	0836	DS2432	125C, 5.25 VOLTS	1000	HRS	45	0	QH740152ADA
HIGH TEMP OP LIFE	0836	DS2432	125C, 5.25 VOLTS	1000	HRS	45	0	QH740152AB
HIGH TEMP OP LIFE	0836	DS2432	125C, 5.25 VOLTS	1000	HRS	45	0	QH740152AC
HIGH TEMP OP LIFE	0838	MAX5423ETA+	135C	192	HRS	48	0	DOE1EA005CQ
HIGH TEMP OP LIFE	0841	MAX5418NETA+	135C	192	HRS	50	0	DNS8DA009GQ
HIGH TEMP OP LIFE	N/A	MAX4760EWX+T	135C	500	HRS	45	0	DIB2DAO44Q2
Total:							0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	0836	DS2432	150C	1000 HRS	77	0	QH740152ADA
STORAGE LIFE	0836	DS2432	150C	1000 HRS	77	0	QH740152AB
STORAGE LIFE	0836	DS2432	150C	1000 HRS	76	0	QH740152AC
STORAGE LIFE	N/A	MAX4760EWX+T	150C	1000 HRS	77	0	DIB2DA044Q1
STORAGE LIFE	N/A	MAX4760EWX+T	150C	800 HRS	77	0	DIB2DA044Q2
STORAGE LIFE	N/A	MAX4760EWX+T	150C	800 HRS	77	0	DIB2DA044Q3
Total:							0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	0629	MAX5477HETE	-65C TO 150C	1500 CYS	76	0	DRI0CA006DA
TEMP CYCLE, 5' RAMP, 10' DWELL	0629	MAX5477HETE	-65C TO 150C	2500 CYS	76	0	DR10CA006DA
TEMP CYCLE, 5' RAMP, 10' DWELL	0629	MAX5477HETE	-65C TO 150C	1500 CYS	77	0	DRI0CA006DB
TEMP CYCLE, 5' RAMP, 10' DWELL	0629	MAX5477HETE	-65C TO 150C	2500 CYS	76	0	DR10CA006DB
TEMP CYCLE, 5' RAMP, 10' DWELL	0629	MAX5477HETE	-65C TO 150C	2000 CYS	77	0	DR10CA006DC
TEMP CYCLE, 5' RAMP, 10' DWELL	0629	MAX5477HETE	-65C TO 150C	2500 CYS	77	0	DRI0CA006DC

TEMP CYCLE, 5' RAMP, 10' DWELL	0836	DS2432	-55C TO 125C	1000	CYS	77	0	QH740152ADA
TEMP CYCLE, 5' RAMP, 10' DWELL	0836	DS2432	-55C TO 125C	1000	CYS	77	0	QH740152AB
TEMP CYCLE, 5' RAMP, 10' DWELL	0836	DS2432	-55C TO 125C	1000	CYS	77	0	QH740152AC
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX4760EWX+T	-40C TO +125C	300	CYS	77	0	DIB2DA029Q1
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX4760EWX+T	-40C TO +125C	1000	CYS	77	0	DIB2DA044Q1
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX4760EWX+t	-40C TO +125C	1000	CYS	77	0	DIB2DA044Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	N/A	MAX4760EWX+T	-65C TO 150C	500	CYS	77	0	DIB2DA044Q2
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
HAST	0836	DS2432	130C, 85%R.H.,5.5V	96	HRS	45	0	QH740152ADA
HAST	0836	DS2432	130C, 85%R.H.,5.5V	96	HRS	45	0	QH740152AB
HAST	0836	DS2432	130C, 85%R.H.,5.5V	96	HRS	45	0	QH740152AC
Total:							0	

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
WRITE CYCLE STRESS (KCYS)	0746	DS7505	25 C, 3.7 VOLTS	80	KCYS	77	0	QJ805646BC-NPI
STORAGE LIFE	0746	DS7505	150C	1000	HRS	77	0	QJ805646BC-NPI
WRITE CYCLE STRESS (KCYS)	0746	DS7505	85 C, 3.7 VOLTS	20	KCYS	77	0	QJ805646BC-NPI
STORAGE LIFE	0746	DS7505	150C	1000	HRS	77	0	QJ805646BC-NPI
WRITE CYCLE STRESS (KCYS)	0810	DS1875	85 C, 5.5 VOLTS	30	KCYS	77	0	QJ751639AAA-NPI
STORAGE LIFE	0810	DS1875	150C	1000	HRS	76	0	QJ751639AAA-NPI
WRITE CYCLE STRESS (KCYS)	0826	DS2784	50 C, 5.5 V (PSA) & 15.0 V (PSB)	50	KCYS	77	0	QJ841177BB-NPI
STORAGE LIFE	0826	DS2784	150C	1000	HRS	77	0	QJ841177BB-NPI
WRITE CYCLE STRESS (KCYS)	0832	DS2776	50 C, 8.4V (PSB) & 4.2V (PSA)	50	KCYS	77	0	QJ823626BC-NPI
STORAGE LIFE	0832	DS2776	150C	1000	HRS	77	0	QJ823626BC-NPI
Total:							0	

FAILURE RATE: **MTTF (YRS): 113532** **FITS: 1.0**