



1/25/2008

RELIABILITY MONITOR REPORT
FOR

DAL 0.8 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:

DS1254	DS1410	DS17885	DS1814	DS1844
DS38452	DS75	DS87C520	MAX1566ETL+C	MAX1607ESA+
MAX1607ESA+C	MAX1834EUT	MAX1951ESA+	MAX1997ETJ+	MAX4246AKA+
MAX4695ETC+	MAX6381XR26D	MAX6613MXK+	MAX8869EUE25	MAX9718AEUB

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 239439** **FITS: 0.5**

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 and

Process Information:

Process Description: DAL 0.8µm Silicon Gate CMOS

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0541	MAX1566ETL+C2X	135C, 5.25V	1000 HRS	45	0	
HIGH TEMP OP LIFE	0546	MAX4695ETC+	135C, 5.25V	1000 HRS	45	0	
			135C, 5.25V	1000 HRS	44	0	
			135C, 5.25V	1000 HRS	45	0	
HIGH TEMP OP LIFE	0601	MAX1607ESA+C71055	135C, 5.25V	1000 HRS	80	0	
HIGH TEMP OP LIFE	0607	MAX4695ETC+	135C, 5.25V	1000 HRS	44	0	
HIGH TEMP OP LIFE	0608	MAX4695ETC+	135C, 5.25V	1000 HRS	45	0	
		MAX1834EUT	135C, 5.25V	1000 HRS	80	0	
HIGH TEMP OP LIFE	0618	MAX1997ETJ+	135C, 5.25V	1000 HRS	45	0	
HIGH TEMP OP LIFE	0619	MAX4695ETC+	135C, 5.25V	1000 HRS	45	0	
HIGH TEMP OP LIFE	0627	MAX1607ESA+C71055	135C, 5.25V	1000 HRS	80	0	
HIGH TEMP OP LIFE	0634	MAX6381XR26D3+T	135C, 5.25V	1000 HRS	80	0	
HIGH TEMP OP LIFE	0636	MAX4246AKA+	135C, 5.25V	1000 HRS	98	0	
HIGH TEMP OP LIFE	0643	MAX1951ESA+	135C, 5.25V	1000 HRS	45	0	
HIGH TEMP OP LIFE	0646	DS75	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0651	MAX8869EUE25+	135C, 5.25V	1000 HRS	78	0	
HIGH TEMP OP LIFE	0652	DS17885	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0720	DS1844	125C, 5.5 VOLTS	1000 HRS	54	0	
HIGH TEMP OP LIFE	0720	DS1844	125C, 5.5 VOLTS	1000 HRS	54	0	

HIGH TEMP OP LIFE	0720	DS1844	125C, 5.5 VOLTS	1000 HRS	54	0
HIGH TEMP OP LIFE	0727	MAX9718AEUB+	135C, 5.25V	1000 HRS	45	0
HIGH TEMP OP LIFE	0732	MAX6613MXK+T	135C, 5.25V	1000 HRS	50	0
			135C, 5.25V	1000 HRS	50	0
				Total:	0	0

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0717	DS1410	85 C	1000 HRS	49	0	
STORAGE LIFE	0717	DS1254	70 C	1000 HRS	77	0	
STORAGE LIFE	0717	DS38452	85 C	1000 HRS	77	0	
STORAGE LIFE	0717	DS1410	85 C	1000 HRS	77	0	
STORAGE LIFE	0720	DS1844	150C	1000 HRS	77	0	
STORAGE LIFE	0720	DS1844	150C	1000 HRS	77	0	
STORAGE LIFE	0720	DS1844	150C	1000 HRS	77	0	
STORAGE LIFE	0722	DS1814	150C	1000 HRS	77	0	
STORAGE LIFE	0722	DS1814	150C	1000 HRS	77	0	
				Total:	0	0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0717	DS1410	-40 TO 85C	1000 CYS	50	0	
TEMP CYCLE	0717	DS1254	-40 TO 85C	1000 CYS	77	0	
TEMP CYCLE	0717	DS1254	0C TO 70C	1000 CYS	77	0	
TEMP CYCLE	0717	DS38452	-40 TO 85C	1000 CYS	77	0	
TEMP CYCLE	0717	DS1410	-40 TO 85C	1000 CYS	77	0	
TEMP CYCLE	0720	DS1844	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0720	DS1844	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0720	DS1844	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0722	DS1814	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0722	DS1814	-55C TO 125C	1000 CYS	77	0	
				Total:	0	0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST	0642	DS87C520	130C, 85%R.H.,5.5V	96 HRS	117	0	
HAST	0642	DS87C520	130C, 85%R.H.,5.5V	96 HRS	117	0	
BIASED MOISTURE	0720	DS1844	85/85, 5.5 VOLTS	1000 HRS	77	0	
BIASED MOISTURE	0720	DS1844	85/85, 5.5 VOLTS	1000 HRS	77	0	
BIASED MOISTURE	0720	DS1844	85/85, 5.5 VOLTS	1000 HRS	77	0	

Total: 0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
MOISTURE SOAK	0717	DS1410	60C/90% R.H.	1000 HRS	49	0	
MOISTURE SOAK	0717	DS1254	60C/90% R.H.	1000 HRS	77	0	
MOISTURE SOAK	0717	DS38452	60C/90% R.H.	1000 HRS	77	0	
MOISTURE SOAK	0717	DS1410	60C/90% R.H.	1000 HRS	77	0	
				Total:		0	

FAILURE RATE: MTTF (YRS): 239439 FITS: 0.5