

**RELIABILITY MONITOR REPORT
FOR**

DAL 0.8 μ m Process

Dallas Semiconductor

**4401 South Beltwood Parkway
Dallas, TX 75244-3292**

**This Report was prepared by
Dallas Semiconductor 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	DS2406	DS2430
DS38452	DS75	DS87C520		

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 54287** **FITS: 2.1**

The parameters used to calculate this failure rate are as follows:

Cf: 60% **Ea: 0.7** **Tu: 25 °C**

The reliability data follows. At the start of this data is the process information. The next section is the detailed reliability data for each stress. The reliability data section includes the latest data available. This report covers data between 10/1/2006 and 9/30/2007 .

Device Information:

Process: DAL 0.8µm Process
Interconnect: Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness: 175 Å

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0637	DS2430	125C, 6.0 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0640	DS17885	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0642	DS87C520	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0646	DS75	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0648	DS2406	125C, 6.0 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0652	DS17885	125C, 5.5 VOLTS	1000 HRS	77	0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0642	DS87C520	150C	1000 HRS	77	0	
STORAGE LIFE	0648	DS2406	150C	1000 HRS	77	0	
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	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
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TEMP CYCLE	0637	DS2430	-55C TO 125C	1000	CYS	77	0
TEMP CYCLE	0640	DS17885	-55C TO 125C	1000	CYS	77	0
TEMP CYCLE	0642	DS87C520	-55C TO 125C	1000	CYS	77	0
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
Total:							0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
BIASED MOISTURE	0637	DS2430	85/85, 5.5 VOLTS	1000	HRS	77	0
HAST	0640	DS17885	130C, 85%R.H.,5.5V	96	HRS	77	0
HAST	0642	DS87C520	130C, 85%R.H.,5.5V	96	HRS	77	0
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
Total:							0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
AUTOCLAVE	0637	DS2430	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0
AUTOCLAVE	0640	DS17885	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0
AUTOCLAVE	0642	DS87C520	121C, 2 ATM STEAM, UNBIASED	168	HRS	75	0
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

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0637	DS2430	150C	1000	HRS	77	0
WRITE CYCLE STRESS (KCYS)			25 C, 5.0 VOLTS	100	KCYS	77	0
Total:							0

FAILURE RATE:

MTTF (YRS): 54287

FITS: 2.1