

**RELIABILITY MONITOR REPORT
FOR**

0.35 μm 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 products covered by this process monitor are:

DS1388	DS2431	DS2703	DS2780	DS2782
DS2804	DS4802	DS600	DS620	

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 47119 FITS: 2.4

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

Cf: 60% Ea: 0.7 B: 0 Tu: 25 °C Vu: 5.5 Volts

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 04/01/2004 and 03/31/2005.

Device Information:

Process: 0.35 µm Process
 Interconnect: Aluminum / 1% Silicon / 0.5% Copper
 Gate Oxide Thickness: 131 Å

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0411	DS2431	125C, 5.25 VOLTS	1000 HRS		0	
HIGH TEMP REVERSE BIAS	0427	DS2431	125C, 5.25 VOLTS	1000 HRS		0	
HIGH TEMP OP LIFE	0432	DS2804	125C, 5.25 VOLTS	1000 HRS		0	
HIGH TEMP OP LIFE	0435	DS620	125C, 3.5 VOLTS	1000 HRS		0	
HIGH TEMP OP LIFE	0437	DS600	125C, 5.5 VOLTS	1000 HRS		0	
HIGH TEMP OP LIFE	0442	DS2780	125C, 5.5 VOLTS	1000 HRS		0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0437	DS600	150C	1000 HRS		0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0411	DS2431	-55C TO 125C	1000 CYS		0	
TEMP CYCLE, SLOW	0427	DS2431	-40C TO +125C	1000 CYS		0	

TEMP CYCLE	0442	DS2780	-55C TO 125C	1000	CYS	0
				Total:		0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST	0411	DS2431	130C, 85%R.H.,5.5V	96	HRS	0	
BIASED MOISTURE	0427	DS2431	85/85, 5.5 VOLTS	1000	HRS	0	
BIASED MOISTURE	0442	DS2780	85/85, 5.5 VOLTS	1000	HRS	0	
				Total:		0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
AUTOCLAVE	0411	DS2431	121C, 2 ATM STEAM, UNBIASED	168	HRS	0	
AUTOCLAVE	0442	DS2780	121C, 2 ATM STEAM, UNBIASED	168	HRS	0	
				Total:		0	

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
WRITE CYCLE STRESS	0411	DS2431	85 C, 5.25 VOLTS	50	KCYS	0	
STORAGE LIFE			150C	1000	HRS	0	
WRITE CYCLE STRESS	0411	DS2431	25 C, 5.25 VOLTS	200	KCYS	0	
STORAGE LIFE			150C	1000	HRS	0	
WRITE CYCLE STRESS	0432	DS2804	85 C, 5.25 VOLTS	50	KCYS	1	30028420
STORAGE LIFE			150C	1000	HRS	0	
WRITE CYCLE STRESS	0442	DS2780	50 C, 5.5 VOLTS	50	KCYS	0	
STORAGE LIFE			150C	1000	HRS	0	
				Total:		1	

FAILURE RATE:

MTTF (YRS): 47119

FITS: 2.4