

**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:

DS1088L	DS1099	DS2431	DS2460	DS2703
DS2780	DS2782	DS28E01	DS28E04	DS3984
DS3988	DS4026C	DS4303	DS4802	DS600
DS620	DSQ3301-K02			

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 15040** **FITS: 7.6**

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

Cf: 60% **Ea: 0.7** **B: 0** **Tu: 25 °C** **Vu: 3.3 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 7/1/2005 and 6/30/2006.

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	0513	DS4026C	125C, 3.6 VOLTS	1000 HRS	45	0	
LOW TEMP OP LIFE	0523	DS4303	25 C, 3.6 VOLTS	1000 HRS	72	0	
HIGH TEMP REVERSE BIAS	0527	DSQ3301-K02	125C, 5.5 VOLTS	1000 HRS	83	0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0513	DS4026C	150C	1000 HRS	77	0	
STORAGE LIFE	0523	DS4303	150C	1000 HRS	77	0	
STORAGE LIFE	0527	DSQ3301-K02	150C	1000 HRS	77	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0523	DS4303	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0527	DSQ3301-K02	-55C TO 125C	100 CYS	77		
TEMP CYCLE	0527	DSQ3301-K02	-55C TO 125C	1000 CYS	77	0	
Total:						0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST	0523	DS4303	130C, 85%R.H.,3.5V	100 HRS	76	0	
BIASED MOISTURE	0527	DSQ3301- K02	85/85, 5.5 VOLTS	1000 HRS	82	0	
Total:						0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
AUTOCLAVE	0523	DS4303	121C, 2 ATM STEAM, UNBIASED	168 HRS	71	0	
MOISTURE SOAK	0527	DSQ3301- K02	85 C/85% R.H.	1000 HRS	77	0	
Total:						0	

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