



04/27/2005

**RELIABILITY MONITOR REPORT
FOR**

0.35 μm Chartered 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:

DS21455	DS21458	DS2155	DS2156	DS2174
DS2194	DS21Q42	DS21Q44	DS26101	DS26102
DS26324	DS26334	DS26401	DS26502	DS26503
DS26528	DS26556	DS3112	DS31256	DS3131
DS3134	DS3141	DS31412	DS3142	DS3143
DS3144	DS3146	DS3148	DS3150	DS3151
DS3152	DS3153	DS3154	DS3160	DS3161
DS3162	DS3163	DS3164	DS3170	DS3171
DS3172	DS3173	DS3174	DS3181	DS3182
DS3183	DS3184	DS3254		

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 31608** **FITS: 3.6**

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 Chartered Process
Interconnect: Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness: 75 Å

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0403	DS3184	125C, 3.5 VOLTS	1000 HRS		0	
HIGH TEMP OP LIFE	0417	DS21458	125C, 3.5 VOLTS	1000 HRS		0	
HIGH TEMP OP LIFE	0418	DS26502	125C, 3.5 VOLTS	1000 HRS		0	
HIGH TEMP OP LIFE	0425	DS26528	125C, 3.5 VOLTS	1000 HRS		0	
HIGH TEMP OP LIFE	0440	DS26556	125C, 3.5 VOLTS	1000 HRS		0	
HIGH TEMP OP LIFE	0442	DS3184	125C, 3.5 VOLTS	1000 HRS		0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0417	DS21458	150C	1000 HRS		0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
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TEMP CYCLE	0417	DS21458	-55C TO 125C	1000	CYS	0
TEMP CYCLE	0418	DS26502	-55C TO 125C	1000	CYS	0
Total:						0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
BIASED MOISTURE CYCLING	0417	DS21458	85/85, 3.5 VOLTS	1000	HRS	0	
Total:						0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
AUTOCLAVE	0418	DS26502	121C, 2 ATM STEAM, UNBIASED	168	HRS	0	
Total:						0	

FAILURE RATE: MTTF (YRS): 31608 FITS: 3.6