

**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
DS26504	DS26521	DS26524	DS26528	DS26556
DS3112	DS31256	DS3131	DS3134	DS3141
DS3142	DS3143	DS3144	DS3150	DS3151
DS3152	DS3153	DS3154	DS3160	DS3170
DS3184	DS3251	DS3252	DS3253	DS3254

The calculated failure rate for devices using this process is

FAILURE RATE: **MTTF (YRS): 21033** **FITS: 5.4**

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 12/31/05 and .

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	0440	DS26556	125C, 3.5 VOLTS	1000 HRS	45	0	
HIGH TEMP OP LIFE	0448	DS26334	125C, 3.5 VOLTS	1000 HRS	45	0	
HIGH TEMP OP LIFE	0501	DS3254	125C, 3.5 VOLTS	1000 HRS	45	0	
HIGH TEMP OP LIFE	0520	DS26504	125C, 3.5 VOLTS	1000 HRS	44	0	
VISUAL INSPECTION			WHISKERS < 50µM		3	0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0520	DS26504	150C	1000 HRS	76	0	
VISUAL INSPECTION			WHISKERS < 50µM		3	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0520	DS26504	-55C TO 125C	1000 CYS	76	0	
VISUAL INSPECTION			WHISKERS < 50µM		3	0	
Total:						0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST	0520	DS26504	130C, 85%R.H.,3.5V	96	HRS	45	0
VISUAL INSPECTION			WHISKERS < 50uM			3	0
					Total:	0	0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST, NO BIAS	0520	DS26504	130C, 85% R.H.	200	HRS	76	0
VISUAL INSPECTION			WHISKERS < 50uM			3	0
					Total:	0	0

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