3/1/2007

RELIABILITY MONITOR REPORT
FOR

0.8 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:

DS1023	DS1033	DS1035	DS1044	DS1065
DS1073	DS1075	DS1175	DS1216	DS1231
DS1232	DS1233	DS1302	DS1305	DS1306
DS1307	DS1308	DS1312	DS1314	DS1315
DS1321	DS1323	DS13D12	DS13D14	DS1481
DS1621	DS1624	DS1629	DS1670	DS1671
DS1673	DS1674	DS1677	DS1680	DS1685
DS1705	DS1706	DS1707	DS1708	DS1720
DS1721	DS17285	DS17485	DS1780	DS17885
DS1800	DS1801	DS1802	DS1803	DS1804
DS1806	DS1807	DS1810	DS1811	DS1812
DS1813	DS1814	DS1815	DS1816	DS1817
DS1818	DS1819	DS1821	DS1832	DS1834
DS1836	DS1844	DS1866	DS1868	DS2105
DS2106	DS2109	DS2110	DS2114	DS2118M
DS21372	DS2151	DS2152	DS2153	DS2154
DS2172	DS21Q41	DS21S07	DS21T05	DS21T06
DS21T07	DS21T11	DS2401	DS2406	DS2407
DS2423	DS2430	DS2434	DS2435	DS2436
DS2480	DS24S03	DS24S34	DS2502	DS2503
DS2505	DS2506	DS32KHZ	DS32KHZS	DS56
DS60	DS75	DS76KHZ	DS80CH10	DS83C520
DS87C520	DS87C530			

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 91065** **FITS: 1.3**

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. A 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:	0.8 µm 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	0528	DS1302	125C, 5.5 VOLTS	1000 HRS	80	0	
HIGH TEMP OP LIFE	0532	DS1624	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0535	DS1624	125C, 5.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0536	DS1232	125C, 5.5 VOLTS	1000 HRS	80	0	
HIGH TEMP OP LIFE	0546	DS1302	125C, 5.5 VOLTS	1000 HRS	80	0	

HIGH TEMP OP LIFE	0550	DS2172	125C, 5.5 VOLTS	1000	HRS		72	0
HIGH TEMP OP LIFE	0550	DS2172	125C, 5.5 VOLTS	1000	HRS		72	0
HIGH TEMP OP LIFE	0550	DS1803	125C, 5.25 VOLTS	1000	HRS		80	0
HIGH TEMP OP LIFE	0606	DS1821	125C, 5.5 VOLTS	1000	HRS		77	0
HIGH TEMP OP LIFE	0608	DS1302	125C, 5.5 VOLTS	1000	HRS		80	0
						Total:		**0**

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT		QUANTITY	FAILS	FA NO
STORAGE LIFE	0550	DS2172	150C	1000	HRS	77	0	
STORAGE LIFE	0550	DS2172	150C	1000	HRS	77	0	
STORAGE LIFE	0608	DS1302	150C	1000	HRS	80	0	
					Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT		QUANTITY	FAILS	FA NO
TEMP CYCLE	0528	DS1302	-55C TO 125C	1000	CYS	45	0	
TEMP CYCLE	0535	DS1624	-55C TO 125C	1000	CYS	77	0	
TEMP CYCLE	0536	DS1232	-55C TO 125C	1000	CYS	40	0	
TEMP CYCLE	0546	DS1302	-55C TO 125C	1000	CYS	45	0	
TEMP CYCLE	0550	DS2172	-55C TO 125C	1000	CYS	77	0	
TEMP CYCLE	0550	DS2172	-55C TO 125C	1000	CYS	77	0	
TEMP CYCLE	0550	DS1803	-55C TO 125C	1000	CYS	40	0	
TEMP CYCLE	0606	DS1821	-55C TO 125C	1000	CYS	77	0	
TEMP CYCLE	0608	DS1302	-55C TO 125C	1000	CYS	45	0	
					Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT		QUANTITY	FAILS	FA NO
BIASED MOISTURE	0528	DS1302	85/85, 5.5 VOLTS	1000	HRS	77	0	
HAST	0535	DS1624	130C, 85%R.H.,5.5V	96	HRS	77	0	
HAST	0536	DS1232	130C, 85%R.H.,5.5V	96	HRS	77	0	
BIASED MOISTURE	0546	DS1302	85/85, 5.5 VOLTS	1000	HRS	77	0	
BIASED MOISTURE	0550	DS2172	85/85, 5.5 VOLTS	1000	HRS	77	0	
BIASED MOISTURE	0550	DS2172	85/85, 5.5 VOLTS	1000	HRS	77	0	
BIASED MOISTURE	0550	DS1803	85/85, 5.5 VOLTS	1000	HRS	77	0	
BIASED MOISTURE	0606	DS1821	85/85, 5.5 VOLTS	1000	HRS	77	0	
BIASED MOISTURE	0608	DS1302	85/85, 5.5 VOLTS	1000	HRS	77	0	
					Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT		QUANTITY	FAILS	FA NO
AUTOCLAVE	0528	DS1302	121C, 2 ATM STEAM, UNBIASED	168	HRS	45	0	
AUTOCLAVE	0535	DS1624	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
AUTOCLAVE	0536	DS1232	121C, 2 ATM STEAM, UNBIASED	96	HRS	40	0	
AUTOCLAVE	0546	DS1302	121C, 2 ATM STEAM, UNBIASED	168	HRS	45	0	
HAST, NO BIAS	0550	DS2172	130C, 85% R.H.	200	HRS	77	0	
BIASED MOISTURE	0550	DS2172	130C, 85% R.H.	200	HRS	77	0	
AUTOCLAVE	0550	DS1803	121C, 2 ATM STEAM, UNBIASED	168	HRS	40	0	
AUTOCLAVE	0606	DS1821	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
AUTOCLAVE	0608	DS1302	121C, 2 ATM STEAM, UNBIASED	168	HRS	45	0	
					Total:		**0**	

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT		QUANTITY	FAILS	FA NO
WRITE CYCLE STRESS (KCYS)	0532	DS1624	85 C, 5.5 VOLTS	25	KCYS	77	0	
STORAGE LIFE			150C	1000	HRS	77	0	
WRITE CYCLE STRESS (KCYS)	0535	DS1624	85 C, 5.5 VOLTS	25	KCYS	77	0	
STORAGE LIFE			150C	1000	HRS	77	0	
WRITE CYCLE STRESS (KCYS)	0606	DS1821	85 C, 5.5 VOLTS	50	KCYS	77	0	
STORAGE LIFE			150C	1000	HRS	76	0	
					Total:		**0**	

FAILURE RATE: MTTF (YRS): 91065 FITS: 1.3