

Dallas Semiconductor Reliability Report:

DS2250T, SIPSTICK

NVSRAM, 32K X 8 w/clock

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage
 Failure Rate Determined by Sum of Parts

Cf: Tuse:
 Ea: Vuse:
 β:

QUALIFICATION VEHICLES INCLUDED IN THIS ANALYSIS:

<u>PRODUCT</u>	<u>REV</u>	<u>PIN COUNT</u>	<u>PACKAGE</u>	<u>SIZE</u>
256K SRAM	na	28	SOIC	330
CR1632	na	2	CELL	16
CRYSTAL	na	2	BARREL	
DS1214	A4	16	SOIC	300
DS5000	D6	80	MQFP	14x20

STRESS	CONDITION	READPOINT	QUANTITY	FAILS	DEVICE HRS
256K SRAM					
HIGH VOLTAGE LIFE	125C, 6.0 VOLTS	48 HOURS	300	0	1850442
HIGH VOLTAGE LIFE	125C, 6.0 VOLTS	336 HOURS	300	0	11102653
HIGH VOLTAGE LIFE	125C, 6.0 VOLTS	1000 HOURS	299	0	25512458
DATE CODE RANGE:	9734 to 9830		TOTALS:	0	DEVICE HRS: 3.85E+07
					FITs: 24
CR1632					
HIGH TEMPERATURE STOR	110C	1350 HOURS	100	1	21556700
DATE CODE RANGE:	9548 to 9548		TOTALS:	1	DEVICE HRS: 2.16E+07
					FITs: 94
CRYSTAL					
ESTIMATE		10 YEARS	1000	0	90000000

STRESS	CONDITION	READPOINT	QUANTITY	FAILS	DEVICE HRS
DATE CODE RANGE:	0 to 0		TOTALS:	0	DEVICE HRS: 9.00E+07 FITs: 10
DS1214					
OP-LIFE	125C, 5.5 VOLTS	336 HOURS	116	0	3037827
OP-LIFE	125C, 5.5 VOLTS	1000 HOURS	116	0	6003325
INFANT LIFE	125C, 7.0 VOLTS	48 HOURS	315	0	5281525
DATE CODE RANGE:	0 to 0		TOTALS:	0	DEVICE HRS: 1.43E+07 FITs: 64
DS5000					
HIGH VOLTAGE LIFE	125C, 6.0 VOLTS	48 HOURS	116	0	715504
HIGH VOLTAGE LIFE	125C, 6.0 VOLTS	336 HOURS	116	0	4293026
HIGH VOLTAGE LIFE	125C, 6.0 VOLTS	1000 HOURS	116	0	9897810
DATE CODE RANGE:	9941 to 9941		TOTALS:	0	DEVICE HRS: 1.49E+07 FITs: 61
				FAILURE RATE	MTBF (yrs): 451
					TOTAL FITs: 253

<u>FILE #</u>	<u>FAILURE MODE</u>	<u>FAILURE MECHANISM</u>
BATT	LOW BATTERY	ELECTROLYTE CONSUMPTION (Ea = 1.0ev)