



4/17/2012

**RELIABILITY MONITOR REPORT
FOR**

San Antonio 0.4 μ m Silicon Gate CMOS (E35)

MAXIM Integrated Products

120 San Gabriel Dr.
Sunnyvale, CA 94086

**This Report was prepared by
Maxim Reliability Engineering**

Summary:

The data in the tables that follow was generated as the result of an on-going Process Reliability Monitor. The specific products in this process monitor are:

DS24B33	DS28EC20	DSQ3301-K04+T
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The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 30618 QUANTITY: 385 FAILS: 0 FITS: 3.7

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

Cf: 60% Ea: 0.7 Tu: 25 °C

The reliability data follows and in this section is the detailed reliability data by stress. The reliability data section includes the latest data available. This report covers data between 4/1/2011 and 3/31/2012 .

Process Information:

Process Description: San Antonio 0.4µm Silicon Gate CMOS (E35)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1047	DS24B33	125C, 5.25 VOLTS	192 HRS	77	0	ZU156000CBA-NPI
HIGH TEMP REVERSE BIAS	1122	DSQ3301-K04+T	125C, 5.5 VOLTS	1000 HRS	77	0	ZJ166825ACA
HIGH TEMP REVERSE BIAS	1123	DSQ3301-K04+T	125C, 5.5 VOLTS	1000 HRS	77	0	ZJ166825ACB
HIGH TEMP REVERSE BIAS	1124	DSQ3301-K04+T	125C, 5.5 VOLTS	1000 HRS	77	0	ZJ166825ACC
HIGH TEMP OP LIFE	1135	DS28EC20	125C, 5.25 VOLTS	192 HRS	77	0	ZJ272094AB-NPI
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1122	DSQ3301-K04+T	150C	1000 HRS	77	0	ZJ166825ACA
STORAGE LIFE	1123	DSQ3301-K04+T	150C	1000 HRS	77	0	ZJ166825ACB
STORAGE LIFE	1124	DSQ3301-K04+T	150C	1000 HRS	77	0	ZJ166825ACC
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 5' RAMP, 10' DWELL	1122	DSQ3301-K04+T	-55C TO 125C	1000 CYS	77	0	ZJ166825ACA
TEMP CYCLE, 5' RAMP, 10' DWELL	1123	DSQ3301-K04+T	-55C TO 125C	1000 CYS	77	0	ZJ166825ACB
TEMP CYCLE, 5' RAMP, 10' DWELL	1124	DSQ3301-K04+T	-55C TO 125C	1000 CYS	77	0	ZJ166825ACC

Total: 0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
BIASED MOISTURE	1122	DSQ3301-K04+T	85/85, 5.5 VOLTS	1000 HRS	77	0	ZJ166825ACA
BIASED MOISTURE	1123	DSQ3301-K04+T	85/85, 5.5 VOLTS	1000 HRS	77	0	ZJ166825ACB
BIASED MOISTURE	1124	DSQ3301-K04+T	85/85, 5.5 VOLTS	1000 HRS	77	0	ZJ166825ACC
Total:						0	

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
WRITE CYCLE STRESS (KCYS)	1134	DS28EC20	85 C, 5.25 VOLTS	50 KCYS	77	0	ZM268985AB-NPI
STORAGE LIFE	1134	DS28EC20	150C	1000 HRS	77	0	ZM268985AB-NPI
WRITE CYCLE STRESS (KCYS)	1134	DS28EC20	25 C, 5.25 VOLTS	200 KCYS	77	0	ZM268985AB-NPI
STORAGE LIFE	1134	DS28EC20	150C	1000 HRS	74	0	ZM268985AB-NPI
WRITE CYCLE STRESS (KCYS)	1135	DS28EC20	85 C, 5.25 VOLTS	50 KCYS	77	1	ZJ272094AB-NPI
STORAGE LIFE	1135	DS28EC20	150C	1000 HRS	76	0	ZJ272094AB-NPI
WRITE CYCLE STRESS (KCYS)	1135	DS28EC20	25 C, 5.25 VOLTS	200 KCYS	77	0	ZJ272094AB-NPI
STORAGE LIFE	1135	DS28EC20	150C	1000 HRS	77	0	ZJ272094AB-NPI
WRITE CYCLE STRESS (KCYS)	1135	DS28EC20	85 C, 5.25 VOLTS	50 KCYS	80	0	ZJ272094AB-NPI
STORAGE LIFE	1135	DS28EC20	150C	1000 HRS	80	0	ZJ272094AB-NPI
WRITE CYCLE STRESS (KCYS)	1137	DS28EC20	85 C, 5.25 VOLTS	50 KCYS	77	0	ZJ268984EB
STORAGE LIFE	1137	DS28EC20	150C	1000 HRS	77	0	ZJ268984EB
WRITE CYCLE STRESS (KCYS)	1137	DS28EC20	25 C, 5.25 VOLTS	200 KCYS	77	0	ZJ268984EB
STORAGE LIFE	1137	DS28EC20	150C	1000 HRS	76	0	ZJ268984EB
Total:						1	

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