



5/9/2009

**RELIABILITY MONITOR REPORT  
FOR**

**Dallas B8 Silicon Gate CMOS**

**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:

DS2413	DS3510	DS3514	DS8007	DS8113
--------	--------	--------	--------	--------

The calculated failure rate for devices using this process is:

**FAILURE RATE:**                      **MTTF (YRS): 59574**                      **FITS: 1.9**

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 1/1/2008 and 12/31/2008.

**Process Information:**

Process Description:                      Dallas B8 Silicon Gate CMOS

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0740	DS8007	125C, 6.0 VOLTS	1000 HRS	77	0	QN824614BBA
HIGH TEMP OP LIFE	0740	DS8007	125C, 6.0 VOLTS	1000 HRS	77	0	XN716349CAC
HIGH TEMP OP LIFE	0744	DS8113	125C, 6.0 VOLTS	1000 HRS	45	0	QK732036AB
HIGH TEMP OP LIFE	0747	DS3510	125C, 5.5 V (PSA) & 15.0 V (PSB)	1000 HRS	77	0	QJ712635BA
HIGH TEMP OP LIFE	0747	DS3510	125C, 5.5 V (PSA) & 15.0 V (PSB)	1000 HRS	77	0	QJ712635BA
HIGH TEMP OP LIFE	0750	DS8007	125C, 6.0 VOLTS	1000 HRS	77	0	QN824614AB-NPI
HIGH TEMP OP LIFE	0833	DS3514	125C, 5.5 V (PSA) & 15.0 V (PSB)	1000 HRS	77	0	QJ803644BA-NPI
<b>Total:</b>						<b>0</b>	

**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	0740	DS8007	150C	1000 HRS	77	0	QN824614BBA
STORAGE LIFE	0740	DS8007	150C	1000 HRS	77	0	XN716349CAC
STORAGE LIFE	0750	DS8007	150C	1000 HRS	77	0	QN824614AB-NPI
<b>Total:</b>						<b>0</b>	

**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
-------------	-----------	--------------	-----------	-----------	----------	-------	---------

BOND STRENGTH	0740	DS8007	MIL-STD-883-2011 : COND D	40	WIRES	5	0	QN824614BBA
TEMP CYCLE, 5' RAMP, 10' DWELL	0740	DS8007	-65C TO 150C	1000	CYS	77	0	QN824614BBA
BOND STRENGTH	0740	DS8007	MIL-STD-883-2011 : COND D	40	WIRES	5	0	XN716349CAC
TEMP CYCLE, 5' RAMP, 10' DWELL	0740	DS8007	-65C TO 150C	1000	CYS	77	0	XN716349CAC
BOND STRENGTH	0750	DS8007	MIL-STD-883-2011 : COND D	40	WIRES	5	0	QN824614AB-NPI
TEMP CYCLE, 5' RAMP, 10' DWELL	0750	DS8007	-65C TO 150C	1000	CYS	77	0	QN824614AB-NPI
TEMP CYCLE, 5' RAMP, 10' DWELL	0821	DS2413	-55C TO 125C	2000	CYS	77	0	QJ816087AEA
TEMP CYCLE, 5' RAMP, 10' DWELL	0821	DS2413	-55C TO 125C	2000	CYS	77	0	QJ821113AEA
TEMP CYCLE, 5' RAMP, 10' DWELL	0821	DS2413	-55C TO 125C	1000	CYS	77	0	QJ823334ACA
<b>Total:</b>							<b>0</b>	

### TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE	TEST CODE	VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HAST	0740	DS8007		130C, 85%R.H.,5.5V	96 HRS	77	0	QN824614BBA
HAST	0740	DS8007		130C, 85%R.H.,5.5V	96 HRS	77	0	XN716349CAC
HAST	0750	DS8007		130C, 85%R.H.,5.5V	96 HRS	77	0	QN824614AB-NPI
HAST	0821	DS2413		130C, 85%R.H.,3.5V	96 HRS	45	0	QJ816087AEA
HAST	0821	DS2413		130C, 85%R.H.,3.5V	96 HRS	45	0	QJ821113AEA
HAST	0821	DS2413		130C, 85%R.H.,3.5V	96 HRS	45	0	QJ823334ACA
<b>Total:</b>							<b>0</b>	

### UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE	TEST CODE	VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
AUTOCLAVE	0740	DS8007		121C, 2 ATM STEAM, UNBIASED	168 HRS	76	0	QN824614BBA
AUTOCLAVE	0740	DS8007		121C, 2 ATM STEAM, UNBIASED	168 HRS	76	0	XN716349CAC
AUTOCLAVE	0750	DS8007		121C, 2 ATM STEAM, UNBIASED	168 HRS	76	0	QN824614AB-NPI
<b>Total:</b>							<b>0</b>	

### W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE	TEST CODE	VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
-------------	------	-----------	---------	-----------	-----------	----------	-------	---------

WRITE CYCLE STRESS (KCYS)	0750	DS3510	70 C, 5.5V (PSA) & 15.0V (PSB)	50	KCYS	77	0	QJ712635CA-NPI	
STORAGE LIFE	0750	DS3510	150C	1000	HRS	77	0	QJ712635CA-NPI	
WRITE CYCLE STRESS (KCYS)	0833	DS3514	70 C, 5.5V (PSA) & 15.0V (PSB)	50	KCYS	77	0	QJ803644BA-NPI	
STORAGE LIFE	0833	DS3514	150C	1000	HRS	77	0	QJ803644BA-NPI	
<b>Total:</b>							<b>0</b>		

**FAILURE RATE:**

**MTTF (YRS): 59574**

**FITS: 1.9**