



5/9/2009

RELIABILITY MONITOR REPORT  
FOR

**Dallas 2.0 $\mu$ m Silicon Gate CMOS**

**MAXIM Integrated Products**

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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:

DS1284

The calculated failure rate for devices using this process is:

**FAILURE RATE: MTTF (YRS): 27143 FITS: 4.2**

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 4/1/2008 and 3/31/2009 .

**Process Information:**

Process Description: Dallas 2.0µm Silicon Gate CMOS

**OPERATING LIFE**

| DESCRIPTION       | DATE CODE | TEST VEHICLE | CONDITION       | READPOINT | QUANTITY | FAILS    | LOT NO.    |
|-------------------|-----------|--------------|-----------------|-----------|----------|----------|------------|
| HIGH TEMP OP LIFE | 0810      | DS1284       | 125C, 7.0 VOLTS | 1000 HRS  | 77       | 0        | ZQ732115AC |
| HIGH TEMP OP LIFE | 0810      | DS1284       | 125C, 7.0 VOLTS | 1000 HRS  | 77       | 0        | ZQ732115AD |
| HIGH TEMP OP LIFE | 0810      | DS1284       | 125C, 7.0 VOLTS | 1000 HRS  | 77       | 0        | ZQ732115AE |
| <b>Total:</b>     |           |              |                 |           |          | <b>0</b> |            |

**STORAGE LIFE**

| DESCRIPTION   | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS    | LOT NO.    |
|---------------|-----------|--------------|-----------|-----------|----------|----------|------------|
| STORAGE LIFE  | 0810      | DS1284       | 150C      | 1000 HRS  | 77       | 0        | ZQ732115AC |
| STORAGE LIFE  | 0810      | DS1284       | 150C      | 1000 HRS  | 77       | 0        | ZQ732115AD |
| STORAGE LIFE  | 0810      | DS1284       | 150C      | 1000 HRS  | 77       | 0        | ZQ732115AE |
| <b>Total:</b> |           |              |           |           |          | <b>0</b> |            |

**TEMPERATURE CYCLE**

| DESCRIPTION                    | DATE CODE | TEST VEHICLE | CONDITION    | READPOINT | QUANTITY | FAILS    | LOT NO.    |
|--------------------------------|-----------|--------------|--------------|-----------|----------|----------|------------|
| TEMP CYCLE, 5' RAMP, 10' DWELL | 0810      | DS1284       | -55C TO 125C | 1000 CYS  | 77       | 0        | ZQ732115AC |
| TEMP CYCLE, 5' RAMP, 10' DWELL | 0810      | DS1284       | -55C TO 125C | 1000 CYS  | 77       | 0        | ZQ732115AD |
| TEMP CYCLE, 5' RAMP, 10' DWELL | 0810      | DS1284       | -55C TO 125C | 1000 CYS  | 77       | 0        | ZQ732115AE |
| <b>Total:</b>                  |           |              |              |           |          | <b>0</b> |            |

**TEMPERATURE HUMIDITY BIAS**

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

|                 |      |        |                     |          |    |   |            |
|-----------------|------|--------|---------------------|----------|----|---|------------|
| BIASED MOISTURE | 0810 | DS1284 | 85/85, 5.5<br>VOLTS | 1000 HRS | 77 | 0 | ZQ732115AC |
| BIASED MOISTURE | 0810 | DS1284 | 85/85, 5.5<br>VOLTS | 1000 HRS | 77 | 0 | ZQ732115AD |
| BIASED MOISTURE | 0810 | DS1284 | 85/85, 5.5<br>VOLTS | 1000 HRS | 77 | 0 | ZQ732115AE |

**Total:**                   **0**

**FAILURE RATE:**                   **MTTF (YRS): 27143**                   **FITS: 4.2**