



5/9/2009

RELIABILITY MONITOR REPORT
FOR

MFN 0.8 μ m 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:

| | | | | |
|--------------|--------------|--------------|--------------|-------------|
| MAX1558ETB+T | MAX16807AUI+ | MAX16807AUI= | MAX1790EUA+ | MAX1790EUA+ |
| MAX3301EETJ+ | MAX3301EETT+ | MAX8734AEEE+ | MAX8734AEEI+ | MAX8734EEI+ |

The calculated failure rate for devices using this process is:

FAILURE RATE: **MTTF (YRS): 68119** **FITS: 1.7**

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 and

Process Information:

Process Description: MFN 0.8µm Silicon Gate CMOS

OPERATING LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | LOT NO. |
|-------------------|-----------|----------------|-----------|-----------|----------|----------|----------------------|
| HIGH TEMP OP LIFE | | MAX8734EEI+ | 135C | 1000 HRS | 80 | 0 | J0BFJ3001C |
| HIGH TEMP OP LIFE | 0815 | MAX8734AEEI+ | 135C | 192 HRS | 50 | 0 | J0BFJ3001CQ |
| HIGH TEMP OP LIFE | 0822 | MAX8734AEEE+ | 135C | 192 HRS | 80 | 0 | J0BFJ002EA |
| HIGH TEMP OP LIFE | 0822 | MAX8734AEEI+ | 135C | 1000 HRS | 174 | 0 | J0BFJQ002EA |
| HIGH TEMP OP LIFE | 0824 | MAX1790EUA+X01 | 135C | 192 HRS | 50 | 0 | J8VAI3001AQ |
| HIGH TEMP OP LIFE | 0825 | MAX1790EUA+ | 135C | 1000 HRS | 78 | 0 | J8VAIQ003CA |
| HIGH TEMP OP LIFE | 0828 | MAX1558ETB+T | 135C | 1000 HRS | 80 | 0 | JHM0JZ001FC |
| HIGH TEMP OP LIFE | 0830 | MAX3301EETJ+ | 135C | 192 HRS | 48 | 0 | JQW0FZ001GQ |
| HIGH TEMP OP LIFE | 0830 | MAX3301EETT+ | 135C | 144 HRS | 40 | 0 | JQW0FZ001GA/R080107B |
| HIGH TEMP OP LIFE | 0831 | MAX16807AUI+ | 135C | 700 HRS | 77 | 0 | NBTUAAG |
| HIGH TEMP OP LIFE | 0846 | MAX1558ETB+T | 135C | 1000 HRS | 80 | 0 | JHM0J3004BA |
| Total: | | | | | | 0 | |

STORAGE LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | LOT NO. |
|--------------|-----------|--------------|-----------|-----------|----------|-------|-------------|
| STORAGE LIFE | | MAX8734EEI+ | 150C | 1000 HRS | 80 | 0 | J0BFJ3001C |
| STORAGE LIFE | 083 | MAX3301EETJ+ | 150C | 1000 HRS | 80 | 0 | JQW0FZ001EA |
| STORAGE LIFE | 083 | MAX3301EETJ+ | 150C | 1000 HRS | 45 | 0 | JQW0FZ001GA |
| STORAGE LIFE | 0822 | MAX8734EEI+ | 150C | 1000 HRS | 80 | 0 | J0BFJQ002EA |
| STORAGE LIFE | 0822 | MAX8734AEEI+ | 150C | 500 HRS | 80 | 0 | J0BFJQ002EA |
| STORAGE LIFE | 0825 | MAX1790EUA+ | 150C | 500 HRS | 80 | 0 | J8VAIQ00CA |

| | | | | | | | |
|---------------|------|--------------|------|----------|----|----------|-------------|
| STORAGE LIFE | 0825 | MAX1790EUA+ | 150C | 1000 HRS | 80 | 0 | J8VAIQ003CA |
| STORAGE LIFE | 0828 | MAX1558ETB+T | 150C | 1000 HRS | 80 | 0 | JHM0JZ001FC |
| STORAGE LIFE | 0831 | MAX16807AUI+ | 150C | 1000 HRS | 48 | 0 | NBTUAAG# |
| STORAGE LIFE | 0846 | MAX1558ETB+T | 150C | 1000 HRS | 80 | 0 | JHM0J3004BA |
| Total: | | | | | | 0 | |

TEMPERATURE CYCLE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | LOT NO. |
|--------------------------------|-----------|--------------|--------------|-----------|----------|----------|--------------|
| TEMP CYCLE, 5' RAMP, 10' DWELL | | MAX8734EEI+ | -65C TO 150C | 500 CYS | 80 | 0 | J0BFJ3001C |
| TEMP CYCLE, 5' RAMP, 10' DWELL | | MAX8734EEI+ | -65C TO 150C | 1000 CYS | 80 | 0 | J0BFJ3001C |
| TEMP CYCLE, 5' RAMP, 10' DWELL | 0825 | MAX1790EUA+ | -65C TO 150C | 200 CYS | 80 | 0 | J8VAIQ00CA |
| TEMP CYCLE, 5' RAMP, 10' DWELL | 0825 | MAX1790EUA+ | -65C TO 150C | 500 CYS | 80 | 0 | J8VAIQ003CA |
| TEMP CYCLE, 5' RAMP, 10' DWELL | 0828 | MAX1558ETB+T | -65C TO 150C | 1000 CYS | 80 | 0 | JHM0JZ001FC |
| TEMP CYCLE, 5' RAMP, 10' DWELL | 0830 | MAX3301EETJ+ | -65C TO 150C | 500 CYS | 80 | 0 | JQW0FZ001GA |
| TEMP CYCLE, 5' RAMP, 10' DWELL | 0830 | MAX3301EETJ+ | -65C TO 150C | 1000 CYS | 80 | 0 | JQW0FZ0011GA |
| TEMP CYCLE, 5' RAMP, 10' DWELL | 0831 | MAX16807AUI= | -65C TO 150C | 500 CYS | 80 | 0 | NBTUAAG |
| TEMP CYCLE, 5' RAMP, 10' DWELL | 0846 | MAX1558ETB+T | -65C TO 150C | 1000 CYS | 80 | 0 | JHM0J3004BA |
| Total: | | | | | | 0 | |

FAILURE RATE:

MTTF (YRS): 68119

FITS: 1.7