

7/10/2017



**RELIABILITY MONITOR REPORT
FOR**

San Antonio E35

MAXIM INTEGRATED

**160 RIO ROBLES
SAN JOSE, CA 95134**

**This Report was prepared by
MAXIM INTEGRATED 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:

| | | | |
|--------------|--------------|--------------|--------------|
| 87-1L91U+33V | 87-3231M+ZNX | 87-3731M+ZNX | MAX5487ETE+T |
|--------------|--------------|--------------|--------------|

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 69568 QUANTITY: 399 FAILS: 0 FITS: 1.6

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 4/1/2017 and 6/30/2017 .

Process Information:

Process Description: San Antonio E35

OPERATING LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | LOT NO. |
|-------------------|-----------|--------------|-----------|-----------|----------|----------|-------------|
| HIGH TEMP OP LIFE | 1602 | MAX5487ETE+T | 135°C | 1000 HRS | 80 | 0 | TSE0E2075B |
| HIGH TEMP OP LIFE | 1621 | 87-3231M+ZNX | 135°C | 500 HRS | 80 | 0 | ZX625744AB |
| HIGH TEMP OP LIFE | 1622 | 87-3231M+ZNX | 135°C | 1000 HRS | 80 | 0 | ZX625744ABA |
| HIGH TEMP OP LIFE | 1622 | 87-3231M+ZNX | 135°C | 1000 HRS | 80 | 0 | ZX625744BB |
| HIGH TEMP OP LIFE | 1637 | 87-1L91U+33V | 135°C | 1000 HRS | 79 | 0 | ZJ633583C |
| Total: | | | | | | 0 | |

STORAGE LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | LOT NO. |
|---------------|-----------|--------------|-----------|-----------|----------|----------|-------------|
| STORAGE LIFE | 1602 | MAX5487ETE+T | 150°C | 1000 HRS | 80 | 0 | TSE0E2075B |
| STORAGE LIFE | 1621 | 87-3231M+ZNX | 150°C | 1000 HRS | 80 | 0 | ZX625744AB |
| STORAGE LIFE | 1622 | 87-3731M+ZNX | 150°C | 1000 HRS | 80 | 0 | ZX625744ABA |
| STORAGE LIFE | 1622 | 87-3231M+ZNX | 150°C | 1000 HRS | 77 | 0 | ZX625744BB |
| STORAGE LIFE | 1637 | 87-1L91U+33V | 150°C | 1000 HRS | 86 | 0 | ZJ633583C |
| Total: | | | | | | 0 | |

TEMPERATURE CYCLE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | LOT NO. |
|--------------------------------|-----------|--------------|-----------------------------|-----------|----------|-------|------------|
| TEMP CYCLE, 5' RAMP, 10' DWELL | 1602 | MAX5487ETE+T | -65C TO +150C (Condition C) | 1000 CYS | 80 | 0 | TSE0E2075B |
| TEMP CYCLE, 5' RAMP, 10' DWELL | 1621 | 87-3231M+ZNX | -65C TO +150C (Condition C) | 1000 CYS | 100 | 0 | ZX625744AB |

| | | | | | | | | |
|-----------------------------------|------|--------------|-----------------------------------|------|-----|-----|----------|-------------|
| TEMP CYCLE, 5' RAMP, 10' DWELL | 1622 | 87-3231M+ZNX | -65C TO +150C (Condition C) | 1000 | CYS | 100 | 0 | ZX625744ABA |
| TEMP CYCLE, 5' RAMP, 10' DWELL | 1622 | 87-3231M+ZNX | -65C TO +150C (Condition C) | 1000 | CYS | 95 | 0 | ZX625744BB |
| TEMP CYCLE, 5' RAMP, 10' DWELL | 1637 | 87-1L91U+33V | -65C TO +150C (Condition C) | 1000 | CYS | 95 | 0 | ZJ633583C |
| Total: | | | | | | | 0 | |

TEMPERATURE HUMIDITY BIAS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | LOT NO. |
|-----------------|--------------|-----------------|-----------|-----------|----------|-------|---------------|
| BIASED MOISTURE | 1602 | MAX5487ETE+T | 130C, 85% | 96 | HRS | 80 | 0 TSE0E2075B |
| BIASED MOISTURE | 1621 | 87-3231M+ZNX | 130C, 85% | 96 | HRS | 80 | 0 ZX625744AB |
| BIASED MOISTURE | 1622 | 87-3231M+ZNX | 130C, 85% | 96 | HRS | 80 | 0 ZX625744ABA |
| BIASED MOISTURE | 1622 | 87-3231M+ZNX | 130C, 85% | 96 | HRS | 80 | 0 ZX625744BB |
| Total: | | | | | | | 0 |

UNBIASED MOISTURE RESISTANCE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | LOT NO. |
|---------------|--------------|-----------------|-----------|-----------|----------|-------|---------------|
| MOISTURE SOAK | 1621 | 87-3231M+ZNX | 130C, 85% | 96 | HRS | 80 | 0 ZX625744AB |
| MOISTURE SOAK | 1622 | 87-3231M+ZNX | 130C, 85% | 96 | HRS | 80 | 0 ZX625744ABA |
| MOISTURE SOAK | 1622 | 87-3231M+ZNX | 130C, 85% | 96 | HRS | 80 | 0 ZX625744BB |
| MOISTURE SOAK | 1637 | 87-1L91U+33V | 130C, 85% | 96 | HRS | 80 | 0 ZJ633583C |
| Total: | | | | | | | 0 |

FAILURE RATE: MTF (YRS): 69568 QUANTITY: 399 FAILS: 0 FITS: 1.6