

RELIABILITY MONITOR REPORT
FOR

MQFP Package

Dallas Semiconductor

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Dallas, TX 75244-3292

This Report was prepared by
Dallas Semiconductor Reliability Engineering

Summary:

The data in the tables that follow was generated as the result of an on-going Package Reliability Monitor. The specific assemblies included in this package monitor are:

| ASSY SITE | PINS | PACKAGE | | |
|----------------|------|---------|-----------------|--------------------|
| ATK (Amkor, K) | 80 | MQFP | ATP (Amkor, PI) | 100 MQFP (Pb-Free) |

The calculated failure rate for this assembly 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. At the start of this data is a description of the assembly vehicle used to generate this reliability data. The next section is the detailed reliability data for each stress. The reliability data section includes the latest data available. This report covers data between and

Assembly Information:

Package Type: MQFP
Flammability: UL 94-V0
Date Code Range: 0705 to 0705

OPERATING LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|----------|-------|
| HIGH TEMP OP LIFE | 0705 | DS5001 | 125C, 5.5 VOLTS | 1000 HRS | 77 | 0 | |
| Total: | | | | | | 0 | |

Assembly Information:

Package Type: MQFP (Pb-Free)
Flammability: UL 94-V0
Date Code Range: 0642 to 0651

OPERATING LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|----------|-------|
| HIGH TEMP OP LIFE | 0642 | DS5250 | 125C, 5.5 VOLTS | 1000 HRS | 77 | 0 | |
| HIGH VOLTAGE LIFE | 0651 | DS5240 | 125C, 5.5 VOLTS | 1000 HRS | 77 | 0 | |
| Total: | | | | | | 0 | |

STORAGE LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|---------------|-----------|--------------|-----------|-----------|----------|----------|-------|
| STORAGE LIFE | 0651 | DS5240 | 150C | 1000 HRS | 77 | 0 | |
| Total: | | | | | | 0 | |

TEMPERATURE CYCLE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|---------------|-----------|--------------|--------------|-----------|----------|----------|-------|
| TEMP CYCLE | 0642 | DS5250 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| TEMP CYCLE | 0651 | DS5240 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| Total: | | | | | | 0 | |

TEMPERATURE HUMIDITY BIAS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-----------------|--------------|-----------------|------------------|---------------|----------|----------|-------|
| BIASED MOISTURE | 0642 | DS5250 | 85/85, 5.5 VOLTS | 1000 HRS | 45 | 0 | |
| BIASED MOISTURE | 0651 | DS5240 | 85/85, 5.5 VOLTS | 1000 HRS | 77 | 0 | |
| | | | | Total: | | 0 | |

UNBIASED MOISTURE RESISTANCE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------|--------------|-----------------|-----------------------------|---------------|----------|----------|-------|
| AUTOCLAVE | 0642 | DS5250 | 121C, 2 ATM STEAM, UNBIASED | 168 HRS | 77 | 0 | |
| AUTOCLAVE | 0651 | DS5240 | 121C, 2 ATM STEAM, UNBIASED | 168 HRS | 77 | 0 | |
| | | | | Total: | | 0 | |

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