

RELIABILITY MONITOR REPORT
FOR

SOIC Package

Dallas Semiconductor

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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 assemblies covered by this package monitor are:

| ASSY SITE | PINS | PACKAGE | | |
|-----------------|------|---------------------------------|-----------------|-------------------|
| ATK (Amkor, K) | 14 | SOIC | ATK (Amkor, K) | 16 SOIC |
| ATK (Amkor, K) | 20 | SOIC | ATK (Amkor, K) | 24 SOIC |
| ATK (Amkor, K) | 28 | SOIC | ATK (Amkor, K) | 8 SOIC |
| ATP (Amkor, PI) | 14 | SOIC | ATP (Amkor, PI) | 16 SOIC |
| ATP (Amkor, PI) | 20 | SOIC | ATP (Amkor, PI) | 24 SOIC |
| ATP (Amkor, PI) | 28 | SOIC | ATP (Amkor, PI) | 8 SOIC |
| ATP (Amkor, PI) | 16 | SOIC (Pb-Free) | ATP (Amkor, PI) | 20 SOIC (Pb-Free) |
| ATP (Amkor, PI) | 24 | SOIC (Pb-Free) | ATP (Amkor, PI) | 28 SOIC (Pb-Free) |
| ATP (Amkor, PI) | 8 | SOIC (Pb-Free) | ATP (Amkor, PI) | 16 SOIC w/CRYSTAL |
| Carsem | 14 | SOIC | Carsem | 16 SOIC |
| Carsem | 20 | SOIC | Carsem | 24 SOIC |
| Carsem | 28 | SOIC | Carsem | 8 SOIC |
| Carsem | 14 | SOIC (Pb-Free) | Carsem | 16 SOIC (Pb-Free) |
| Carsem | 20 | SOIC (Pb-Free) | Carsem | 24 SOIC (Pb-Free) |
| Carsem | 28 | SOIC (Pb-Free) | Carsem | 8 SOIC (Pb-Free) |
| Hana | 8 | SOIC | Hana | 8 SOIC (Pb-Free) |
| Hana | 16 | SOIC w/Welded Crystal (Pb-Free) | NSEB | 14 SOIC |
| NSEB | 16 | SOIC | NSEB | 8 SOIC |
| NSEB | 14 | SOIC (Pb-Free) | NSEB | 16 SOIC (Pb-Free) |
| NSEB | 8 | SOIC (Pb-Free) | OSEP | 14 SOIC |
| OSEP | 16 | SOIC | OSEP | 20 SOIC |
| OSEP | 24 | SOIC | OSEP | 28 SOIC |
| OSEP | 8 | SOIC | OSEP | 14 SOIC (Pb-Free) |
| OSEP | 16 | SOIC (Pb-Free) | OSEP | 20 SOIC (Pb-Free) |
| OSEP | 24 | SOIC (Pb-Free) | OSEP | 28 SOIC (Pb-Free) |
| OSEP | 8 | SOIC (Pb-Free) | | |

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 277475 FITS: 0.4

The parameters used to calculate this failure rate are as follows:

Cf: 60% Ea: 0.7 B: 0 Tu: 25 °C Vu: 5.5 Volts

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 10/1/04 and 9/30/05 .

Assembly Information:

Package Type: SOIC 150
 Flammability: UL 94-V0
 Moisture Sensitivity Level 1
 (JEDEC J-STD20A)
 Date Code Range: 0437 to 0521

OPERATING LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|-------|-------|
| HIGH TEMP OP LIFE | 0437 | DS1232 | 125C, 5.5 VOLTS | 1000 HRS | 80 | 0 | |
| HIGH TEMP OP LIFE | 0437 | DS2711 | 125C, 5.5 VOLTS | 1000 HRS | 45 | 0 | |

| | | | | | | |
|-------------------|------|----------|----------------------------------|----------|----|----------|
| HIGH TEMP OP LIFE | 0441 | DS2502 | 125C, 6.0 VOLTS | 1000 HRS | 77 | 0 |
| HIGH TEMP OP LIFE | 0442 | DS2482-1 | 125C, 5.5 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0449 | DS1232 | 125C, 5.5 VOLTS | 1000 HRS | 78 | 0 |
| HIGH TEMP OP LIFE | 0451 | DS2431 | 125C, 5.25 VOLTS | 1000 HRS | 77 | 0 |
| HIGH TEMP OP LIFE | 0504 | DS2413 | 125C, 5.25 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0505 | DS1629 | 125C, 5.5 VOLTS | 1000 HRS | 77 | 0 |
| HIGH TEMP OP LIFE | 0507 | DS1086H | 125C, 5.25 VOLTS | 408 HRS | 77 | 0 |
| HIGH TEMP OP LIFE | 0507 | DS2715 | 125C, 5.5 V (PSA) & 17.0 V (PSB) | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0512 | DS2431 | 125C, 5.25 VOLTS | 1000 HRS | 77 | 0 |
| HIGH TEMP OP LIFE | 0521 | DS1099 | 125C, 5.5 VOLTS | 1000 HRS | 77 | 0 |
| Total: | | | | | | 0 |

PACKAGE TESTS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-----------------------|-----------|--------------|---------------------|-----------|----------|----------|-------|
| SOLDERABILITY (Sn/Pb) | 0505 | DS1672 | JESD22-B102, COND C | | 15 | 0 | |
| Total: | | | | | | 0 | |

PRECONDITIONING LEVEL 1

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|---------------|-----------|----------|----------|-------|
| ULTRASOUND | 0449 | DS1232 | J-STD-020 | | 241 | 0 | |
| STORAGE LIFE | 0449 | DS1232 | 125C | 24 HRS | 241 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 241 | | |
| CONVECTION REFLOW | | | 235C +5/-0C | 3 PASS | 239 | 0 | |
| PRECONDITION U/S | 0449 | DS1232 | J-STD-020 | | 4 | 0 | |
| STORAGE LIFE | 0521 | DS1099 | 125C | 24 HRS | 315 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 315 | | |
| CONVECTION REFLOW | | | 235C +5/-0C | 3 PASS | 315 | 0 | |
| Total: | | | | | | 0 | |

STORAGE LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|---------------|-----------|--------------|-----------|-----------|----------|----------|-------|
| STORAGE LIFE | 0507 | DS2715 | 150C | 1000 HRS | 77 | 0 | |
| Total: | | | | | | 0 | |

TEMPERATURE CYCLE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|---------------|-----------|--------------|--------------|-----------|----------|----------|-------|
| TEMP CYCLE | 0437 | DS1232 | -55C TO 125C | 1000 CYS | 40 | 0 | |
| TEMP CYCLE | 0449 | DS1232 | -55C TO 125C | 1000 CYS | 40 | 0 | |
| TEMP CYCLE | 0451 | DS2431 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| TEMP CYCLE | 0512 | DS2431 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| TEMP CYCLE | 0521 | DS1099 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| Total: | | | | | | 0 | |

TEMPERATURE HUMIDITY BIAS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|---------------|-----------|--------------|--------------------|-----------|----------|----------|-------|
| HAST | 0437 | DS1232 | 130C, 85%R.H.,5.5V | 96 HRS | 77 | 0 | |
| HAST | 0449 | DS1232 | 130C, 85%R.H.,5.5V | 96 HRS | 77 | 0 | |
| HAST | 0451 | DS2431 | 130C, 85%R.H.,5.5V | 96 HRS | 77 | 0 | |
| HAST | 0512 | DS2431 | 130C, 85%R.H.,5.5V | 96 HRS | 77 | 0 | |
| HAST | 0521 | DS1099 | 130C, 85%R.H.,5.5V | 96 HRS | 77 | 0 | |
| Total: | | | | | | 0 | |

UNBIASED MOISTURE RESISTANCE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|---------------|-----------|--------------|-----------------------------|-----------|----------|----------|-------|
| AUTOCLAVE | 0437 | DS1232 | 121C, 2 ATM STEAM, UNBIASED | 96 HRS | 40 | 0 | |
| AUTOCLAVE | 0449 | DS1232 | 121C, 2 ATM STEAM, UNBIASED | 96 HRS | 40 | 0 | |
| AUTOCLAVE | 0451 | DS2431 | 121C, 2 ATM STEAM, UNBIASED | 168 HRS | 77 | 0 | |
| AUTOCLAVE | 0512 | DS2431 | 121C, 2 ATM STEAM, UNBIASED | 168 HRS | 77 | 0 | |
| AUTOCLAVE | 0521 | DS1099 | 121C, 2 ATM STEAM, UNBIASED | 168 HRS | 77 | 0 | |
| Total: | | | | | | 0 | |

Assembly Information:

Package Type: SOIC 300
Flammability: UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A) Level 1
Date Code Range: 0513 to 0513

OPERATING LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|----------|-------|
| HIGH TEMP OP LIFE | 0513 | DS4026C | 125C, 3.6 VOLTS | 1000 HRS | 45 | 0 | |
| Total: | | | | | | 0 | |

STORAGE LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|---------------|-----------|--------------|-----------|-----------|----------|----------|-------|
| STORAGE LIFE | 0513 | DS4026C | 150C | 1000 HRS | 77 | 0 | |
| Total: | | | | | | 0 | |

Assembly Information:

Package Type: SOIC (Pb-Free) 150
Flammability: UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A) Level 1
Date Code Range: 0502 to 0530

MOISTURE SENSITIVITY LEVEL 1

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-----------------|-----------|--------------|-----------------|-----------|----------|-------|-------|
| EXTERNAL VISUAL | 0502 | DS1803 | J-STD-020, 6.1a | | 8 | 0 | |

| | | | | | | | |
|-------------------|------|--------|-----------------|-----|------|---|----------|
| ULTRASOUND | 0502 | DS1803 | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| EXTERNAL VISUAL | 0502 | DS1803 | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| EXTERNAL VISUAL | 0502 | DS1803 | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| EXTERNAL VISUAL | 0506 | DS1672 | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| EXTERNAL VISUAL | 0507 | DS1672 | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| EXTERNAL VISUAL | 0508 | DS1672 | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| Total: | | | | | | | 0 |

OPERATING LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------------------------|-----------|--------------|----------------------------------|-----------|----------|-------|-------|
| HIGH TEMP OP LIFE VISUAL INSPECTION | 0502 | DS1803 | 125C, 5.25 VOLTS WHISKERS < 50uM | 1000 HRS | 45 | 0 | |
| HIGH TEMP OP LIFE VISUAL INSPECTION | 0502 | DS1803 | 125C, 5.25 VOLTS WHISKERS < 50uM | 1000 HRS | 45 | 0 | |
| HIGH TEMP OP LIFE VISUAL INSPECTION | 0502 | DS1803 | 125C, 5.25 VOLTS WHISKERS < 50uM | 1000 HRS | 45 | 0 | |

| | | | | | | |
|-------------------|------|--------|---------------------------------|----------|----------|----------|
| HIGH TEMP OP LIFE | 0506 | DS1672 | 125C, 3.3 VOLTS | 1000 HRS | 45 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 |
| HIGH TEMP OP LIFE | 0507 | DS1672 | 125C, 3.3 VOLTS | 1000 HRS | 45 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 |
| HIGH TEMP OP LIFE | 0508 | DS1672 | 125C, 3.3 VOLTS | 1000 HRS | 45 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 |
| HIGH TEMP OP LIFE | 0530 | DS1482 | 125C, 4.9 V (PSA) & 3.6 V (PSB) | 1000 HRS | 45 | 0 |
| Total: | | | | | 0 | 0 |

PACKAGE TESTS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------------|-----------|--------------|------------------------------------|-----------|----------|-------|-------|
| SOLDERABILITY (Sn/Pb) | 0502 | DS1803 | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0502 | DS1803 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| SOLDERABILITY (Sn/Pb) | 0502 | DS1803 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0502 | DS1803 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| SOLDERABILITY (Sn/Pb) | 0502 | DS1803 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0502 | DS1803 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| SOLDERABILITY (Sn/Pb) | 0506 | DS1672 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0506 | DS1672 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| SOLDERABILITY (Sn/Pb) | 0507 | DS1672 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0507 | DS1672 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| SOLDERABILITY (Sn/Pb) | 0508 | DS1672 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0508 | DS1672 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |

| | | | | | | | |
|----------------|------|--------|---------------------|---------------|--|---|----------|
| LEAD INTEGRITY | 0508 | DS1672 | JESD22-B105, COND B | | | 6 | 0 |
| | | | | Total: | | | 0 |

PRECONDITIONING LEVEL 1

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|---------------|---------------|----------|-------|----------|
| STORAGE LIFE | 0502 | DS1803 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| STORAGE LIFE | 0502 | DS1803 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| STORAGE LIFE | 0502 | DS1803 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| STORAGE LIFE | 0506 | DS1672 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| STORAGE LIFE | 0507 | DS1672 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| STORAGE LIFE | 0508 | DS1672 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| | | | | Total: | | | 0 |

STORAGE LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|---------------|----------|-------|----------|
| STORAGE LIFE | 0502 | DS1803 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| STORAGE LIFE | 0502 | DS1803 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| STORAGE LIFE | 0502 | DS1803 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| STORAGE LIFE | 0506 | DS1672 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| STORAGE LIFE | 0507 | DS1672 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| STORAGE LIFE | 0508 | DS1672 | 150C | 1000 HRS | 75 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| | | | | Total: | | | 0 |

TEMPERATURE CYCLE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|-------|-------|
| TEMP CYCLE | 0502 | DS1803 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| TEMP CYCLE | 0502 | DS1803 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| TEMP CYCLE | 0502 | DS1803 | -55C TO 125C | 1000 CYS | 77 | 0 | |

| | | | | | | | |
|-------------------|------|--------|-----------------|------|-----|----------|----------|
| VISUAL INSPECTION | 0502 | DS1803 | WHISKERS < 50uM | | | 3 | 0 |
| TEMP CYCLE | 0506 | DS1672 | -55C TO 125C | 1000 | CYS | 77 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| TEMP CYCLE | 0507 | DS1672 | -55C TO 125C | 1000 | CYS | 77 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| TEMP CYCLE | 0508 | DS1672 | -55C TO 125C | 1000 | CYS | 76 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| Total: | | | | | | 0 | 0 |

TEMPERATURE HUMIDITY BIAS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|--------------------|-----------|----------|----------|----------|
| BIASED MOISTURE | 0502 | DS1803 | 85/85, 5.5 VOLTS | 1000 | HRS | 77 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| BIASED MOISTURE | 0502 | DS1803 | 85/85, 5.5 VOLTS | 1000 | HRS | 77 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| BIASED MOISTURE | 0502 | DS1803 | 85/85, 5.5 VOLTS | 1000 | HRS | 77 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| HAST | 0506 | DS1672 | 130C, 85%R.H.,3.5V | 96 | HRS | 77 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| HAST | 0507 | DS1672 | 130C, 85%R.H.,3.5V | 96 | HRS | 77 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| HAST | 0508 | DS1672 | 130C, 85%R.H.,3.5V | 96 | HRS | 77 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| Total: | | | | | | 0 | 0 |

UNBIASED MOISTURE RESISTANCE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------------------|-----------|----------|----------|----------|
| AUTOCLAVE | 0502 | DS1803 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| AUTOCLAVE | 0502 | DS1803 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| AUTOCLAVE | 0502 | DS1803 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| AUTOCLAVE | 0506 | DS1672 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| AUTOCLAVE | 0507 | DS1672 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| AUTOCLAVE | 0508 | DS1672 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 75 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| Total: | | | | | | 0 | 0 |

Assembly Information:

Package Type: SOIC (Pb-Free) 208
 Flammability: UL 94-V0
 Moisture Sensitivity (JEDEC J-STD20A) Level 1
 Date Code Range: 0441 to 0532

MOISTURE SENSITIVITY LEVEL 1

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|----------|-------|
| EXTERNAL VISUAL | 0441 | DS2433 | J-STD-020, 6.1a | | 8 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 8 | 0 | |
| STORAGE LIFE | | | 125C | 48 HRS | 8 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 8 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 8 | 0 | |
| PRECONDITION U/S | | | J-STD-020 | | 8 | 0 | |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | 8 | 0 | |
| EXTERNAL VISUAL | 0442 | DS2433 | J-STD-020, 6.1a | | 8 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 8 | 0 | |
| STORAGE LIFE | | | 125C | 48 HRS | 8 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 8 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 8 | 0 | |
| PRECONDITION U/S | | | J-STD-020 | | 8 | 0 | |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | 8 | 0 | |
| EXTERNAL VISUAL | 0442 | DS2433 | J-STD-020, 6.1a | | 8 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 8 | 0 | |
| STORAGE LIFE | | | 125C | 48 HRS | 8 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 8 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 8 | 0 | |
| PRECONDITION U/S | | | J-STD-020 | | 8 | 0 | |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | 8 | 0 | |
| EXTERNAL VISUAL | 0443 | DS2433 | J-STD-020, 6.1a | | 8 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 8 | 0 | |
| STORAGE LIFE | | | 125C | 48 HRS | 8 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 8 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 8 | 0 | |
| PRECONDITION U/S | | | J-STD-020 | | 8 | 0 | |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | 8 | 0 | |
| EXTERNAL VISUAL | 0443 | DS2433 | J-STD-020, 6.1a | | 8 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 8 | 0 | |
| STORAGE LIFE | | | 125C | 48 HRS | 8 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 8 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 8 | 0 | |
| PRECONDITION U/S | | | J-STD-020 | | 8 | 0 | |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | 8 | 0 | |
| EXTERNAL VISUAL | 0444 | DS2433 | J-STD-020, 6.1a | | 8 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 8 | 0 | |
| STORAGE LIFE | | | 125C | 48 HRS | 8 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 8 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 8 | 0 | |
| PRECONDITION U/S | | | J-STD-020 | | 8 | 0 | |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | 8 | 0 | |
| Total: | | | | | | 0 | |

OPERATING LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|-------|-------|
| HIGH TEMP OP LIFE | 0441 | DS2433 | 125C, 6.0 VOLTS | 1000 HRS | 45 | 0 | |
| HIGH TEMP OP LIFE | 0442 | DS2433 | 125C, 6.0 VOLTS | 1000 HRS | 45 | 0 | |

| | | | | | | |
|-------------------|------|--------|-----------------|----------|----|----------|
| HIGH TEMP OP LIFE | 0442 | DS2433 | 125C, 6.0 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0443 | DS2433 | 125C, 6.0 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0443 | DS2433 | 125C, 6.0 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0444 | DS2433 | 125C, 6.0 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0532 | DS1624 | 125C, 5.5 VOLTS | 1000 HRS | 77 | 0 |
| Total: | | | | | | 0 |

PACKAGE TESTS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------------|-----------|--------------|------------------------------------|-----------|----------|-------|-------|
| SOLDERABILITY (Sn/Pb) | 0441 | DS2433 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0441 | DS2433 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| SOLDERABILITY (Sn/Pb) | 0442 | DS2433 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0442 | DS2433 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| SOLDERABILITY (Sn/Pb) | 0442 | DS2433 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0442 | DS2433 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| SOLDERABILITY (Sn/Pb) | 0443 | DS2433 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0443 | DS2433 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| SOLDERABILITY (Sn/Pb) | 0443 | DS2433 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0443 | DS2433 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| SOLDERABILITY (Sn/Pb) | 0444 | DS2433 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0444 | DS2433 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |

| | | | | | | | |
|----------------|------|--------|---------------------|--|--|---------------|----------|
| LEAD INTEGRITY | 0444 | DS2433 | JESD22-B105, COND B | | | 6 | 0 |
| | | | | | | Total: | 0 |

PRECONDITIONING LEVEL 1

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|---------------|-----------|----------|---------------|----------|
| STORAGE LIFE | 0441 | DS2433 | 125C | 48 HRS | 355 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 355 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 355 | 0 | |
| STORAGE LIFE | 0442 | DS2433 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| STORAGE LIFE | 0442 | DS2433 | 125C | 48 HRS | 408 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 408 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 408 | 0 | |
| STORAGE LIFE | 0443 | DS2433 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| STORAGE LIFE | 0443 | DS2433 | 125C | 48 HRS | 296 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 296 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 296 | 0 | |
| STORAGE LIFE | 0444 | DS2433 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| STORAGE LIFE | 0511 | DS2433 | 125C | 48 HRS | 350 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 350 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 350 | 0 | |
| STORAGE LIFE | 0511 | DS2433 | 125C | 48 HRS | 350 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 350 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 350 | 0 | |
| | | | | | | Total: | 0 |

STORAGE LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|--------------|-----------|--------------|-----------|-----------|----------|---------------|----------|
| STORAGE LIFE | 0441 | DS2433 | 150C | 1000 HRS | 79 | 0 | |
| STORAGE LIFE | 0442 | DS2433 | 150C | 1000 HRS | 77 | 0 | |
| STORAGE LIFE | 0442 | DS2433 | 150C | 1000 HRS | 91 | 0 | |
| STORAGE LIFE | 0443 | DS2433 | 150C | 1000 HRS | 77 | 0 | |
| STORAGE LIFE | 0443 | DS2433 | 150C | 1000 HRS | 61 | 0 | |
| STORAGE LIFE | 0444 | DS2433 | 150C | 1000 HRS | 77 | 0 | |
| | | | | | | Total: | 0 |

TEMPERATURE CYCLE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------|-----------|--------------|--------------|-----------|----------|-------|-------|
| TEMP CYCLE | 0441 | DS2433 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| TEMP CYCLE | 0442 | DS2433 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| TEMP CYCLE | 0442 | DS2433 | -55C TO 125C | 1000 CYS | 89 | 0 | |

| | | | | | | | |
|------------|------|--------|--------------|------|-----|---------------|----------|
| TEMP CYCLE | 0443 | DS2433 | -55C TO 125C | 1000 | CYS | 77 | 0 |
| TEMP CYCLE | 0443 | DS2433 | -55C TO 125C | 1000 | CYS | 65 | 0 |
| TEMP CYCLE | 0444 | DS2433 | -55C TO 125C | 1000 | CYS | 77 | 0 |
| | | | | | | Total: | 0 |

TEMPERATURE HUMIDITY BIAS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------|-----------|--------------|--------------------|-----------|----------|---------------|----------|
| HAST | 0441 | DS2433 | 130C, 85%R.H.,5.5V | 96 | HRS | 77 | 0 |
| HAST | 0442 | DS2433 | 130C, 85%R.H.,5.5V | 96 | HRS | 77 | 0 |
| HAST | 0442 | DS2433 | 130C, 85%R.H.,5.5V | 96 | HRS | 91 | 0 |
| HAST | 0443 | DS2433 | 130C, 85%R.H.,5.5V | 96 | HRS | 77 | 0 |
| HAST | 0443 | DS2433 | 130C, 85%R.H.,5.5V | 96 | HRS | 63 | 0 |
| HAST | 0444 | DS2433 | 130C, 85%R.H.,5.5V | 96 | HRS | 77 | 0 |
| | | | | | | Total: | 0 |

UNBIASED MOISTURE RESISTANCE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------|-----------|--------------|-----------------------------|-----------|----------|---------------|----------|
| AUTOCLAVE | 0441 | DS2433 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| AUTOCLAVE | 0442 | DS2433 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 76 | 0 |
| AUTOCLAVE | 0442 | DS2433 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 92 | 0 |
| AUTOCLAVE | 0443 | DS2433 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 75 | 0 |
| AUTOCLAVE | 0443 | DS2433 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 62 | 0 |
| AUTOCLAVE | 0444 | DS2433 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| | | | | | | Total: | 0 |

Assembly Information:

Package Type: SOIC (Pb-Free) 300
 Flammability: UL 94-V0
 Moisture Sensitivity (JEDEC J-STD20A) Level 1
 Date Code Range: 0452 to 0511

MOISTURE SENSITIVITY LEVEL 1

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|-------|-------|
| EXTERNAL VISUAL | 0452 | DS12885 | J-STD-020, 6.1a | | 8 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 8 | 0 | |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | 8 | 0 | |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | 8 | 0 | |
| EXTERNAL VISUAL | 0452 | DS12885 | J-STD-020, 6.1a | | 8 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 8 | 0 | |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |

| | | | | | | | |
|-------------------|------|---------|-----------------|-----|------|----------|----------|
| PRECONDITION U/S | 0452 | DS12885 | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| EXTERNAL VISUAL | 0501 | DS12885 | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| EXTERNAL VISUAL | 0511 | DS12885 | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| EXTERNAL VISUAL | 0511 | DS12885 | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| EXTERNAL VISUAL | 0511 | DS12885 | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| Total: | | | | | | 0 | 0 |

OPERATING LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------------------------|-----------|--------------|------------------------------------|-----------|----------|----------|----------|
| HIGH TEMP OP LIFE VISUAL INSPECTION | 0452 | DS12885 | 125C, 5.0 VOLTS WHISKERS < 50uM | 1000 HRS | 45 | 0 | |
| | | | | | 3 | 0 | |
| HIGH TEMP OP LIFE VISUAL INSPECTION | 0452 | DS12885 | 125C, 5.0 VOLTS WHISKERS < 50uM | 1000 HRS | 45 | 0 | |
| | | | | | 3 | 0 | |
| HIGH TEMP OP LIFE VISUAL INSPECTION | 0501 | DS12885 | 125C, 5.0 VOLTS WHISKERS < 50uM | 1000 HRS | 45 | 0 | |
| | | | | | 3 | 0 | |
| HIGH TEMP OP LIFE VISUAL INSPECTION | 0511 | DS12885 | 125C, 5.0 VOLTS WHISKERS < 50uM | 1000 HRS | 45 | 0 | |
| | | | | | 3 | 0 | |
| HIGH TEMP OP LIFE VISUAL INSPECTION | 0511 | DS12885 | 125C, 5.0 VOLTS WHISKERS < 50uM | 1000 HRS | 45 | 0 | |
| | | | | | 3 | 0 | |
| HIGH TEMP OP LIFE VISUAL INSPECTION | 0511 | DS12885 | 125C, 5.0 VOLTS WHISKERS < 50uM | 1000 HRS | 45 | 0 | |
| | | | | | 3 | 0 | |
| Total: | | | | | | 0 | 0 |

PACKAGE TESTS

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

| | | | | | |
|-------------------------|------|---------|------------------------------------|---------------|----------|
| SOLDERABILITY (Sn/Pb) | 0452 | DS12885 | JESD22-B102, COND C | 3 | 0 |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | 3 | 0 |
| X-RAY | 0452 | DS12885 | MIL-STD-883-2012 : TOP & SIDE VIEW | 6 | 0 |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | 6 | 0 |
| MARK PERMANENCY | | | JESD22-B107 | 6 | 0 |
| LEAD INTEGRITY | | | JESD22-B105, COND B | 6 | 0 |
| SOLDERABILITY (Sn/Pb) | 0452 | DS12885 | JESD22-B102, COND C | 3 | 0 |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | 3 | 0 |
| X-RAY | 0452 | DS12885 | MIL-STD-883-2012 : TOP & SIDE VIEW | 6 | 0 |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | 6 | 0 |
| MARK PERMANENCY | | | JESD22-B107 | 6 | 0 |
| LEAD INTEGRITY | | | JESD22-B105, COND B | 6 | 0 |
| SOLDERABILITY (Sn/Pb) | 0501 | DS12885 | JESD22-B102, COND C | 3 | 0 |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | 3 | 0 |
| X-RAY | 0501 | DS12885 | MIL-STD-883-2012 : TOP & SIDE VIEW | 6 | 0 |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | 6 | 0 |
| MARK PERMANENCY | | | JESD22-B107 | 6 | 0 |
| LEAD INTEGRITY | | | JESD22-B105, COND B | 6 | 0 |
| SOLDERABILITY (Sn/Pb) | 0511 | DS12885 | JESD22-B102, COND C | 3 | 0 |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | 3 | 0 |
| X-RAY | 0511 | DS12885 | MIL-STD-883-2012 : TOP & SIDE VIEW | 6 | 0 |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | 6 | 0 |
| MARK PERMANENCY | | | JESD22-B107 | 6 | 0 |
| LEAD INTEGRITY | | | JESD22-B105, COND B | 6 | 0 |
| SOLDERABILITY (Sn/Pb) | 0511 | DS12885 | JESD22-B102, COND C | 3 | 0 |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | 3 | 0 |
| X-RAY | 0511 | DS12885 | MIL-STD-883-2012 : TOP & SIDE VIEW | 6 | 0 |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | 6 | 0 |
| MARK PERMANENCY | | | JESD22-B107 | 6 | 0 |
| LEAD INTEGRITY | | | JESD22-B105, COND B | 6 | 0 |
| SOLDERABILITY (Sn/Pb) | 0511 | DS12885 | JESD22-B102, COND C | 3 | 0 |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | 3 | 0 |
| X-RAY | 0511 | DS12885 | MIL-STD-883-2012 : TOP & SIDE VIEW | 6 | 0 |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | 6 | 0 |
| MARK PERMANENCY | | | JESD22-B107 | 6 | 0 |
| LEAD INTEGRITY | | | JESD22-B105, COND B | 6 | 0 |
| | | | | Total: | 0 |

PRECONDITIONING LEVEL 1

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|---------------|-----------|----------|-------|-------|
| STORAGE LIFE | 0452 | DS12885 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| STORAGE LIFE | 0452 | DS12885 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |

| | | | | | | | |
|-------------------|------|---------|---------------|-----|------|----------|----------|
| CONVECTION REFLOW | 0452 | DS12885 | 260C +/-5C | 3 | PASS | 353 | 0 |
| STORAGE LIFE | 0501 | DS12885 | 125C | 48 | HRS | 353 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 353 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 353 | 0 |
| STORAGE LIFE | 0511 | DS12885 | 125C | 48 | HRS | 353 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 353 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 353 | 0 |
| STORAGE LIFE | 0511 | DS12885 | 125C | 48 | HRS | 353 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 353 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 353 | 0 |
| STORAGE LIFE | 0511 | DS12885 | 125C | 48 | HRS | 353 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 353 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 353 | 0 |
| Total: | | | | | | 0 | 0 |

STORAGE LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|----------|----------|
| STORAGE LIFE | 0452 | DS12885 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| STORAGE LIFE | 0452 | DS12885 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| STORAGE LIFE | 0501 | DS12885 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| STORAGE LIFE | 0511 | DS12885 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| STORAGE LIFE | 0511 | DS12885 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| STORAGE LIFE | 0511 | DS12885 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| Total: | | | | | | 0 | 0 |

TEMPERATURE CYCLE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|----------|----------|
| TEMP CYCLE | 0452 | DS12885 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| TEMP CYCLE | 0452 | DS12885 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| TEMP CYCLE | 0501 | DS12885 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| TEMP CYCLE | 0511 | DS12885 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| TEMP CYCLE | 0511 | DS12885 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| TEMP CYCLE | 0511 | DS12885 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| Total: | | | | | | 0 | 0 |

TEMPERATURE HUMIDITY BIAS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|---------------------------|-----------|--------------|---------------------------------------|-----------|----------|----------|----------|
| HAST VISUAL INSPECTION | 0452 | DS12885 | 130C, 85%R.H.,5.5V WHISKERS < 50uM | 96 | HRS | 77 3 | 0 0 |
| HAST VISUAL INSPECTION | 0452 | DS12885 | 130C, 85%R.H.,5.5V WHISKERS < 50uM | 96 | HRS | 77 3 | 0 0 |
| HAST VISUAL INSPECTION | 0501 | DS12885 | 130C, 85%R.H.,5.5V WHISKERS < 50uM | 96 | HRS | 77 3 | 0 0 |
| HAST VISUAL INSPECTION | 0511 | DS12885 | 130C, 85%R.H.,5.5V WHISKERS < 50uM | 96 | HRS | 77 3 | 0 0 |
| HAST VISUAL INSPECTION | 0511 | DS12885 | 130C, 85%R.H.,5.5V WHISKERS < 50uM | 96 | HRS | 77 3 | 0 0 |
| HAST VISUAL INSPECTION | 0511 | DS12885 | 130C, 85%R.H.,5.5V WHISKERS < 50uM | 96 | HRS | 77 3 | 0 0 |
| Total: | | | | | | 0 | 0 |

UNBIASED MOISTURE RESISTANCE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|--------------------------------|-----------|--------------|--|-----------|----------|----------|----------|
| AUTOCLAVE VISUAL INSPECTION | 0452 | DS12885 | 121C, 2 ATM STEAM, UNBIASED WHISKERS < 50uM | 168 | HRS | 77 3 | 0 0 |
| AUTOCLAVE VISUAL INSPECTION | 0452 | DS12885 | 121C, 2 ATM STEAM, UNBIASED WHISKERS < 50uM | 168 | HRS | 77 3 | 0 0 |
| AUTOCLAVE VISUAL INSPECTION | 0501 | DS12885 | 121C, 2 ATM STEAM, UNBIASED WHISKERS < 50uM | 168 | HRS | 76 76 | 0 0 |
| AUTOCLAVE VISUAL INSPECTION | 0511 | DS12885 | 121C, 2 ATM STEAM, UNBIASED WHISKERS < 50uM | 168 | HRS | 77 3 | 0 0 |
| AUTOCLAVE VISUAL INSPECTION | 0511 | DS12885 | 121C, 2 ATM STEAM, UNBIASED WHISKERS < 50uM | 168 | HRS | 77 3 | 0 0 |
| AUTOCLAVE VISUAL INSPECTION | 0511 | DS12885 | 121C, 2 ATM STEAM, UNBIASED WHISKERS < 50uM | 168 | HRS | 77 3 | 0 0 |
| Total: | | | | | | 0 | 0 |

Assembly Information:

Package Type: SOIC (Pb-Free) 330
Flammability: UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A) Level 1
Date Code Range: 0502 to 0502

MOISTURE SENSITIVITY LEVEL 1

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|-------|-------|
| EXTERNAL VISUAL | 0502 | DS1501 | J-STD-020, 6.1a | | 8 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 8 | 0 | |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |

| | | | | | | | |
|-------------------|------|--------|-----------------|-----|------|----------|----------|
| PRECONDITION U/S | 0502 | DS1501 | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| EXTERNAL VISUAL | 0502 | DS1501 | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| EXTERNAL VISUAL | 0502 | DS1501 | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 48 | HRS | 8 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 8 | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 | PASS | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| Total: | | | | | | 0 | 0 |

OPERATING LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|----------|----------|
| HIGH TEMP OP LIFE | 0502 | DS1501 | 125C, 5.0 VOLTS | 1000 HRS | 45 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| HIGH TEMP OP LIFE | 0502 | DS1501 | 125C, 5.0 VOLTS | 1000 HRS | 45 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| HIGH TEMP OP LIFE | 0502 | DS1501 | 125C, 5.0 VOLTS | 1000 HRS | 45 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| Total: | | | | | | 0 | 0 |

PACKAGE TESTS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------------|-----------|--------------|------------------------------------|-----------|----------|-------|-------|
| SOLDERABILITY (Sn/Pb) | 0502 | DS1501 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0502 | DS1501 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| SOLDERABILITY (Sn/Pb) | 0502 | DS1501 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0502 | DS1501 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| SOLDERABILITY (Sn/Pb) | 0502 | DS1501 | JESD22-B102, COND C | | 3 | 0 | |
| SOLDERABILITY (Pb-Free) | | | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0502 | DS1501 | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |

Total: 0

PRECONDITIONING LEVEL 1

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|---------------|-----------|----------|----------|-------|
| STORAGE LIFE | 0502 | DS1501 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| STORAGE LIFE | 0502 | DS1501 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| STORAGE LIFE | 0502 | DS1501 | 125C | 48 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 3 PASS | 353 | 0 | |
| Total: | | | | | | 0 | |

STORAGE LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|----------|-------|
| STORAGE LIFE | 0502 | DS1501 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| STORAGE LIFE | 0502 | DS1501 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| STORAGE LIFE | 0502 | DS1501 | 150C | 1000 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| Total: | | | | | | 0 | |

TEMPERATURE CYCLE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|----------|-------|
| TEMP CYCLE | 0502 | DS1501 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| TEMP CYCLE | 0502 | DS1501 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| TEMP CYCLE | 0502 | DS1501 | -55C TO 125C | 1000 CYS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| Total: | | | | | | 0 | |

TEMPERATURE HUMIDITY BIAS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|--------------------|-----------|----------|----------|-------|
| HAST | 0502 | DS1501 | 130C, 85%R.H.,3.5V | 96 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| HAST | 0502 | DS1501 | 130C, 85%R.H.,3.5V | 96 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| HAST | 0502 | DS1501 | 130C, 85%R.H.,3.5V | 96 HRS | 77 | 0 | |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | 3 | 0 | |
| Total: | | | | | | 0 | |

UNBIASED MOISTURE RESISTANCE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------|-----------|--------------|-----------------------------|-----------|----------|-------|-------|
| AUTOCLAVE | 0502 | DS1501 | 121C, 2 ATM STEAM, UNBIASED | 168 HRS | 73 | 0 | |

| | | | | | | | |
|-------------------|------|--------|-----------------------------|-----|-----|----------|----------|
| VISUAL INSPECTION | 0502 | DS1501 | WHISKERS < 50uM | | | 3 | 0 |
| AUTOCLAVE | 0502 | DS1501 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| AUTOCLAVE | 0502 | DS1501 | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 76 | 0 |
| VISUAL INSPECTION | | | WHISKERS < 50uM | | | 3 | 0 |
| Total: | | | | | | 0 | 0 |

Assembly Information:

Package Type: SOIC w/Crystal 300
 Flammability: UL 94-V0
 Moisture Sensitivity (JEDEC J-STD20A) Level 1
 Date Code Range: 0451 to 0522

MOISTURE SENSITIVITY LEVEL 1

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|------------------------------------|-----------|----------|-------|-------|
| EXTERNAL VISUAL | 0520 | DS32KHZS | J-STD-020, 6.1a | | 44 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 44 | 0 | |
| STORAGE LIFE | | | 125C | 24 | HRS | 44 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 44 | |
| CONVECTION REFLOW | | | 260C +/-5C | 2 | PASS | 44 | 0 |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | 44 | 0 | |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | 44 | 0 | |
| PRECONDITION U/S | | | J-STD-020 | | 44 | 0 | |
| EXTERNAL VISUAL | 0520 | DS32KHZS | J-STD-020, 6.1a | | 44 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 44 | 0 | |
| STORAGE LIFE | | | 125C | 24 | HRS | 44 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 44 | |
| CONVECTION REFLOW | | | 260C +/-5C | 2 | PASS | 44 | 0 |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | 44 | 0 | |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | 44 | 0 | |
| PRECONDITION U/S | | | J-STD-020 | | 44 | 0 | |
| EXTERNAL VISUAL | 0520 | DS32KHZS | J-STD-020, 6.1a | | 44 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 44 | 0 | |
| STORAGE LIFE | | | 125C | 24 | HRS | 44 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 44 | |
| CONVECTION REFLOW | | | 260C +/-5C | 2 | PASS | 44 | 0 |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | 44 | 0 | |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | 44 | 0 | |
| PRECONDITION U/S | | | J-STD-020 | | 44 | 0 | |
| EXTERNAL VISUAL | 0522 | DS32KHZS | J-STD-020, 6.1a | | 44 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 44 | 0 | |
| STORAGE LIFE | | | 125C | 24 | HRS | 44 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 44 | |
| CONVECTION REFLOW | | | 260C +/-5C | 2 | PASS | 44 | 0 |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | 44 | 0 | |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | 44 | 0 | |
| PRECONDITION U/S | | | J-STD-020 | | 44 | 0 | |
| EXTERNAL VISUAL | 0522 | DS32KHZS | J-STD-020, 6.1a | | 44 | 0 | |
| ULTRASOUND | | | J-STD-020 | | 44 | 0 | |
| STORAGE LIFE | | | 125C | 24 | HRS | 44 | |

| | | | | | | | |
|-------------------|------|----------|------------------------------------|-----|------|----|----------|
| MOISTURE SOAK | 0522 | DS32KHZS | 85 C/85% R.H. | 168 | HRS | 44 | |
| CONVECTION REFLOW | | | 260C +/-5C | 2 | PASS | 44 | 0 |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | | 44 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 44 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 44 | 0 |
| EXTERNAL VISUAL | 0522 | DS32KHZS | J-STD-020, 6.1a | | | 44 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 44 | 0 |
| STORAGE LIFE | | | 125C | 24 | HRS | 44 | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 | HRS | 44 | |
| CONVECTION REFLOW | | | 260C +/-5C | 2 | PASS | 44 | 0 |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | | 44 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 44 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 44 | 0 |
| Total: | | | | | | | 0 |

MOISTURE SENSITIVITY LEVEL 3

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|------------------------------------|-----------|----------|-------|----------|
| EXTERNAL VISUAL | 0451 | DS32KHZS | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 24 | HRS | 8 | |
| MOISTURE SOAK | | | 30C/60% R.H. | 192 | HRS | 8 | |
| CONVECTION REFLOW | | | 235C +/-5/-0C | 2 | PASS | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | 0451 | DS32KHZS | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 24 | HRS | 8 | |
| MOISTURE SOAK | | | 30C/60% R.H. | 192 | HRS | 8 | |
| CONVECTION REFLOW | | | 235C +/-5/-0C | 2 | PASS | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | 0452 | DS32KHZS | J-STD-020, 6.1a | | | 8 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 8 | 0 |
| STORAGE LIFE | | | 125C | 24 | HRS | 8 | |
| MOISTURE SOAK | | | 30C/60% R.H. | 192 | HRS | 8 | |
| CONVECTION REFLOW | | | 235C +/-5/-0C | 2 | PASS | 8 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 8 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 8 | 0 |
| EXTERNAL VISUAL | 0509 | DS32KHZS | J-STD-020, 6.1a | | | 45 | 0 |
| ULTRASOUND | | | J-STD-020 | | | 45 | 0 |
| STORAGE LIFE | | | 125C | 24 | HRS | 45 | |
| MOISTURE SOAK | | | 30C/60% R.H. | 192 | HRS | 45 | |
| CONVECTION REFLOW | | | 235C +/-5/-0C | 2 | PASS | 45 | 0 |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | | 45 | 0 |
| EXTERNAL VISUAL | | | J-STD-020, 6.1a | | | 45 | 0 |
| PRECONDITION U/S | | | J-STD-020 | | | 45 | 0 |
| Total: | | | | | | | 0 |

OPERATING LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|-----------------|-----------|----------|-------|-------|
| HIGH TEMP OP LIFE | 0451 | DS32KHZS | 125C, 5.5 VOLTS | 1000 | HRS | 45 | 0 |

| | | | | | | |
|-------------------|------|----------|-----------------|----------|----------|----------|
| HIGH TEMP OP LIFE | 0451 | DS32KHZS | 125C, 5.5 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0452 | DS32KHZS | 125C, 5.5 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0453 | DS3231S | 125C, 5.5 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0509 | DS32KHZS | 125C, 5.5 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0520 | DS32KHZS | 125C, 5.5 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0520 | DS32KHZS | 125C, 5.5 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0520 | DS32KHZS | 125C, 5.5 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0522 | DS32KHZS | 125C, 5.5 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0522 | DS32KHZS | 125C, 5.5 VOLTS | 1000 HRS | 45 | 0 |
| HIGH TEMP OP LIFE | 0522 | DS32KHZS | 125C, 5.5 VOLTS | 1000 HRS | 45 | 0 |
| Total: | | | | | 0 | 0 |

PACKAGE TESTS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------------|-----------|--------------|------------------------------------|-----------|----------|-------|-------|
| X-RAY | 0451 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| X-RAY | 0451 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| X-RAY | 0452 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| X-RAY | 0509 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 398 | 0 | |
| SOLDERABILITY (Pb-Free) | 0520 | DS32KHZS | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0520 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| X-RAY | 0520 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 397 | 0 | |
| SOLDERABILITY (Pb-Free) | 0520 | DS32KHZS | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0520 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 | |
| X-RAY | 0520 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 397 | 0 | |
| SOLDERABILITY (Pb-Free) | 0520 | DS32KHZS | JESD22-B102, COND C | | 3 | 0 | |
| X-RAY | 0520 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 | |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 | |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 | |

| | | | | | | |
|-------------------------|------|----------|------------------------------------|--|----------|----------|
| LEAD INTEGRITY | 0520 | DS32KHZS | JESD22-B105, COND B | | 6 | 0 |
| X-RAY | 0520 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 397 | 0 |
| SOLDERABILITY (Pb-Free) | 0522 | DS32KHZS | JESD22-B102, COND C | | 3 | 0 |
| X-RAY | 0522 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 |
| X-RAY | 0522 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 397 | 0 |
| SOLDERABILITY (Pb-Free) | 0522 | DS32KHZS | JESD22-B102, COND C | | 3 | 0 |
| X-RAY | 0522 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 |
| X-RAY | 0522 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 397 | 0 |
| SOLDERABILITY (Pb-Free) | 0522 | DS32KHZS | JESD22-B102, COND C | | 3 | 0 |
| X-RAY | 0522 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 6 | 0 |
| PHYSICAL DIMENSIONS | | | JESD22-B100 | | 6 | 0 |
| MARK PERMANENCY | | | JESD22-B107 | | 6 | 0 |
| LEAD INTEGRITY | | | JESD22-B105, COND B | | 6 | 0 |
| X-RAY | 0522 | DS32KHZS | MIL-STD-883-2012 : TOP & SIDE VIEW | | 397 | 0 |
| Total: | | | | | 0 | 0 |

PRECONDITIONING LEVEL 1

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|------------------------------------|-----------|----------|-------|-------|
| STORAGE LIFE | 0520 | DS32KHZS | 125C | 24 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 2 PASS | 353 | 0 | |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | 353 | 0 | |
| STORAGE LIFE | 0520 | DS32KHZS | 125C | 24 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 2 PASS | 353 | 0 | |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | 353 | 0 | |
| STORAGE LIFE | 0520 | DS32KHZS | 125C | 24 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 2 PASS | 353 | 0 | |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | 353 | 0 | |
| STORAGE LIFE | 0522 | DS32KHZS | 125C | 24 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 2 PASS | 353 | 0 | |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | 352 | 0 | |
| STORAGE LIFE | 0522 | DS32KHZS | 125C | 24 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |
| CONVECTION REFLOW | | | 260C +/-5C | 2 PASS | 353 | 0 | |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | 353 | 0 | |
| STORAGE LIFE | 0522 | DS32KHZS | 125C | 24 HRS | 353 | | |
| MOISTURE SOAK | | | 85 C/85% R.H. | 168 HRS | 353 | | |

| | | | | | | | |
|-------------------|------|----------|------------------------------------|---|------|----------|----------|
| CONVECTION REFLOW | 0522 | DS32KHZS | 260C +/-5C | 2 | PASS | 353 | 0 |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | | 353 | 0 |
| Total: | | | | | | 0 | 0 |

PRECONDITIONING LEVEL 3

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------------|-----------|--------------|------------------------------------|-----------|----------|----------|----------|
| STORAGE LIFE | 0451 | DS32KHZS | 125C | 24 HRS | 353 | | |
| MOISTURE SOAK | | | 30C/60% R.H. | 192 HRS | 353 | | |
| CONVECTION REFLOW | | | 235C +/-5-0C | 2 PASS | 353 | 0 | |
| STORAGE LIFE | 0451 | DS32KHZS | 125C | 24 HRS | 353 | | |
| MOISTURE SOAK | | | 30C/60% R.H. | 192 HRS | 353 | | |
| CONVECTION REFLOW | | | 235C +/-5-0C | 2 PASS | 353 | 0 | |
| STORAGE LIFE | 0452 | DS32KHZS | 125C | 24 HRS | 353 | | |
| MOISTURE SOAK | | | 30C/60% R.H. | 192 HRS | 353 | | |
| CONVECTION REFLOW | | | 235C +/-5-0C | 2 PASS | 353 | 0 | |
| STORAGE LIFE | 0509 | DS32KHZS | 125C | 24 HRS | 353 | | |
| MOISTURE SOAK | | | 30C/60% R.H. | 192 HRS | 353 | | |
| CONVECTION REFLOW | | | 235C +/-5-0C | 2 PASS | 353 | 0 | |
| X-RAY | | | MIL-STD-883-2012 : TOP & SIDE VIEW | | 352 | 0 | |
| Total: | | | | | | 0 | 0 |

STORAGE LIFE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|---------------|-----------|--------------|-----------|-----------|----------|----------|----------|
| STORAGE LIFE | 0451 | DS32KHZS | 125C | 1000 HRS | 77 | 0 | |
| STORAGE LIFE | 0451 | DS32KHZS | 125C | 1000 HRS | 77 | 0 | |
| STORAGE LIFE | 0452 | DS32KHZS | 125C | 1000 HRS | 77 | 0 | |
| STORAGE LIFE | 0453 | DS3231S | 125C | 2300 HRS | 77 | 0 | |
| STORAGE LIFE | 0507 | DS3231S | 150C | 1000 HRS | 77 | 0 | |
| STORAGE LIFE | 0509 | DS32KHZS | 125C | 1000 HRS | 77 | 0 | |
| STORAGE LIFE | 0520 | DS32KHZS | 125C | 1000 HRS | 77 | 0 | |
| STORAGE LIFE | 0520 | DS32KHZS | 125C | 1000 HRS | 77 | 0 | |
| STORAGE LIFE | 0520 | DS32KHZS | 125C | 1000 HRS | 77 | 0 | |
| STORAGE LIFE | 0522 | DS32KHZS | 125C | 1000 HRS | 77 | 0 | |
| STORAGE LIFE | 0522 | DS32KHZS | 125C | 1000 HRS | 77 | 0 | |
| STORAGE LIFE | 0522 | DS32KHZS | 125C | 1000 HRS | 77 | 0 | |
| Total: | | | | | | 0 | 0 |

TEMPERATURE CYCLE

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-------------|-----------|--------------|------------|-----------|----------|-------|-------|
| TEMP CYCLE | 0451 | DS32KHZS | -40 TO 85C | 1000 CYS | 77 | 0 | |
| TEMP CYCLE | 0451 | DS32KHZS | -40 TO 85C | 1000 CYS | 77 | 0 | |
| TEMP CYCLE | 0452 | DS32KHZS | -40 TO 85C | 1000 CYS | 77 | 0 | |
| TEMP CYCLE | 0509 | DS32KHZS | -40 TO 85C | 1000 CYS | 77 | 0 | |
| TEMP CYCLE | 0520 | DS32KHZS | -40 TO 85C | 1000 CYS | 77 | 0 | |

| | | | | | | | |
|---------------|------|----------|------------|------|-----|----|----------|
| TEMP CYCLE | 0520 | DS32KHZS | -40 TO 85C | 1000 | CYS | 77 | 0 |
| TEMP CYCLE | 0520 | DS32KHZS | -40 TO 85C | 1000 | CYS | 77 | 0 |
| TEMP CYCLE | 0522 | DS32KHZS | -40 TO 85C | 1000 | CYS | 77 | 0 |
| TEMP CYCLE | 0522 | DS32KHZS | -40 TO 85C | 1000 | CYS | 77 | 0 |
| TEMP CYCLE | 0522 | DS32KHZS | -40 TO 85C | 1000 | CYS | 77 | 0 |
| Total: | | | | | | | 0 |

TEMPERATURE HUMIDITY BIAS

| DESCRIPTION | DATE CODE | TEST VEHICLE | CONDITION | READPOINT | QUANTITY | FAILS | FA NO |
|-----------------|-----------|--------------|------------------|-----------|----------|-------|----------|
| BIASED MOISTURE | 0451 | DS32KHZS | 85/85, 5.5 VOLTS | 1000 | HRS | 77 | 0 |
| BIASED MOISTURE | 0451 | DS32KHZS | 85/85, 5.5 VOLTS | 1000 | HRS | 77 | 0 |
| BIASED MOISTURE | 0452 | DS32KHZS | 85/85, 5.5 VOLTS | 1000 | HRS | 77 | 0 |
| BIASED MOISTURE | 0509 | DS32KHZS | 85/85, 5.5 VOLTS | 1000 | HRS | 77 | 0 |
| BIASED MOISTURE | 0520 | DS32KHZS | 85/85, 5.5 VOLTS | 1000 | HRS | 77 | 0 |
| BIASED MOISTURE | 0520 | DS32KHZS | 85/85, 5.5 VOLTS | 1000 | HRS | 77 | 0 |
| BIASED MOISTURE | 0520 | DS32KHZS | 85/85, 5.5 VOLTS | 1000 | HRS | 77 | 0 |
| BIASED MOISTURE | 0522 | DS32KHZS | 85/85, 5.5 VOLTS | 1000 | HRS | 77 | 0 |
| BIASED MOISTURE | 0522 | DS32KHZS | 85/85, 5.5 VOLTS | 1000 | HRS | 77 | 0 |
| BIASED MOISTURE | 0522 | DS32KHZS | 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 | 0451 | DS32KHZS | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| AUTOCLAVE | 0451 | DS32KHZS | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| AUTOCLAVE | 0452 | DS32KHZS | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| AUTOCLAVE | 0509 | DS32KHZS | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 76 | 0 |
| AUTOCLAVE | 0520 | DS32KHZS | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| AUTOCLAVE | 0520 | DS32KHZS | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| AUTOCLAVE | 0520 | DS32KHZS | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| AUTOCLAVE | 0522 | DS32KHZS | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 76 | 0 |
| AUTOCLAVE | 0522 | DS32KHZS | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| AUTOCLAVE | 0522 | DS32KHZS | 121C, 2 ATM STEAM, UNBIASED | 168 | HRS | 77 | 0 |
| Total: | | | | | | | 0 |

FAILURE RATE: **MTTF (YRS): 277475** **FITS: 0.4**