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|---|------------------------------------|------------------|----------------|
| Project Number: Design Qualification Test Report | Tracking Code: 116238_Report_Rev_1 | | |
| Requested by: Bruce Liu | Date: 1/25/2011 | Product Rev: 0 | |
| Part #:BNC5-J-P-GN-ST-TH2D/RF316-04SP2-01SP1-0150 | Lot #: N/A | Tech: Peter Chen | Eng: Vico Zhao |
| Part description: BNC5/RF316 | | Qty to test: 40 | |
| Test Start: 12/10/2010 | Test Completed: 01/15/2010 | | |



Design Qualification Test Report

BNC5/RF316
BNC5-J-P-GN-ST-TH2D/RF316-04SP2-01SP1-0150

| | |
|------------------------------------|--|
| Tracking Code: 116238 Report Rev 1 | Part #: BNC5-J-P-GN-ST-TH2D/RF316-04SP2-01SP1-0150 |
| Part description: BNC5/RF316 | |

CERTIFICATION

All instruments and measuring equipment were calibrated to National Institute for Standards and Technology (NIST) traceable standards according to ISO 10012-1 and ANSI/NCSL 2540-1, as applicable.

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SCOPE

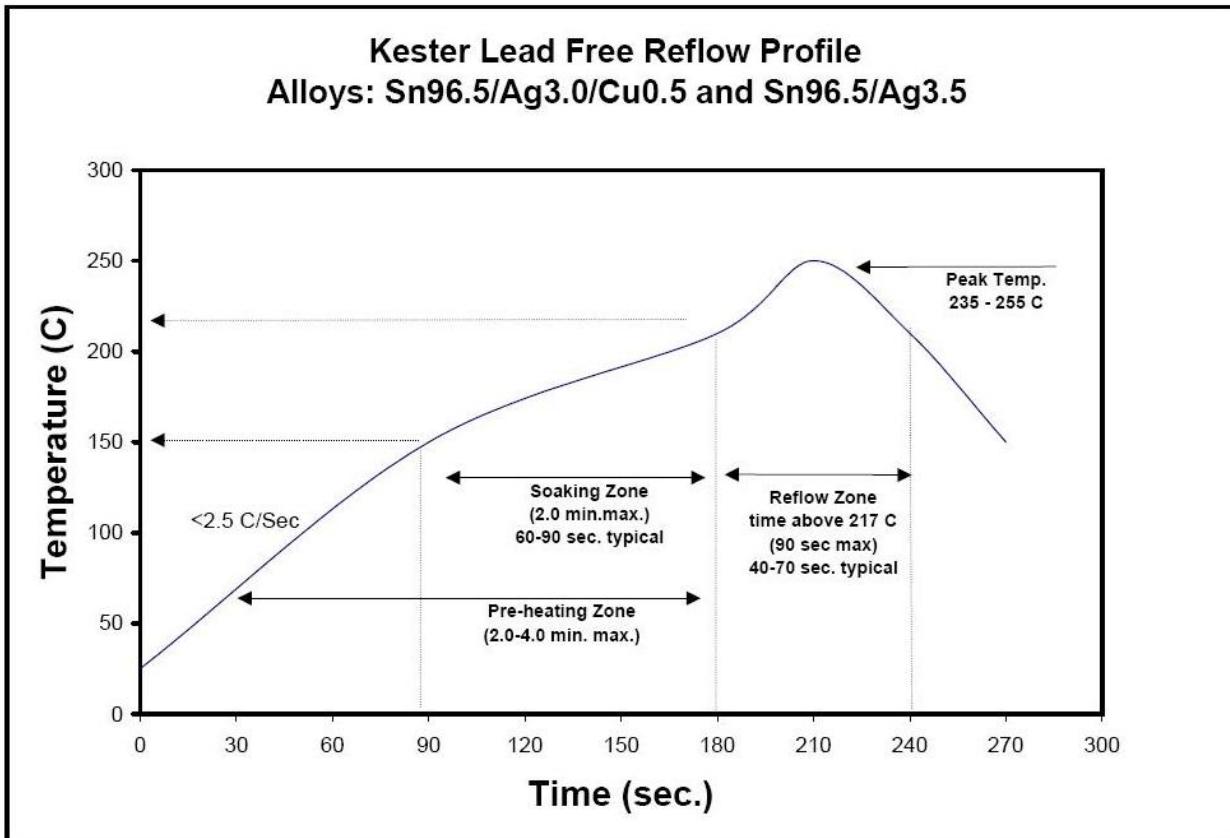
To perform the following tests: Design Qualification Test, Please see test plan.

APPLICABLE DOCUMENTS

Standards: EIA Publication 364

TEST SAMPLES AND PREPARATION

- 1) All materials were manufactured in accordance with the applicable product specification.
- 2) All test samples were identified and encoded to maintain traceability throughout the test sequences.
- 3) After soldering, the parts to be used for LLCR and DWV/IR testing were cleaned according to TLWI-0001.
- 4) Either an automated cleaning procedure or an ultrasonic cleaning procedure may be used.
- 5) The automated procedure is used with aqueous compatible soldering materials.
- 6) Parts not intended for testing LLCR and DWV/IR are visually inspected and cleaned if necessary.
- 7) Any additional preparation will be noted in the individual test sequences.
- 8) Solder Information: Lead free
- 9) Re-Flow Time/Temp: See accompanying profile.
- 10) Samtec Test PCBs used: PCB-102905-TST-01A

TYPICAL OVEN PROFILE (Soldering Parts to Test Boards)

FLOWCHARTS

Gas Tight

| TEST STEP | GROUP A 8 Points for signal | |
|--------------|--------------------------------|--|
| 01 | LLCR-1 | |
| 02 | Gas Tight | |
| 03 | LLCR-2 | |

Gas Tight = EIA-364-36A

LLCR = EIA-364-23, LLCR

20 mV Max, 100 mA Max

Use Keithley 580 or 3706 in 4 wire dry circuit mode

IR & DWV

| TEST STEP | GROUP A1 2 Mated Sets Break Down Pin-to-Ground | GROUP A2 2 Unmated of Part # Being Tested Break Down Pin-to-Ground | GROUP A3 2 Unmated of Mating Part # Break Down Pin-to-Ground | GROUP B1 2 Mated Sets Pin-to-Ground |
|--------------|---|---|--|---|
| 01 | DWV/Break Down Voltage | DWV/Break Down Voltage | DWV/Break Down Voltage | IR & DWV at test voltage (on both mated sets and on each connector unmated) |
| 02 | | | | Thermal Shock (Mated and Undisturbed) |
| 03 | | | | IR & DWV at test voltage (on both mated sets and on each connector unmated) |
| 04 | | | | Cyclic Humidity (Mated and Undisturbed) |
| 05 | | | | IR & DWV at test voltage (on both mated sets and on each connector unmated) |

DWV on Group B1 to be performed at Test Voltage

DWV test voltage is equal to 75% of the lowest break down voltage from Groups A1, A2 or A3

Thermal Shock = EIA-364-32, Table II, Test Condition I:

-55°C to +85°C 1/2 hour dwell, 100 cycles

Humidity = EIA-364-31, Test Condition B (240 Hours)

and Method III (+25°C to +65°C @ 90% RH to 98% RH)

ambient pre-condition and delete steps 7a and 7b

IR = EIA-364-21

DWV = EIA-364-20, Test Condition 1

FLOWCHARTS Continued**Durability/Mating/Unmating/Gaps**

| TEST | GROUP B1 |
|------|--|
| STEP | 8 points |
| | Contact Gaps |
| 02 | LLCR-1 |
| 10 | 100 Cycles (100 Total) |
| | Contact Gaps |
| 14 | LLCR-2 |
| 15 | Thermal Shock (Mated and Undisturbed) |
| 16 | LLCR-3 |
| 17 | Cyclic Humidity (Mated and Undisturbed) |
| 18 | LLCR-4 |

Thermal Shock = EIA-364-32, Table II, Test Condition I:

-55°C to +85°C 1/2 hour dwell, 100 cycles

Humidity = EIA-364-31, Test Condition B (240 Hours)

and Method III (+25°C to +65°C @ 90% RH to 98% RH)

ambient pre-condition and delete steps 7a and 7b

Mating / Unmating Forces = EIA-364-13

Contact Gaps / Height - No standard method. Usually measured optically.

Gaps to be taken on a minimum of 20% of each part tested

LLCR = EIA-364-23, LLCR

20 mV Max, 100 mA Max

Use Keithley 580 or 3706 in 4 wire dry circuit mode

Connector Pull

| TEST | GROUP A1 | GROUP B1 |
|------|-----------------------|-----------------------|
| STEP | 5 Pieces | 5 Pieces |
| 01 | 0° | 90° |
| | Pull test, Continuity | Pull test, Continuity |

Monitor continuity and pull; record forces when continuity fails

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

THERMAL SHOCK:

- 1) EIA-364-32, *Thermal Shock (Temperature Cycling) Test Procedure for Electrical Connectors*.
- 2) Test Condition 1: -55°C to +85°C
- 3) Test Time: ½ hour dwell at each temperature extreme
- 4) Number of Cycles: 100
- 5) All test samples are pre-conditioned at ambient.
- 6) All test samples are exposed to environmental stressing in the mated condition.

HUMIDITY:

- 1) Reference document: EIA-364-31, *Humidity Test Procedure for Electrical Connectors*.
- 2) Test Condition B, 240 Hours.
- 3) Method III, +25° C to + 65° C, 90% to 98% Relative Humidity excluding sub-cycles 7a and 7b.
- 4) All samples are pre-conditioned at ambient.
- 5) All test samples are exposed to environmental stressing in the mated condition.

LLCR:

- 1) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 2) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 3) The following guidelines are used to categorize the changes in LLCR as a result from stressing
 - a. <= +5.0 mOhms: ----- Stable
 - b. +5.1 to +10.0 mOhms: ----- Minor
 - c. +10.1 to +15.0 mOhms: ----- Acceptable
 - d. +15.1 to +50.0 mOhms: ----- Marginal
 - e. +50.1 to +2000 mOhms: ----- Unstable
 - f. >+2000 mOhms: ----- Open Failure

GAS TIGHT:

To provide method for evaluating the ability of the contacting surfaces in preventing penetration of harsh vapors which might lead to oxide formation that may degrade the electrical performance of the contact system.

- 1) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 2) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 3) The following guidelines are used to categorize the changes in LLCR as a result from stressing
 - a. <= +5.0 mOhms: ----- Stable
 - b. +5.1 to +10.0 mOhms: ----- Minor
 - c. +10.1 to +15.0 mOhms: ----- Acceptable
 - d. +15.1 to +50.0 mOhms: ----- Marginal
 - e. +50.1 to +2000 mOhms: ----- Unstable
 - f. >+2000 mOhms: ----- Open Failure

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

4) Procedure:

- a. Reference document: EIA-364-36, *Test Procedure for Determination of Gas-Tight Characteristics for Electrical Connectors, Sockets and/or Contact Systems.*
- b. Test Conditions:
 - i. Class II--- Mated pairs of contacts assembled to their plastic housings.
 - ii. Reagent grade Nitric Acid shall be used of sufficient volume to saturate the test chamber
 - iii. The ratio of the volume of the test chamber to the surface area of the acid shall be 10:1.
 - iv. The chamber shall be saturated with the vapor for at least 15 minutes before samples are added.
 - v. Exposure time, 55 to 65 minutes.
 - vi. The samples shall be no closer to the chamber walls than 1 inches and no closer to the surface of the acid than 3 inches.
 - vii. The samples shall be dried after exposure for a minimum of 1 hour.
 - viii. Drying temperature 50° C
 - ix. The final LLCR shall be conducted within 1 hour after drying.

CONNECTOR PULL:

- 1) Secure cable near center and pull on connector
 - a. At 90°, right angle to cable
 - b. At 0°, in-line with cable

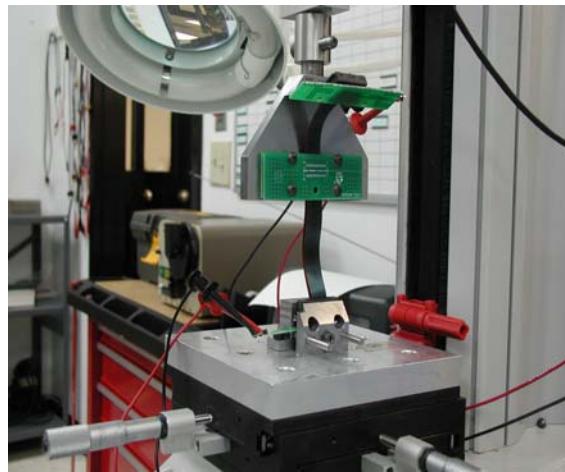


Fig. 1

(Typical set-up, actual part not depicted.)
0° Connector pull, notice the electrical continuity hook-up wires.

RESULTS

Contact Gaps

- Initial
 - Min ----- 1.3320 mm
 - Max ----- 1.4275 mm
- After 100 Cycles
 - Min ----- 1.4155 mm
 - Max ----- 1.4712 mm

Cable Pull force:

- SIG 0°
- Min ----- 23.26 Lbs
 - Max ----- 29.11 Lbs
- SIG 90°
- Min ----- 27.76 Lbs
 - Max ----- 34.38 Lbs

LLCR Durability (24 ground pin LLCR test points and 8 signal pin LLCR test points)

Signal Pin:

- Initial ----- 8.0 mOhms Max
- After 100 Cycles
 - <= +5.0 mOhms ----- 8 Points ----- Stable
 - +5.1 to +10.0 mOhms ----- 0 Points ----- Minor
 - +10.1 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +2000 mOhms ----- 0 Points ----- Unstable
 - >+2000 mOhms ----- 0 Points ----- Open Failure
- After thermal shock
 - <= +5.0 mOhms ----- 8 Points ----- Stable
 - +5.1 to +10.0 mOhms ----- 0 Points ----- Minor
 - +10.1 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +2000 mOhms ----- 0 Points ----- Unstable
 - >+2000 mOhms ----- 0 Points ----- Open Failure
- After humidity
 - <= +5.0 mOhms ----- 8 Points ----- Stable
 - +5.1 to +10.0 mOhms ----- 0 Points ----- Minor
 - +10.1 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +2000 mOhms ----- 0 Points ----- Unstable
 - >+2000 mOhms ----- 0 Points ----- Open Failure

Ground Pin:

- Initial ----- 2.5 mOhms Max
- After 100 Cycles
 - <= +5.0 mOhms ----- 24 Points ----- Stable
 - +5.1 to +10.0 mOhms ----- 0 Points ----- Minor
 - +10.1 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +2000 mOhms ----- 0 Points ----- Unstable
 - >+2000 mOhms ----- 0 Points ----- Open Failure
- After thermal shock
 - <= +5.0 mOhms ----- 24 Points ----- Stable
 - +5.1 to +10.0 mOhms ----- 0 Points ----- Minor
 - +10.1 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +2000 mOhms ----- 0 Points ----- Unstable
 - >+2000 mOhms ----- 0 Points ----- Open Failure

Result Continued**• After humidity**

- | | | |
|------------------------------|-----------------|--------------|
| ○ <= +5.0 mOhms ----- | 24 Points ----- | Stable |
| ○ +5.1 to +10.0 mOhms ----- | 0 Points ----- | Minor |
| ○ +10.1 to +15.0 mOhms ----- | 0 Points ----- | Acceptable |
| ○ +15.1 to +50.0 mOhms ----- | 0 Points ----- | Marginal |
| ○ +50.1 to +2000 mOhms----- | 0 Points ----- | Unstable |
| ○ >+2000 mOhms ----- | 0 Points ----- | Open Failure |

LLCR Gas Tight (24 ground pin LLCR test points and 8 signal pin LLCR test points)**Signal Pin:**

- Initial ----- 13.1 mOhms Max
- Gas-Tight

- | | | |
|------------------------------|----------------|--------------|
| ○ <= +5.0 mOhms ----- | 8 Points ----- | Stable |
| ○ +5.1 to +10.0 mOhms ----- | 0 Points ----- | Minor |
| ○ +10.1 to +15.0 mOhms ----- | 0 Points ----- | Acceptable |
| ○ +15.1 to +50.0 mOhms ----- | 0 Points ----- | Marginal |
| ○ +50.1 to +2000 mOhms----- | 0 Points ----- | Unstable |
| ○ >+2000 mOhms ----- | 0 Points ----- | Open Failure |

Ground Pin:

- Initial ----- 4.3 mOhms Max
- Gas-Tight

- | | | |
|------------------------------|-----------------|--------------|
| ○ <= +5.0 mOhms ----- | 24 Points ----- | Stable |
| ○ +5.1 to +10.0 mOhms ----- | 0 Points ----- | Minor |
| ○ +10.1 to +15.0 mOhms ----- | 0 Points ----- | Acceptable |
| ○ +15.1 to +50.0 mOhms ----- | 0 Points ----- | Marginal |
| ○ +50.1 to +2000 mOhms----- | 0 Points ----- | Unstable |
| ○ >+2000 mOhms ----- | 0 Points ----- | Open Failure |

Insulation Resistance minimums, IR

- Initial
 - Mated ----- 10000Meg Ω ----- Pass
 - Unmated ----- 10000Meg Ω ----- Pass
- Thermal
 - Mated ----- 10000Meg Ω ----- Pass
 - Unmated ----- 10000Meg Ω ----- Pass
- Humidity
 - Mated ----- 10000Meg Ω ----- Pass
 - Unmated ----- 10000Meg Ω ----- Pass

Dielectric Withstanding Voltage minimums, DWV

- Minimums
 - Breakdown Voltage ----- 1100VAC
 - Test Voltage ----- 825VAC
 - Working Voltage ----- 275VAC
- Initial DWV ----- Passed
- Thermal DWV ----- Passed
- Humidity DWV ----- Passed

DATA SUMMARIES

CONTACT GAPS:

| Initial | | After 100 Cycles | |
|-----------------|--------|------------------|--------|
| Units: | mm | Units: | mm |
| Minimum | 1.3302 | Minimum | 1.4155 |
| Maximum | 1.4275 | Maximum | 1.4712 |
| Average | 1.2272 | Average | 1.2764 |
| St. Dev. | 0.0319 | St. Dev. | 0.0169 |
| Count | 8 | Count | 8 |

Connector Pull:

SIG 0°

| Force (lbs) | |
|-------------|--------------|
| Minimum | 23.26 |
| Maximum | 29.11 |
| Average | 26.20 |

SIG 90°

| Force (lbs) | |
|-------------|--------------|
| Minimum | 27.76 |
| Maximum | 34.38 |
| Average | 30.57 |

INSULATION RESISTANCE (IR):

| | Pin to Ground | | |
|----------|-------------------|-------------|--------------|
| | Mated | Unmated | Unmated |
| Minimum | BNC5/RF316 | BNC5 | RF316 |
| Initial | 10000 | 10000 | 10000 |
| Thermal | 10000 | 10000 | 10000 |
| Humidity | 10000 | 10000 | 10000 |

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

| Voltage Rating Summary | |
|--------------------------|-------------------|
| Minimum | BNC5/RF316 |
| Breakdown Voltage | 1100 |
| Test Voltage | 825 |
| Working Voltage | 275 |

| Pin to Ground | |
|-----------------------------|--------|
| Initial Test Voltage | Passed |
| After Thermal Test Voltage | Passed |
| After Humidity Test Voltage | Passed |

DATA SUMMARIES Continued

LLCR Durability:

- 1) A total of 32 points were measured.
- 2) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 3) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 4) The following guidelines are used to categorize the changes in LLCR as a result from stressing.

| | |
|--------------------------|--------------|
| a. <= +5.0 mOhms: | Stable |
| b. +5.1 to +10.0 mOhms: | Minor |
| c. +10.1 to +15.0 mOhms: | Acceptable |
| d. +15.1 to +50.0 mOhms: | Marginal |
| e. +50.1 to +2000 mOhms | Unstable |
| f. >+2000 mOhms: | Open Failure |

Ground Pin:

| Date | Dec. 20 2010 | Dec. 20 2010 | Jan. 03 2011 | Jan. 13 2011 |
|-----------|-------------------|---------------------|------------------|-------------------|
| | Room Temp C | 23 | 23 | 20 |
| RH | 42% | 45% | 50% | 40% |
| | Peter Chen | | Peter Chen | Peter Chen |
| hm values | Actual Initial | Delta 100 Cycles | Delta Thermal | Delta Humidity |
| Average | 1.8 | 0.1 | 1.6 | 1.0 |
| St. Dev. | 0.4 | 0.6 | 1.6 | 1.0 |
| Min | 1.2 | -0.9 | -0.3 | -0.6 |
| Max | 2.5 | 1.3 | 4.5 | 2.8 |
| Count | 24 | 24 | 24 | 24 |

How many samples are being tested?

8

How many contacts are on each board?

3

| | Stable | Minor | Acceptable | Marginal | Unstable | Open |
|------------|--------|-------|------------|----------|----------|------|
| 100 Cycles | 24 | 0 | 0 | 0 | 0 | 0 |
| Thermal | 24 | 0 | 0 | 0 | 0 | 0 |
| Humidity | 24 | 0 | 0 | 0 | 0 | 0 |

DATA SUMMARIES Continued**Signal Pin:**

| Date | Dec. 20 2010 | Dec. 20 2010 | Jan. 03 2011 | Jan. 13 2011 |
|-------------|-------------------|---------------------|------------------|-------------------|
| From Temp C | 23 | 23 | 23 | 20 |
| RH | 42% | 45% | 50% | 40% |
| Name | Peter Chen | Peter Chen | Peter Chen | Peter Chen |
| hm values | Actual Initial | Delta 100 Cycles | Delta Thermal | Delta Humidity |
| Average | 7.5 | 0.0 | 0.1 | 0.3 |
| St. Dev. | 0.3 | 0.2 | 0.3 | 0.3 |
| Min | 7.1 | -0.5 | -0.3 | 0.0 |
| Max | 8.0 | 0.4 | 0.5 | 0.7 |
| Count | 8 | 8 | 8 | 8 |

How many samples are being tested?

8

How many contacts are on each board?

1

| | Stable | Minor | Acceptable | Marginal | Unstable | Open |
|------------|--------|-------|------------|----------|----------|------|
| 100 Cycles | 8 | 0 | 0 | 0 | 0 | 0 |
| Thermal | 8 | 0 | 0 | 0 | 0 | 0 |
| Humidity | 8 | 0 | 0 | 0 | 0 | 0 |

DATA SUMMARIES Continued**GAS TIGHT:**

- 1) A total of 32 points were measured.
- 2) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 3) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 4) The following guidelines are used to categorize the changes in LLCR as a result from stressing.
 - a. <= +5.0 mOhms: ----- Stable
 - b. +5.1 to +10.0 mOhms: ----- Minor
 - c. +10.1 to +15.0 mOhms: ----- Acceptable
 - d. +15.1 to +50.0 mOhms: ----- Marginal
 - e. +50.1 to +2000 mOhms: ----- Unstable
 - f. >+2000 mOhms: ----- Open Failure

Ground Pin:

| | Date | Jan. 06 2011 | Jan. 07 2011 |
|-------------|------------|-------------------|--------------------------|
| Room Temp C | 23 | 23 | |
| RH | 50% | 50% | |
| Name | Peter Chen | Peter Chen | |
| hm values | | Actual Initial | Delta After Gas Tight |
| Average | 2.5 | 0.3 | |
| St. Dev. | 0.8 | 0.7 | |
| Min | 1.8 | -0.6 | |
| Max | 4.3 | 1.9 | |
| Count | 24 | 24 | |

How many samples are being tested?

8

How many contacts are on each board?

3

| | Stable | Minor | Acceptable | Marginal | Unstable | Open |
|-----------------|--------|-------|------------|----------|----------|------|
| After Gas Tight | 24 | 0 | 0 | 0 | 0 | 0 |

DATA SUMMARIES Continued**Signal Pin:**

| | Date | Jan. 06 2011 | Jan. 07 2011 |
|-----------|--------|-------------------|--------------------------|
| From | Temp C | 23 | 23 |
| | RH | 50% | 50% |
| Name | | Peter Chen | Peter Chen |
| hm values | | Actual Initial | Delta After Gas Tight |
| Average | 12.5 | 0.0 | |
| St. Dev. | 0.4 | 0.1 | |
| Min | 12.1 | -0.1 | |
| Max | 13.1 | 0.2 | |
| Count | 8 | 8 | |

How many samples are being tested?**8****How many contacts are on each board?****1**

| | Stable | Minor | Acceptable | Marginal | Unstable | Open |
|-----------------|--------|-------|------------|----------|----------|------|
| After Gas Tight | 8 | 0 | 0 | 0 | 0 | 0 |

DATA

CONTACT GAPS

| Initial | | |
|------------------|--------|--------|
| Units: mm | | |
| Pos.# | B1 | B2 |
| 1 | 1.3812 | 1.3302 |
| After 500 Cycles | | |
| Units: mm | | |
| Pos.# | B1 | B2 |
| 1 | 1.4712 | 1.4155 |
| | 1.4357 | 1.4375 |
| | 1.4445 | 1.4218 |
| | 1.4335 | 1.4277 |
| | 1.4712 | |

INSULATION RESISTANCE (IR):

Initial Insulation Resistance

Measured In Meg Ohms

Pin to Ground

| Sample# | Mated | A | Unmated | B |
|-------------------|-------|-------|---------|---|
| | X | X | X | |
| 116238-005 | 10000 | 10000 | 10000 | |
| 116238-006 | 10000 | 10000 | 10000 | |

Thermal Insulation Resistance

Measured In Meg Ohms

Pin to Ground

| Sample# | Mated | A | Unmated | B |
|-------------------|-------|-------|---------|---|
| | X | X | X | |
| 116238-005 | 10000 | 10000 | 10000 | |
| 116238-006 | 10000 | 10000 | 10000 | |

DATA Continued**Humidity Insulation Resistance****Measured In Meg Ohms**

| Sample# | Pin to Ground | | |
|-------------------|-------------------|--------------|--------------|
| | Mated | A | Unmated |
| | x | x | x |
| 116238-005 | BNC5/RF316 | BNC5 | RF316 |
| 116238-006 | 10000 | 10000 | 10000 |

DIELECTRIC WITHSTANDING VOLTAGE (DWV):**Initial Breakdown Voltage****Test Voltage Until Breakdown Occurs**

| Sample# | Pin to Ground | | |
|-------------------|-------------------|-------------|--------------|
| | Mated | A | Unmated |
| | x | | |
| 116238-001 | BNC5/RF316 | BNC5 | RF316 |
| 116238-002 | 1300 | 1950 | 2200 |

Initial DWV**Test Voltage= 825**

| Sample# | Pin to Ground | | |
|-------------------|-------------------|-------------|--------------|
| | Mated | A | Unmated |
| | | | B |
| 116238-005 | BNC5/RF316 | BNC5 | RF316 |
| 116238-006 | 825 | 825 | 825 |

DATA Continued**Thermal Test Voltage**

Test Voltage= 825

Pin to Ground

| Sample# | Mated | A | Unmated | B |
|------------|------------|------|---------|---|
| | BNC5/RF316 | BNC5 | RF316 | |
| 116238-005 | 825 | 825 | 825 | |
| 116238-006 | 825 | 825 | 825 | |

Humidity Test Voltage

Test Voltage= 825

Pin to Ground

| Sample# | Mated | A | Unmated | B |
|------------|------------|------|---------|---|
| | BNC5/RF316 | BNC5 | RF316 | |
| 116238-005 | 825 | 825 | 825 | |
| 116238-006 | 825 | 825 | 825 | |

Cable Pull force:**SIG 0°**

| Sample # | Force (lbs) |
|----------|-------------|
| 1 | 28.78 |
| 2 | 23.26 |
| 3 | 24.78 |
| 4 | 25.07 |
| 5 | 29.11 |

SIG 90°

| Sample # | Force (lbs) |
|----------|-------------|
| 1 | 27.76095 |
| 2 | 29.48085 |
| 3 | 28.7091 |
| 4 | 34.37595 |
| 5 | 32.5458 |

DATA Continued**LLCR Durability:****Signal Pin:**

| | mOhm values | Actual | Delta | Delta | Delta |
|-------|-------------|---------|------------|---------|----------|
| Board | Position | Initial | 100 Cycles | Thermal | Humidity |
| 1 | P1 | 7.4 | -0.2 | 0.3 | 0.7 |
| 1 | P2 | 8.0 | -0.5 | -0.2 | 0.6 |
| 1 | P3 | 7.6 | 0.4 | -0.3 | 0.7 |
| 1 | P4 | 7.2 | 0.2 | 0.1 | 0.6 |
| 2 | P1 | 7.7 | 0.0 | -0.2 | 0.0 |
| 2 | P2 | 7.6 | 0.0 | 0.3 | 0.0 |
| 2 | P3 | 7.1 | 0.0 | 0.5 | 0.0 |
| 2 | P4 | 7.3 | 0.1 | -0.1 | 0.0 |

Ground Pin:

| | mOhm values | Actual | Delta | Delta | Delta |
|-------|-------------|---------|------------|---------|----------|
| Board | Position | Initial | 100 Cycles | Thermal | Humidity |
| 1 | P1 | 2.2 | -0.9 | 0.3 | 1.3 |
| 1 | P2 | 2.2 | -0.9 | 0.2 | 1.3 |
| 1 | P3 | 2.2 | -0.9 | 0.2 | 1.3 |
| 1 | P4 | 1.4 | 0.7 | 2.5 | 0.9 |
| 1 | P5 | 1.4 | 0.6 | 2.5 | 0.6 |
| 1 | P6 | 1.4 | 0.6 | 2.4 | 1.2 |
| 1 | P7 | 2.2 | 0.0 | -0.1 | 0.1 |
| 1 | P8 | 2.3 | -0.1 | -0.3 | 0.3 |
| 1 | P9 | 2.3 | -0.2 | -0.2 | -0.4 |
| 1 | P10 | 1.3 | 1.3 | 0.7 | 0.7 |
| 1 | P11 | 1.2 | 1.2 | 0.9 | 1.3 |
| 1 | P12 | 1.3 | 1.2 | 0.8 | 0.7 |
| 2 | P1 | 2.4 | -0.1 | 4.5 | -0.5 |
| 2 | P2 | 2.5 | -0.1 | 4.3 | -0.6 |
| 2 | P3 | 2.4 | -0.2 | 4.4 | -0.5 |
| 2 | P4 | 1.6 | 0.1 | 0.9 | 2.1 |
| 2 | P5 | 1.7 | -0.1 | 0.8 | 1.9 |
| 2 | P6 | 1.6 | 0.1 | 1.0 | 2.0 |
| 2 | P7 | 1.9 | -0.1 | 0.7 | 2.8 |
| 2 | P8 | 1.9 | 0.0 | 0.6 | 2.7 |
| 2 | P9 | 2.0 | -0.1 | 0.0 | 2.7 |
| 2 | P10 | 1.6 | -0.2 | 3.4 | 0.6 |
| 2 | P11 | 1.5 | -0.1 | 3.5 | 0.6 |
| 2 | P12 | 1.5 | -0.1 | 3.4 | 0.7 |

DATA Continued**LLCR Gas Tight:
Signal Pin:**

| | mOhm values | Actual | Delta |
|--------------|------------------------|----------------|-----------------------|
| Board | Position | Initial | After Humidity |
| 1 | P1 | 13.0 | 0.0 |
| 1 | P2 | 12.5 | 0.0 |
| 1 | P3 | 12.2 | 0.1 |
| 1 | P4 | 13.1 | 0.0 |
| 2 | P1 | 12.5 | -0.1 |
| 2 | P2 | 12.1 | -0.1 |
| 2 | P3 | 12.5 | 0.2 |
| 2 | P4 | 12.2 | -0.1 |

Ground Pin:

| | mOhm values | Actual | Delta |
|--------------|------------------------|----------------|-----------------------|
| Board | Position | Initial | After Humidity |
| 1 | P1 | 2.2 | 0.1 |
| 1 | P2 | 2.2 | 0.1 |
| 1 | P3 | 2.2 | 0.0 |
| 1 | P4 | 2.0 | 0.1 |
| 1 | P5 | 2.0 | 0.1 |
| 1 | P6 | 2.0 | 0.1 |
| 1 | P7 | 2.0 | 1.9 |
| 1 | P8 | 2.0 | 1.9 |
| 1 | P9 | 2.0 | 1.9 |
| 1 | P10 | 2.0 | 0.2 |
| 1 | P11 | 2.1 | 0.2 |
| 1 | P12 | 2.1 | 0.0 |
| 2 | P1 | 2.3 | 0.1 |
| 2 | P2 | 2.3 | 0.2 |
| 2 | P3 | 2.3 | 0.2 |
| 2 | P4 | 4.3 | -0.6 |
| 2 | P5 | 4.3 | -0.6 |
| 2 | P6 | 4.2 | -0.6 |
| 2 | P7 | 3.5 | 0.8 |
| 2 | P8 | 3.4 | 0.8 |
| 2 | P9 | 3.5 | 0.8 |
| 2 | P10 | 1.8 | -0.1 |
| 2 | P11 | 1.8 | -0.1 |
| 2 | P12 | 1.8 | -0.1 |

| | |
|------------------------------------|--|
| Tracking Code: 116238 Report Rev 1 | Part #: BNC5-J-P-GN-ST-TH2D/RF316-04SP2-01SP1-0150 |
| Part description: BNC5/RF316 | |

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: HZ-MO-03

Description: Micro-ohmmeter

Manufacturer: Keithley

Model: 580

Serial #: 297288

Accuracy: Last Cal: 2010-9-21, Next Cal: 2011-9-20

Equipment #: HZ-TCT-01

Description: Normal force analyzer

Manufacturer: Mecmesin Multitester

Model: Mecmesin Multitester 2.5-i

Serial #: 08-1049-04

Accuracy: Last Cal: 2010-4-28, Next Cal: 2011-4-27

Equipment #: HZ-THC-01

Description: Humidity transmitter

Manufacturer: Thermtron

Model: HMM30C

Serial #: D0240037

Accuracy: Last Cal: 2010-6-1, Next Cal: 2011-5-31

Equipment #: HZ-MO-01

Description: Micro-ohmmeter

Manufacturer: Keithley

Model: 2700

Serial #: 1199807

Accuracy: Last Cal: 2010-6-1, Next Cal: 2011-5-31

Equipment #: HZ-TSC-01

Description: Thermal Shock transmitter

Manufacturer: Keithley

Model: 10-VT14994

Serial #: VTS-3-6-6-SC/AC

Accuracy: Last Cal: 2010-11-1, Next Cal: 2011-11-1