Project Number: Design Qualification Test Report	Tracking Code: 2183953_Report_Rev_1
Requested by: Alvin Wang	Date: 3/27/2020
Part #: RF047-A-18SP-18SP-0152/RF047-A-18SJ-18SJ-0152	
Part description: RF047-A-18SP/RF047-A-18SJ	Tech: Tony Wagoner
Test Start: 1/15/2020	Test Completed: 1/24/2020

DESIGN QUALIFICATION TEST REPORT

RF047-A-18SP/RF047-A-18SJ
RF047-A-18SP-18SP-0152/RF047-A-18SJ-18SJ-0152

REVISION HISTORY

DATA	REV.NUM.	DESCRIPTION	ENG
2/27/2020	**1**	**Initial Issue**	**KH**

CERTIFICATION

All instruments and measuring equipment were calibrated to National Institute for Standards and Technology (NIST) traceable standards according to IS0 10012-l and ANSI/NCSL 2540-1, as applicable.

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 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 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) Samtec Test PCBs used: PCB-103219-TST

FLOWCHARTS

Mating/Unmating/Durability

Group 1
RF047-A-18SJ-505050-0152
RF047-A-18SP-505050-0152
4 Assemblies

Step	Description
1.	Length & Mass
2.	Interface Gaging
3.	DWV at Test Voltage (1) - Non Standard DWV = 500 VAC
4.	LLCR (2) - Non Standard *Note: Signal and ground.*
5.	Cycles Quantity = 500 Cycles *Note: By hand. Torque each time to 8 in-lbs. Rotate plug coupling nut only. Do not rotate entire assembly. MIL-PRF-39012, Paragraph. 4.6.12*
6.	LLCR (2) - Non Standard Max Delta = 15 mOhm *Note: Signal and ground.*
7.	Interface Gaging

(1) DWV at Test Voltage = Other
Test Condition = 1 (Sea Level) Test voltage applied for 60 seconds
MIL-PRF-39012, Paragraph. 4.6.14 per MIL-STD-202-301

(2) LLCR = Other
Open Circuit Voltage = 20 mV Max
Test Current = 100 mA Max
MIL-PRF-39012, Paragraph 4.6.13 except current to be 100mA nominal and voltage to be 20 mV maximum.

FLOWCHARTS Continued

IR/DWV

Pin-to-Ground

Group 1

RF047-A-18SJ-505050-1000

RF047-A-18SP-505050-1000

4 Assemblies

Note: For STEP 6, please put the following additional cable assemblies in the thermal shock chamber (ride along parts).
Plug & jack versions are mated with dust caps (Yellow) on open ends.
Plug version: RF047A-18SJ-18SJ-1000 (4 PCS)
Jack version: RF047A-18SP-18SP-1000 (4 PCS)

Step	Description
1.	Length & Mass
2.	Interface Gaging
3.	IR (2) - Non Standard
4.	DWV at Test Voltage (1) - Non Standard Test Voltage = 500 VAC
5.	LLCR (3) - Non Standard *Note: Signal and ground.*
6.	Thermal Shock (4) - Non Standard
7.	IR (2) - Non Standard
8.	DWV at Test Voltage (1) - Non Standard Test Voltage = 500 VAC
9.	LLCR (3) - Non Standard Max Delta = 15 mOhm *Note: Signal and ground.*
10.	Interface Gaging

(1) DWV at Test Voltage = Other
Test Condition = 1 (Sea Level) Test voltage applied for 60 seconds
MIL-PRF-39012, Paragraph. 4.6.14 per MIL-STD-202-301

(2) IR = Other
Test Condition = 500V DC, 2 Minutes Max
MIL-PRF-39012, Paragraph 4.6.8 per MIL-STD-202-302

(3) LLCR = Other
Open Circuit Voltage = 20 mV Max
Test Current = 100 mA Max
MIL-PRF-39012, Paragraph 4.6.13 except current to be 100mA nominal and voltage to be 20 mV maximum.

(4) Thermal Shock = Other
Exposure Time at Temperature Extremes = 1/2 Hour
Test Condition = I (-65°C to +125°C)
Test Duration = test condition B except 10 cycles instead of 5.
MIL-PRF-39012, Paragraph. 4.6.17 per MIL-STD-202-107

FLOWCHARTS Continued

Cable Pull

Group 1
RF047-A-18SJ-505050-0152
2 Assemblies
0 Degrees

Step	Description
1.	Cable Retention (2) - Non Standard *Note: Pull-to-destruct.*

Group 2
RF047-A-18SP-505050-0152
2 Assemblies
0 Degrees

Step	Description
1.	Cable Retention (2) - Non Standard *Note: Pull-to-destruct.*

Group 3
RF047-A-18SJ-505050-0152
RF047-A-18SP-505050-0152
4 Assemblies
0 Degrees

Step	Description
1.	Length & Mass
2.	Interface Gaging
3.	LLCR (3) - Non Standard *Note: Signal and ground.*
4.	Cable Retention (1) - Non Standard *Note: Apply 5 pounds (2.3 kg) for Cable Retention test.*
5.	LLCR (3) - Non Standard *Note: Signal and ground.*
6.	Interface Gaging

(1) Cable Retention = Other
Apply 10 pounds (4.6 kg) for Cable Retention test.
MIL-PRF-30192, Paragraph 4.6.21

(2) Cable Retention = Other
Pull-to-destruct.
MIL-PRF-30192, Paragraph 4.6.21

(3) LLCR = Other
Open Circuit Voltage = 20 mV Max
Test Current = 100 mA Max
MIL-PRF-39012, Paragraph 4.6.13 except current to be 100mA nominal and voltage to be 20 mV maximum.

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

THERMAL SHOCK:

1) MIL-PRF-39012, *Paragraph. 4.6.17 per MIL-STD-202-107*
2) Test Condition: I (-65℃ to +125℃)
3) Test Time: ½ hour dwell at each temperature extreme
4) Test Duration: Test condition B except 10 cycles instead of 5.
5) All test samples are pre-conditioned at ambient.
6) All test samples are exposed to environmental stressing in the mated condition.

MATING/UNMATING:

1) Reference document: EIA-364-13, *Mating and Unmating Forces Test Procedure for Electrical Connectors*.
2) The full insertion position was to within 0.003" to 0.004" of the plug bottoming out in the receptacle to prevent damage to the system under test.
3) One of the mating parts is secured to a floating X-Y table to prevent damage during cycling.

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 +1000 mOhms: ----------Unstable
    f. >+1000 mOhms:----------Open Failure

ATTRIBUTE DEFINITIONS Continued

The following is a brief, simplified description of attributes

INSULATION RESISTANCE (IR):

To determine the resistance of insulation materials to leakage of current through or on the surface of these materials when a DC potential is applied.

1) PROCEDURE:
    a. Reference document: EIA-364-21, *Insulation Resistance Test Procedure for Electrical Connectors*.
    b. Test Conditions:
        i. Between Adjacent Contacts or Signal-to-Ground
        ii. Electrification Time 2.0 minutes
        iii. Test Voltage (500 VDC) corresponds to calibration settings for measuring resistances.
2) MEASUREMENTS:
3) When the specified test voltage is applied (VDC), the insulation resistance shall not be less than 5000 megohms.

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

To determine if the sockets can operate at its rated voltage and withstand momentary over potentials due to switching, surges, and other similar phenomenon. Separate samples are used to evaluate the effect of environmental stresses so not to influence the readings from arcing that occurs during the measurement process.

1) PROCEDURE:
    a. Reference document: EIA-364-20, *Withstanding Voltage Test Procedure for Electrical Connectors*.
    b. Test Conditions:
        i. Between Adjacent Contacts or Signal-to-Ground
        ii. Barometric Test Condition 1
        iii. Rate of Application 500 V/Sec
        iv. Test Voltage (VAC) until breakdown occurs
2) MEASUREMENTS/CALCULATIONS
    a. The breakdown voltage shall be measured and recorded.
    b. The dielectric withstanding voltage shall be recorded as 75% of the minimum breakdown voltage.
    c. The working voltage shall be recorded as one-third (1/3) of the dielectric withstanding voltage (one-fourth of the breakdown voltage).

ATTRIBUTE DEFINITIONS Continued

The following is a brief, simplified description of attributes

CABLE PULL:

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

Fig. 1
0° Connector pull, notice the electrical continuity hook-up wires.

RESULTS

Cable Pull force

- **0° Pull**
  - **SJ**
    - **Min ----------13.26 lbs**
    - **Max ----------14.84 lbs**
  - **SP**
    - **Min ----------12.71 lbs**
    - **Max ----------13.26 lbs**

Insulation Resistance minimums, IR

Pin to Ground

- **Initial**
  - **Mated ----------45000 Meg Ω ---------- Passed**
- **Thermal Shock**
  - **Mated ----------45000 Meg Ω ---------- Passed**

Dielectric Withstanding Voltage minimums, DWV

- **Minimums**
  - **Test Voltage ----------500 VAC**

Pin to Ground

- **Initial DWV ----------Passed**
- **Thermal DWV----------Passed**

DWV Mating/Unmating Durability Group

- **Minimums**
  - **Test Voltage ----------500 VAC**

Pin to Ground

- **Initial DWV ----------Passed**

RESULTS Continued

Length & Mass

Mating/Unmating Durability Group

Length

SJ

- **Min ---------- 153.19 mm**
- **Max ---------- 153.99 mm**

SP

- **Min ---------- 152.40 mm**
- **Max ---------- 153.99 mm**

Mass

SJ

- **Min ---------- 3.048 g**
- **Max ---------- 3.064 g**

SP

- **Min ---------- 3.810 g**
- **Max ---------- 3.860 g**

IR/DWV Group

Length

SJ

- **Min ----------1004.89 mm**
- **Max ----------1004.89 mm**

SP

- **Min ----------1003.3 mm**
- **Max ----------1003.3 mm**

Mass

SJ

- **Min ---------- 7.952 g**
- **Max ---------- 8.044 g**

SP

- **Min ---------- 8.878 g**
- **Max ---------- 8.923 g**

Cable Pull Group

Length

SJ

- **Min ---------- 152.40 mm**
- **Max ---------- 152.40 mm**

SP

- **Min ---------- 152.40 mm**
- **Max ---------- 152.40 mm**

Mass

SJ

- **Min ---------- 3.05 g**
- **Max ---------- 3.50 g**

SP

- **Min ---------- 3.81 g**
- **Max ---------- 3.82 g**

RESULTS Continued

Interface Gaging

IR/DWV Group

SJ

Initial

- **Min ---------- 0.00020 inch**
- **Max ---------- 0.00071 inch**

After 500 cycles

- **Min ---------- 0.00028 inch**
- **Max ---------- 0.00067 inch**

SP

Initial

- **Min ---------- 0.00047 inch**
- **Max ---------- 0.00130 inch**

After 500 cycles

- **Min ---------- 0.00067 inch**
- **Max ---------- 0.00205 inch**

Cable Pull Group

SJ

Initial

- **Min ---------- 0.00001 inch**
- **Max ---------- 0.00051 inch**

After 500 cycles

- **Min ---------- 0.00016 inch**
- **Max ---------- 0.00079 inch**

SP

Initial

- **Min ---------- 0.00020 inch**
- **Max ---------- 0.00079 inch**

After 500 cycles

- **Min ---------- 0.00016 inch**
- **Max ---------- 0.00177 inch**

RESULTS Continued

LLCR IR/DWV (4 signal and 4 ground LLCR test points)

Signal Pin

- **Initial ---------- 552.01 mOhms Max**
- **Thermal Shock**
  - **<= +5.0 mOhms ---------- 0 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 4 Points ---------- Minor**
  - **+10.1 to +15.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+15.1 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.1 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

Ground Pin

- **Initial ---------- 194.90 mOhms Max**
- **Thermal Shock**
  - **<= +5.0 mOhms ---------- 0 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 ---------- 4 Points ---------- Marginal**
  - **+50.1 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

LLCR Cable Pull (4 signal and 4 ground LLCR test points)

Signal Pin

- **Initial ---------- 81.29 mOhms Max**
- **5 Ib Retention**
  - **<= +5.0 mOhms ---------- 4 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 +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

Ground Pin

- **Initial ---------- 28.71 mOhms Max**
- **5 Ib Retention**
  - **<= +5.0 mOhms ---------- 4 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 +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

RESULTS Continued

LLCR Durability (4 signal and 4 ground LLCR test points)

Signal Pin

- **Initial ---------- 81.87 mOhms Max**
- **Durability, 500 Cycles**
  - **<= +5.0 mOhms----------4 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 +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

Ground Pin

- **Initial ---------- 29.25 mOhms Max**
- **Durability, 500 Cycles**
  - **<= +5.0 mOhms----------4 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 +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

DATA SUMMARIES

Cable Pull Force:

0° Pull

18SJ	Force (lbs)
Minimum	**13.26**
Maximum	14.84
Average	14.05

18SP	Force (lbs)
Minimum	**12.71**
Maximum	13.26
Average	12.98

INSULATION RESISTANCE (IR):

	Pin to Ground
	Mated
Minimum	RF047A/RF047A
Initial	45000
Thermal Shock	45000

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

Pin to Ground (500 VAC)	
Initial Test Voltage	Pass
After Thermal Shock Test Voltage	Pass

DWV Mating/Unmating Durability Group

Pin to Ground (500 VAC)	
Initial Test Voltage	Pass

DATA SUMMARIES Continued

LENGTH & MASS

Mating/Unmating Durability Group

18SJ	Length (mm)	Mass (g)
1	153.99	3.057
2	153.99	3.064
3	153.19	3.048
4	153.19	3.06
Min	153.19	3.048
Max	154.99	3.064
Avg	153.59	3.057

18SP	Length (mm)	Mass (g)
1	152.40	3.812
2	153.99	3.829
3	153.99	3.821
4	152.40	3.857
Min	152.40	3.81
Max	153.99	3.86
Avg	153.20	3.83

IR/DWV Group

18SJ	Length (mm)	Mass (g)
1	1004.89	7.998
2	1004.89	7.998
3	1004.89	7.952
4	1004.89	8.044
Min	1004.89	7.952
Max	1004.89	8.044
Avg	1004.89	7.998

18SP	Length (mm)	Mass (g)
1	1003.3	8.890
2	1003.3	8.923
3	1003.3	8.906
4	1003.3	8.878
Min	1003.3	8.878
Max	1003.3	8.923
Avg	1003.3	8.899

DATA SUMMARIES Continued

Cable Pull Group

18SJ	Length (mm)	Mass (g)
13	152.40	3.054
14	152.40	3.051
15	152.40	3.504
16	152.40	3.050
Min	152.40	3.05
Max	152.40	3.50
Avg	152.40	3.17

18SP	Length (mm)	Mass (g)
13	152.40	3.830
14	152.40	3.821
15	152.40	3.811
16	152.40	3.811
Min	152.40	3.81
Max	152.40	3.83
Avg	152.40	3.82

DATA SUMMARIES Continued

INTERFACE GAGING

IR/DWV Group

Gaging (.003 / .000) (in)			
18SJ	Initial	500 Cycles	Deltas
1	0.00039	0.00039	0.00000
2	0.00055	0.00047	0.00008
3	0.0002	0.00028	0.00008
4	0.00071	0.00067	0.00004
Min	0.00020	0.00028	0.00000
Max	0.00071	0.00067	0.00008
Avg	0.00046	0.00045	0.00005

Gaging (.003 / .000) (in)			
18SP	Initial	500 Cycles	Deltas
1	0.00047	0.00134	0.00087
2	0.00067	0.00067	0.00000
3	0.00083	0.00126	0.00043
4	0.00130	0.00205	0.00075
Min	0.00047	0.00067	0.00000
Max	0.00130	0.00205	0.00087
Avg	0.00082	0.00133	0.00051

Cable Pull Group

Gaging (.003 / .000) (in)			
18SJ	Initial	500 Cycles	Deltas
1	0.00001	0.00016	0.00015
2	0.00008	0.00063	0.00055
3	0.00012	0.00079	0.00067
4	0.00051	0.00055	0.00004
Min	0.00001	0.00016	0.00004
Max	0.00051	0.00079	0.00067
Avg	0.00018	0.00053	0.00035

Gaging (.003 / .000) (in)			
18SP	Initial	500 Cycles	Deltas
1	0.00079	0.00177	0.00098
2	0.00071	0.00095	0.00024
3	0.00047	0.00142	0.00095
4	0.00020	0.00016	0.00004
Min	0.00020	0.00016	0.00004
Max	0.00079	0.00177	0.00098
Avg	0.00054	0.00108	0.00055

DATA SUMMARIES Continued

LLCR Durability:

1) A total of 4 signal and 4 ground 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 +1000 mOhms----------Unstable
   f. >+1000 mOhms:----------Open Failure

LLCR Measurement Summaries by Pin Type				
Date	1/15/2020	1/24/2020		
Room Temp (Deg C)	23	23		
Rel Humidity (%)	45	39		
Technician	Tony Wagoner	Tony Wagoner		
mOhm values	Actual **Initial**	**Delta 500 Cycles**		
Pin Type: Signal 1				
Average	81.58	0.47		
St. Dev.	0.26	0.19		
Min	81.31	0.24		
Max	81.87	0.69		
Summary Count	4	4		
Total Count	4	4		
Pin Type: GND 1				
Average	28.92	0.67		
St. Dev.	0.26	0.17		
Min	28.61	0.44		
Max	29.25	0.82		
Summary Count	4	4		
Total Count	4	4		

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=10**	**>10 & <=15**	**>15 & <=50**	**>50 & <=1000**	**>1000**
500 Cycles	**8**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

LLCR IR/DWV:

1) A total of 4 signal and 4 ground 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 +1000 mOhms: ----------Unstable
   f. >+1000 mOhms:----------Open Failure

LLCR Measurement Summaries by Pin Type				
Date	1/15/2020	1/16/2020		
Room Temp (Deg C)	23	22		
Rel Humidity (%)	46	37		
Technician	Tony Wagoner	Tony Wagoner		
mOhm values	Actual **Initial**	**Delta** **Thermal Shock**		
	Pin Type: Signal 1			
Average	551.62	7.57		
St. Dev.	0.45	0.24		
Min	551	7.3		
Max	552.01	7.85		
Summary Count	4	4		
Total Count	4	4		
	Pin Type: GND 1			
Average	193.05	33.13		
St. Dev.	1.66	1.38		
Min	190.98	31.41		
Max	194.9	34.62		
Summary Count	4	4		
Total Count	4	4		

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=10**	**>10 & <=15**	**>15 & <=50**	**>50 & <=1000**	**>1000**
Thermal Shock	**0**	**4**	**0**	**4**	**0**	**0**

DATA SUMMARIES Continued

LLCR Cable Pull:

1) A total of 4 signal and 4 ground 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 +1000 mOhms: ----------Unstable
   f. >+1000 mOhms:----------Open Failure

LLCR Measurement Summaries by Pin Type				
Date	1/15/2020	1/16/2020		
Room Temp (Deg C)	23	23		
Rel Humidity (%)	46	36		
Technician	Tony Wagoner	Tony Wagoner		
mOhm values	Actual **Initial**	**Delta 5lb Retention**		
Pin Type: Signal 1				
Average	81.15	1.41		
St. Dev.	0.15	1.02		
Min	80.95	0.12		
Max	81.29	2.54		
Summary Count	4	4		
Total Count	4	4		
Pin Type: GND 1				
Average	28.51	0.43		
St. Dev.	0.18	0.29		
Min	28.29	0.24		
Max	28.71	0.86		
Summary Count	4	4		
Total Count	4	4		

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=10**	**>10 & <=15**	**>15 & <=50**	**>50 & <=1000**	**>1000**
Cable Retention (5lbs)	**8**	**0**	**0**	**0**	**0**	**0**

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: TCT-04
Description: Dillon Quantrol TC21 25-1000 mm/min series test stand
Manufacturer: Dillon Quantrol
Model: TC2 I series test stand
Serial #: 04-1041-04
Accuracy: Speed Accuracy: +/- 5% of indicated speed; Speed Accuracy: +/- 5% of indicated speed;
… Last Cal: 05/29/2019, Next Cal: 05/29/2020

Equipment #: MO-11
Description: Switch/Multimeter
Manufacturer: Keithley
Model: 3706
Serial #: 120169
Accuracy: See Manual
… Last Cal: 09/11/2019, Next Cal: 09/11/2020

Equipment #: TSC-01
Description: Vertical Thermal Shock Chamber
Manufacturer: Cincinnati Sub Zero
Model: VTS-3-6-6-SC/AC
Serial #: 10-VT14993
Accuracy: See Manual
… Last Cal: 06/30/2019, Next Cal: 06/30/2020

Equipment #: HPT-01
Description: Hipot Safety Tester
Manufacturer: Vitrek
Model: V73
Serial #: 019808
Accuracy:
… Last Cal: 05/15/2019, Next Cal: 05/15/2020