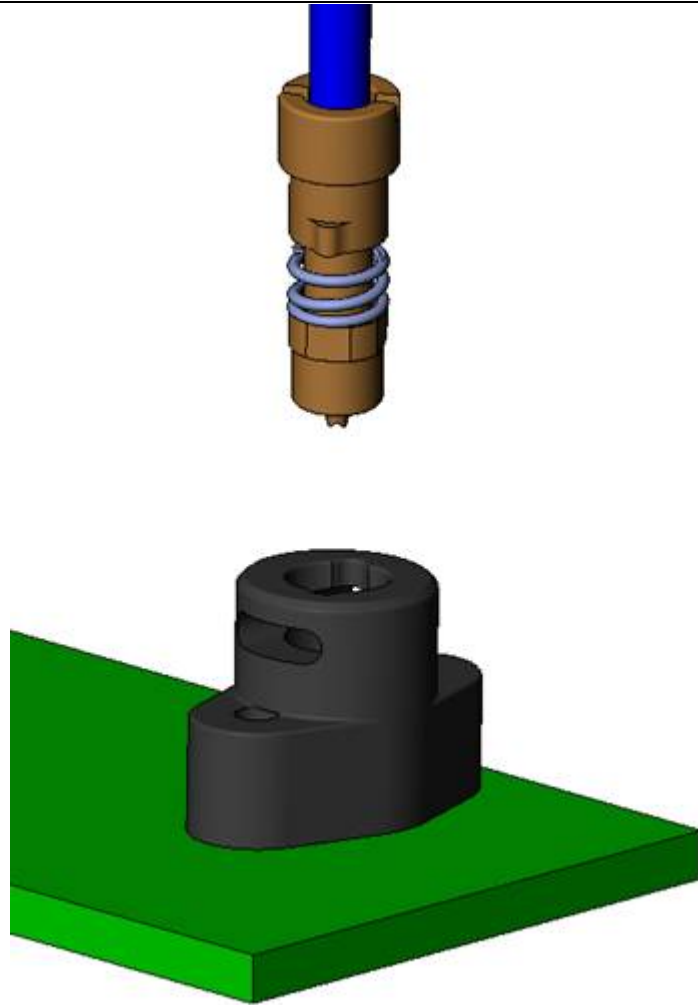




Project Number:		Tracking Code: TC0903--2171_ReportRev4			
Requested by: Kevin Bratcher		Date: 2/22/2010		Product Rev: J	
Part #: RF25M-SCC1-SING		Lot #: 1		Tech: Rodney Riley & Gary Lomax	Eng: Troy Cook
Part description: SCCX - CCH					Qty to test: 4
Test Start: 03/18/2009		Test Completed: 4/20/2009			



PART DESCRIPTION

RF25M-SCC1-SING

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: Cycle test up to 500 cycles. 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) Samtec Test PCBs used: PCB-101500-TST-XX

FLOWCHARTS**Durability 100 Cycle Group**

TEST STEP	GROUP A ROUND 5 Samples Cards to be changed at 50 cycles 100 Cycles	GROUP B CROWNED 5 Samples Cards to be changed at 25 cycles 100 Cycles	GROUP C ROUND 5 Sample Cards will not be changed 100 Cycles
01	LLCR-1	LLCR-1	LLCR-1
02	100 Cycles	100 Cycles	100 Cycles
03	Clean with Compressed Air	Clean with Compressed Air	Clean with Compressed Air
04	LLCR-2	LLCR-2	LLCR-2
05	Data Review	Data Review	Data Review
06	Thermals	Thermals	Thermals
07	LLCR-3	LLCR-3	LLCR-3
08	Data Review	Data Review	Data Review
09	Humidity	Humidity	Humidity
10	LLCR-4	LLCR-4	LLCR-4

Durability 250 Cycle Group

TEST STEP	GROUP A ROUND 5 Samples Cards to be changed at 50 cycles 250 Cycles	GROUP B CROWNED 5 Samples Cards to be changed at 25 cycles 250 Cycles	GROUP C ROUND 5 Sample Cards will not be changed 250 Cycles
01	LLCR-1	LLCR-1	LLCR-1
02	250 Cycles	250 Cycles	250 Cycles
03	Clean with Compressed Air	Clean with Compressed Air	Clean with Compressed Air
04	LLCR-2	LLCR-2	LLCR-2
05	Data Review	Data Review	Data Review
06	Thermals	Thermals	Thermals
07	LLCR-3	LLCR-3	LLCR-3
08	Data Review	Data Review	Data Review
09	Humidity	Humidity	Humidity
10	LLCR-4	LLCR-4	LLCR-4

LLCR = EIA-364-23, LLCR

use Keithley 580 in the dry circuit mode, 10 mA Max

Cycling Rate = 500 +/- 50 per hour

Pass Criteria for LLCR = TBD

Thermal Aging = EIA-364-17, Test Condition 4, 105 deg C;

Time Condition 'B' (250 hours)

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

Durability 500 Cycle Group

TEST STEP	5 Cables, 50 Cycle Boards, 5 LLCR Boards	5 Cables, 100 Cycle Boards, 5 LLCR Boards	5 Cables, 5 Cycle Boards, 5 LLCR Boards
	GROUP A ROUND 5 Samples Cards to be changed at 50 cycles 500 Cycles	GROUP B CROWNED 5 Samples Cards to be changed at 25 cycles 500 Cycles	GROUP C ROUND 5 Sample Cards will not be changed 500 Cycles
01	LLCR-1	LLCR-1	LLCR-1
02	50 Cycles	50 Cycles	50 Cycles
03	Clean with Compressed Air	Clean with Compressed Air	Clean with Compressed Air
04	LLCR-2	LLCR-2	LLCR-2
05	Data Review	Data Review	Data Review
06	50 Cycles (100)	50 Cycles (100)	50 Cycles (100)
07	Clean with Compressed Air	Clean with Compressed Air	Clean with Compressed Air
08	LLCR-3	LLCR-3	LLCR-3
09	Data Review	Data Review	Data Review
10	50 Cycles (150)	50 Cycles (150)	50 Cycles (150)
11	Clean with Compressed Air	Clean with Compressed Air	Clean with Compressed Air
12	LLCR-4	LLCR-4	LLCR-4
13	Data Review	Data Review	Data Review
14	50 Cycles (200)	50 Cycles (200)	50 Cycles (200)
15	Clean with Compressed Air	Clean with Compressed Air	Clean with Compressed Air
16	LLCR-5	LLCR-5	LLCR-5
17	Data Review	Data Review	Data Review
18	50 Cycles (250)	50 Cycles (250)	50 Cycles (250)
19	Clean with Compressed Air	Clean with Compressed Air	Clean with Compressed Air
20	LLCR-6	LLCR-6	LLCR-6
21	Data Review	Data Review	Data Review
22	50 Cycles (300)	50 Cycles (300)	50 Cycles (300)
23	Clean with Compressed Air	Clean with Compressed Air	Clean with Compressed Air
24	LLCR-7	LLCR-7	LLCR-7
25	Data Review	Data Review	Data Review
26	50 Cycles (350)	50 Cycles (350)	50 Cycles (350)
27	Clean with Compressed Air	Clean with Compressed Air	Clean with Compressed Air
28	LLCR-8	LLCR-8	LLCR-8
29	Data Review	Data Review	Data Review
30	50 Cycles (400)	50 Cycles (400)	50 Cycles (400)
31	Clean with Compressed Air	Clean with Compressed Air	Clean with Compressed Air
32	LLCR-9	LLCR-9	LLCR-9
33	Data Review	Data Review	Data Review
34	50 Cycles (450)	50 Cycles (450)	50 Cycles (450)
35	Clean with Compressed Air	Clean with Compressed Air	Clean with Compressed Air
36	LLCR-10	LLCR-10	LLCR-10
37	Data Review	Data Review	Data Review
38	50 Cycles (500)	50 Cycles (500)	50 Cycles (500)
39	Clean with Compressed Air	Clean with Compressed Air	Clean with Compressed Air
40	LLCR-11	LLCR-11	LLCR-11
41	Data Review	Data Review	Data Review
42	Thermals	Thermals	Thermals
43	LLCR-12	LLCR-12	LLCR-12
44	Data Review	Data Review	Data Review
45	Humidity	Humidity	Humidity
46	LLCR-13	LLCR-13	LLCR-13

LLCR = EIA-364-23, LLCR

use Keithley 580 in the dry circuit mode, 10 mA Max

Cycling Rate = 500 +/- 50 per hour

Pass Criteria for LLCR = TBD

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

THERMAL:

- 1) EIA-364-17, *Temperature Life with or without Electrical Load Test Procedure for Electrical Connectors*.
- 2) Test Condition 4 at 105° C.
- 3) Test Time Condition B for 250 hours.
- 4) All test samples are pre-conditioned at ambient.
- 5) 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. $\leq +5.0$ 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

RESULTS

LLCR Durability (5 LLCR test points), Group A (ROUND)

- **Initial** ----- 18.9 mOhms Max
- **Durability, 100 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Thermal**
 - **<= +5.0 mOhms** -----5 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
- **Humidity**
 - **<= +5.0 mOhms** -----5 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 Durability (5 LLCR test points), Group B (CROWNED)

- **Initial** ----- 14.7 mOhms Max
- **Durability, 100 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Thermal**
 - **<= +5.0 mOhms** -----5 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
- **Humidity**
 - **<= +5.0 mOhms** -----5 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 Durability (5 LLCR test points), Group C (ROUND)

- **Initial** ----- 19.9 mOhms Max
- **Durability, 100 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Thermal**
 - **<= +5.0 mOhms** -----5 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
- **Humidity**
 - **<= +5.0 mOhms** -----5 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 Durability (5 LLCR test points), Group A (ROUND)

- **Initial** ----- 13.7 mOhms Max
- **Durability, 250 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Thermal**
 - **<= +5.0 mOhms** -----5 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
- **Humidity**
 - **<= +5.0 mOhms** -----5 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 Durability (5 LLCR test points), Group B (CROWNED)

- **Initial** ----- 14.5 mOhms Max
- **Durability, 250 Cycles**
 - <= +5.0 mOhms -----5 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
- **Thermal**
 - <= +5.0 mOhms -----5 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
- **Humidity**
 - <= +5.0 mOhms -----5 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 Durability (5 LLCR test points), Group C (ROUND)

- **Initial** ----- 13.9 mOhms Max
- **Durability, 250 Cycles**
 - <= +5.0 mOhms -----5 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
- **Thermal**
 - <= +5.0 mOhms -----5 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
- **Humidity**
 - <= +5.0 mOhms -----5 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 Durability (5 LLCR test points), Group A (ROUND)

- **Initial** ----- 13.7 mOhms Max
- **Durability, 50 Cycles**
 - <= +5.0 mOhms -----5 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
- **Durability, 100 Cycles**
 - <= +5.0 mOhms -----5 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
- **Durability, 150 Cycles**
 - <= +5.0 mOhms -----5 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
- **Durability, 200 Cycles**
 - <= +5.0 mOhms -----5 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
- **Durability, 250 Cycles**
 - <= +5.0 mOhms -----5 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
- **Durability, 300 Cycles**
 - <= +5.0 mOhms -----5 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
- **Durability, 350 Cycles**
 - <= +5.0 mOhms -----5 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

- **Durability, 400 Cycles**
 - $\leq +5.0$ mOhms -----5 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
- **Durability, 450 Cycles**
 - $\leq +5.0$ mOhms -----5 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
- **Durability, 500 Cycles**
 - $\leq +5.0$ mOhms -----5 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
- **Thermal**
 - $\leq +5.0$ mOhms -----5 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
- **Humidity**
 - $\leq +5.0$ mOhms -----5 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 Durability (5 LLCR test points), Group B (CROWNED)

- **Initial** ----- 13.9 mOhms Max
- **Durability, 50 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Durability, 100 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Durability, 150 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Durability, 200 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Durability, 250 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Durability, 300 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Durability, 350 Cycles**
 - **<= +5.0 mOhms** -----5 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

- **Durability, 400 Cycles**
 - $\leq +5.0$ mOhms -----5 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
- **Durability, 450 Cycles**
 - $\leq +5.0$ mOhms -----5 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
- **Durability, 500 Cycles**
 - $\leq +5.0$ mOhms -----5 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
- **Thermal**
 - $\leq +5.0$ mOhms -----5 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
- **Humidity**
 - $\leq +5.0$ mOhms -----5 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 Durability (5 LLCR test points), Group C (ROUND)

- **Initial** ----- 13.6 mOhms Max
- **Durability, 50 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Durability, 100 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Durability, 150 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Durability, 200 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Durability, 250 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Durability, 300 Cycles**
 - **<= +5.0 mOhms** -----5 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
- **Durability, 350 Cycles**
 - **<= +5.0 mOhms** -----5 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

- **Durability, 400 Cycles**
 - $\leq +5.0$ mOhms -----5 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
- **Durability, 450 Cycles**
 - $\leq +5.0$ mOhms -----5 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
- **Durability, 500 Cycles**
 - $\leq +5.0$ mOhms -----5 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
- **Thermal**
 - $\leq +5.0$ mOhms -----5 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
- **Humidity**
 - $\leq +5.0$ mOhms -----5 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

TDR PLOTS

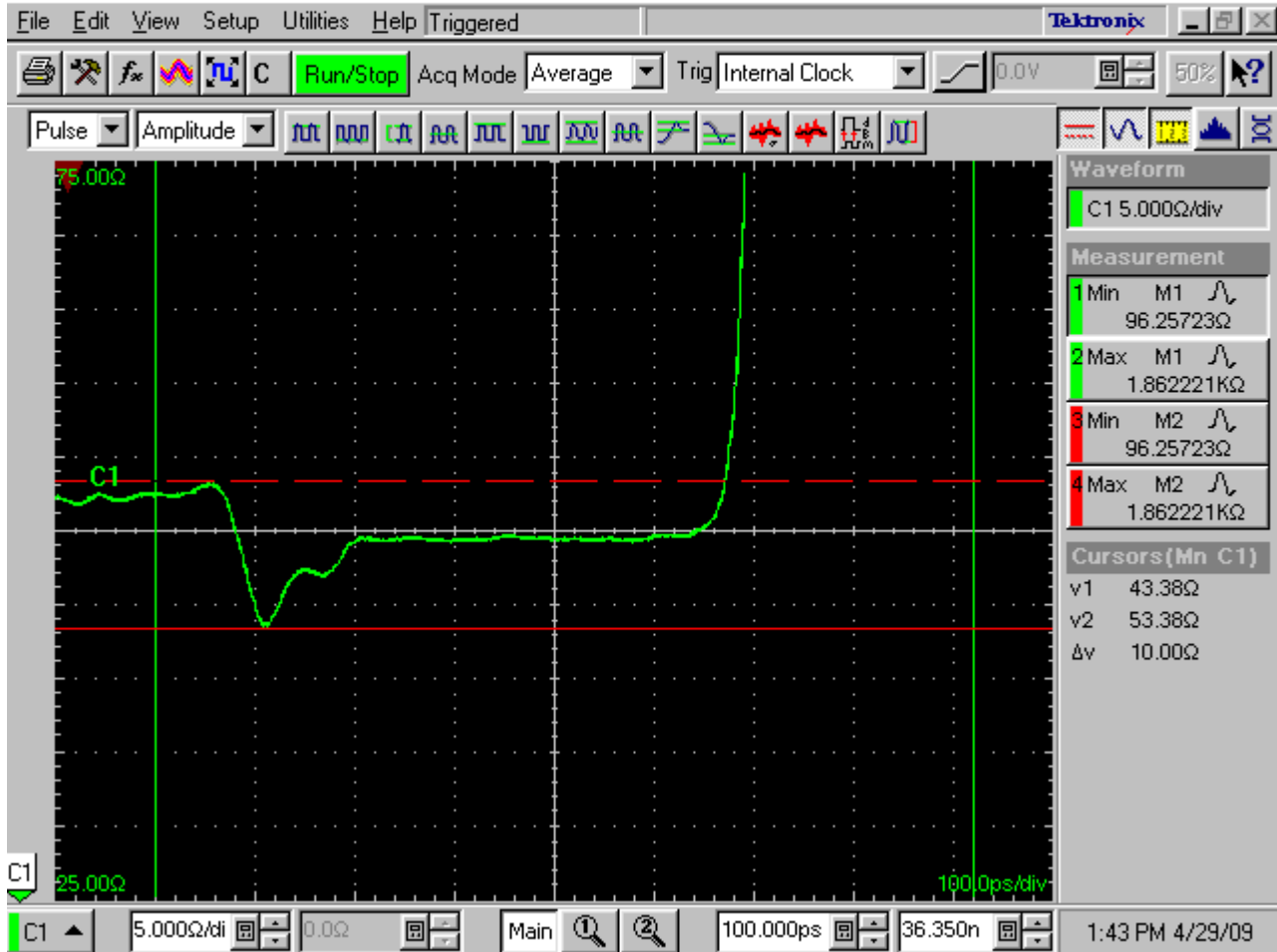
Crown Tip

100 Cycles (Range: 44.3 - 53.6 ohms)



Crown Tip

250 Cycles (Range: 43.3 - 53.3 ohms)



Round Tip

500 Cycles (Range: 43.5 - 52.5 ohms)



DATA SUMMARIES**LLCR:**

- 1) A total of 5 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. $\leq +5.0$ 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

100 CYCLES**GROUP A (ROUND)**

Date	3/18/2009	Mar. 26 2009	April 8, 2009	April 20, 2009
Room Temp C	23	24	21.4	24.1
RH	34%	35%	33%	38%
Name	Lomax	Rodney Riley	Troy Cook	Troy Cook
mOhm values	Actual Initial	Delta 100 Cycles	Delta Thermal	Delta Humidity
Average	18.5	0.0	-0.3	2.0
St. Dev.	0.3	0.2	0.1	0.2
Min	18.2	-0.2	-0.5	1.7
Max	18.9	0.2	-0.1	2.2
Count	5	5	5	5

GROUP B (CROWNED)

Date	3/17/2009	Mar. 26 2009	April 8, 2009	April 20, 2009
Room Temp C	23	24	22	24.1
RH	34%	35%	34%	38%
Name	Lomax	Rodney Riley	Troy Cook	Troy Cook
mOhm values	Actual Initial	Delta 100 Cycles	Delta Thermal	Delta Humidity
Average	14.3	0.0	0.1	3.0
St. Dev.	0.3	0.4	0.4	0.8
Min	13.9	-0.5	-0.4	1.8
Max	14.7	0.4	0.7	3.6
Count	5	5	5	5

GROUP C (ROUND)

Date	3/18/2009	Mar. 26 2009	April 8, 2009	April 20, 2009
Room Temp C	23	24	23.1	24.1
RH	33%	34%	34%	38%
Name	Lomax	Rodney Riley	Troy Cook	Troy Cook
mOhm values	Actual Initial	Delta 100 Cycles	Delta Thermal	Delta Humidity
Average	19.1	-0.1	-0.5	1.5
St. Dev.	0.5	0.3	0.4	0.6
Min	18.7	-0.5	-1.2	0.7
Max	19.9	0.3	-0.2	2.0
Count	5	5	5	5

250 CYCLES**GROUP A (ROUND)**

Date	3/18/2009	Mar. 26 2009	04/08/09	39923
Room Temp C	23	24	23	24.1
RH	35%	34%	31%	37%
Name	Lomax	Rodney Riley	Troy Cook	Troy Cook
mOhm values	Actual Initial	Delta 250 Cycles	Delta Thermal	Delta Humidity
Average	13.5	-0.1	-0.2	2.1
St. Dev.	0.2	0.2	0.3	0.8
Min	13.3	-0.4	-0.4	1.2
Max	13.7	0.0	0.2	3.3
Count	5	5	5	5

GROUP B (CROWNED)

Date	March 18, 2009	March 26, 2009	April 8, 2009	April 20, 2009
Room Temp C	24	24	21	24.2
RH	34%	34%	34%	39%
Name	Lomax	Riley	Troy Cook	Troy Cook
mOhm values	Actual Initial	Delta 250 Cycles	Delta Thermal	Delta Humidity
Average	13.5	0.0	-0.2	2.0
St. Dev.	0.6	0.3	0.9	1.6
Min	12.7	-0.3	-1.7	-0.1
Max	14.5	0.4	0.5	4.4
Count	5	5	5	5

GROUP C (ROUND)

Date	3/18/2009	Mar. 26 2009	4/8/2009	39923
Room Temp C	24	24	21	24.1
RH	34%	35%	33%	39%
Name	LOMAX	Rodney Riley	Troy Cook	Troy Cook
mOhm values	Actual Initial	Delta 250 Cycles	Delta Thermal	Delta Humidity
Average	13.4	0.1	0.1	2.3
St. Dev.	0.3	0.3	0.4	0.5
Min	13.2	-0.4	-0.3	1.5
Max	13.9	0.4	0.6	2.9
Count	5	5	5	5

500 CYCLES**GROUP A (ROUND)**

Date	3/18/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	4/7/2009	4/20/2009
Room Temp C	24	24	24	24	24	24	24	24	24	24	24	24	23.3	24.2
RH	35%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	23%	39%
Name	Lomax	RILEY	RILEY	RILEY	RILEY	RILEY	RILEY	RILEY	RILEY	RILEY	RILEY	RILEY	Troy Cook	Troy Cook
mOhm values	Actual Initial	Delta 50 Cycles	Delta 100 Cycles	Delta 150 Cycles	Delta 200 Cycles	Delta 250 Cycles	Delta 300 Cycles	Delta 350 Cycles	Delta 400 Cycles	Delta 450 Cycles	Delta 500 Cycles	Delta Thermals	Delta Humidity	
Average	13.4	-0.1	-0.1	0.1	-0.1	0.0	-0.1	0.1	0.0	0.1	0.0	-0.2	2.2	
St. Dev.	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.3	0.3	0.2	0.2	0.2	1.3	
Min	13.0	-0.4	-0.4	-0.1	-0.4	-0.1	-0.5	-0.3	-0.3	-0.2	-0.4	-0.5	0.9	
Max	13.7	0.2	0.2	0.4	0.0	0.1	0.3	0.4	0.5	0.3	0.2	0.1	3.8	
Count	5	5	5	5	5	5	5	5	5	5	5	5	5	

GROUP B (CROWNED)

Date	3/18/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	4/7/2009	4/20/2009
Room Temp C	24	23	23	23	23	23	23	23	23	23	23	23	23.3	24.1
RH	35%	31%	31%	31%	31%	31%	31%	31%	31%	31%	31%	31%	24%	40%
Name	Lomax	LOMAX	LOMAX	LOMAX	LOMAX	LOMAX	LOMAX	LOMAX	LOMAX	LOMAX	LOMAX	LOMAX	Troy Cook	Troy Cook
mOhm values	Actual Initial	Delta 50 Cycles	Delta 100 Cycles	Delta 150 Cycles	Delta 200 Cycles	Delta 250 Cycles	Delta 300 Cycles	Delta 350 Cycles	Delta 400 Cycles	Delta 450 Cycles	Delta 500 Cycles	Delta Thermals	Delta Humidity	
Average	13.4	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.3	-0.1	-0.2	-0.2	0.4	3.6	
St. Dev.	0.6	0.3	0.1	0.3	0.3	0.2	0.2	0.3	0.1	0.1	0.2	0.8	0.8	
Min	12.5	-0.4	-0.4	-0.5	-0.5	-0.3	-0.4	-0.6	-0.2	-0.4	-0.5	-0.3	2.8	
Max	13.9	0.3	-0.1	0.2	0.2	0.1	0.1	0.1	0.1	-0.1	0.0	1.4	4.8	
Count	5	5	5	5	5	5	5	5	5	5	5	5	5	

GROUP C (ROUND)

Date	3/18/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/26/2009	3/27/2009	3/27/2009	3/27/2009	3/27/2009	4/7/2009	4/20/2009
Room Temp C	24	23.8	24.1	24.4	24	24	24	24	23	23	23	23	23.4	24.2
RH	35%	36%	35%	35%	36%	36%	36%	36%	32%	32%	32%	32%	23%	39%
Name	Lomax	Troy Cook	Troy Cook	Troy Cook	Troy Cook	Troy Cook	Troy Cook	Troy Cook	LOMAX	LOMAX	LOMAX	LOMAX	Troy Cook	Troy Cook
mOhm values	Actual Initial	Delta 50 Cycles	Delta 100 Cycles	Delta 150 Cycles	Delta 200 Cycles	Delta 250 Cycles	Delta 300 Cycles	Delta 350 Cycles	Delta 400 Cycles	Delta 450 Cycles	Delta 500 Cycles	Delta Thermals	Delta Humidity	
Average	13.2	-0.1	0.1	0.0	0.2	0.2	0.1	0.3	0.0	0.0	0.2	0.0	3.3	
St. Dev.	0.2	0.4	0.2	0.2	0.1	0.3	0.5	0.5	0.1	0.3	0.2	0.1	0.7	
Min	13.1	-0.5	-0.1	-0.3	0.1	-0.2	-0.7	-0.5	-0.1	-0.2	0.1	-0.2	2.5	
Max	13.6	0.5	0.3	0.2	0.3	0.5	0.7	0.8	0.1	0.6	0.5	0.1	4.2	
Count	5	5	5	5	5	5	5	5	5	5	5	5	5	

DATA**LLCR:****100 CYCLES****GROUP A (ROUND)**

mOhm values		Actual	Delta	Delta	Delta
Board	Position	Initial	100 Cycles	Thermal	Humidity
1	P1	18.6	-0.2	-0.4	1.7
2	P1	18.4	-0.1	-0.4	2.0
3	P1	18.4	-0.1	-0.3	1.9
4	P1	18.2	0.2	-0.1	2.1
5	P1	18.9	0.0	-0.5	2.2

GROUP B (CROWNED)

mOhm values		Actual	Delta	Delta	Delta
Board	Position	Initial	100 Cycles	Thermal	Humidity
1	P1	13.9	-0.3	0.4	3.6
2	P1	14.7	0.4	0.7	2.7
3	P1	14.4	-0.1	-0.4	1.8
4	P1	14.3	0.4	0.3	3.5
5	P1	14.5	-0.5	-0.3	3.6

GROUP C (ROUND)

mOhm values		Actual	Delta	Delta	Delta
Board	Position	Initial	100 Cycles	Thermal	Humidity
1	P1	18.7	-0.3	-0.5	1.0
2	P1	19.9	-0.5	-1.2	0.7
3	P1	19.1	0.3	-0.2	2.0
4	P1	18.9	-0.2	-0.5	2.0
5	P1	18.9	-0.1	-0.3	1.8

250 CYCLES**GROUP A (ROUND)**

mOhm values		Actual	Delta	Delta	Delta
Board	Position	Initial	250 Cycles	Thermal	Humidity
1	P1	13.4	0.0	0.2	1.7
2	P1	13.7	-0.4	-0.2	1.2
3	P1	13.5	-0.1	-0.4	2.6
4	P1	13.3	-0.2	-0.4	1.6
5	P1	13.6	0.0	0.0	3.3

GROUP B (CROWNED)

mOhm values		Actual	Delta	Delta	Delta
Board	Position	Initial	250 Cycles	Thermal	Humidity
1	P1	14.5	-0.3	-1.7	-0.1
2	P1	13.4	0.4	0.5	4.4
3	P1	12.7	-0.1	0.2	1.7
4	P1	13.5	0.1	0.0	1.9
5	P1	13.4	-0.2	0.0	2.2

GROUP C (ROUND)

mOhm values		Actual	Delta	Delta	Delta
Board	Position	Initial	250 Cycles	Thermal	Humidity
1	P1	13.9	-0.4	-0.3	2.5
2	P1	13.3	0.4	-0.1	1.5
3	P1	13.2	0.0	-0.1	2.1
4	P1	13.3	0.4	0.6	2.6
5	P1	13.3	0.3	0.3	2.9

500 CYCLES**GROUP A (ROUND)**

mOhm values		Actual	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta
Board	Position	Initial	50 Cycles	100 Cycles	150 Cycles	200 Cycles	250 Cycles	300 Cycles	350 Cycles	400 Cycles	450 Cycles	500 Cycles	Thermals	Humidity
1	P1	13.4	-0.2	-0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.3	0.2	0.1	1.3
2	P1	13.5	0.2	0.2	0.4	-0.1	0.1	0.3	0.4	0.5	0.3	0.2	-0.2	3.8
3	P1	13.7	-0.4	-0.1	0.0	-0.4	-0.1	-0.2	0.0	-0.3	-0.2	-0.1	-0.1	1.6
4	P1	13.4	0.0	0.1	0.2	-0.1	-0.1	0.1	0.3	0.0	0.1	0.0	-0.2	3.4
5	P1	13.0	0.0	-0.4	-0.1	-0.1	0.0	-0.5	-0.3	-0.2	0.0	-0.4	-0.5	0.9

GROUP B (CROWNED)

mOhm values		Actual	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta
Board	Position	Initial	50 Cycles	100 Cycles	150 Cycles	200 Cycles	250 Cycles	300 Cycles	350 Cycles	400 Cycles	450 Cycles	500 Cycles	Thermals	Humidity
1	P1	13.9	-0.3	-0.1	0.2	0.0	0.1	-0.1	0.0	-0.2	-0.2	-0.1	1.4	4.8
2	P1	13.5	-0.4	-0.4	-0.5	-0.3	-0.1	-0.1	-0.6	0.1	-0.1	-0.1	0.1	2.8
3	P1	13.9	-0.2	-0.2	-0.4	-0.5	-0.3	-0.4	-0.4	-0.2	-0.4	-0.5	-0.3	2.9
4	P1	13.0	-0.2	-0.2	0.0	0.0	0.0	-0.1	0.1	0.0	-0.1	-0.1	-0.1	4.0
5	P1	12.5	0.3	-0.1	-0.2	0.2	-0.2	0.1	-0.4	-0.2	-0.2	0.0	1.2	3.5

GROUP C (ROUND)

mOhm values		Actual	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta
Board	Position	Initial	50 Cycles	100 Cycles	150 Cycles	200 Cycles	250 Cycles	300 Cycles	350 Cycles	400 Cycles	450 Cycles	500 Cycles	Thermals	Humidity
1	P1	13.6	-0.5	0.0	-0.3	0.3	-0.1	-0.2	-0.1	0.0	-0.2	0.1	-0.2	3.4
2	P1	13.1	-0.1	0.0	0.2	0.1	0.5	0.7	0.8	0.1	0.0	0.1	0.1	4.2
3	P1	13.2	-0.2	-0.1	0.1	0.1	0.4	0.3	0.5	-0.1	-0.2	0.1	0.1	3.7
4	P1	13.1	-0.2	0.2	0.1	0.3	0.2	0.4	0.6	0.0	0.0	0.1	-0.1	2.5
5	P1	13.2	0.5	0.3	0.1	0.3	-0.2	-0.7	-0.5	0.1	0.6	0.5	0.0	2.6

EQUIPMENT AND CALIBRATION SCHEDULES**Equipment #:** MO-01**Description:** Micro-Ohmmeter**Manufacturer:** Keithley**Model:** 580**Serial #:** 0772740**Accuracy:** See Manual

... Last Cal: 06/17/08, Next Cal: 06/17/09

Equipment #: MO-03**Description:** Multimeter /Data Acquisition System**Manufacturer:** Keithley**Model:** 2700**Serial #:** 0791975**Accuracy:** See Manual

... Last Cal: 06/17/08, Next Cal: 06/17/09

Equipment #: OV-03**Description:** Cascade Tek Forced Air Oven**Manufacturer:** Cascade Tek**Model:** TFO-5**Serial #:** 0500100**Accuracy:** Temp. Stability: +/- .1C/C change in ambient

... Last Cal: 06/17/2009, Next Cal: 06/17/2010

Equipment #: MO-06**Description:** Micro-Ohmmeter**Manufacturer:** Keithley**Model:** 580**Serial #:** 1110525**Accuracy:** See Manual

... Last Cal: 06/17/2008, Next Cal: 06/17/2009

Equipment #: MO-07**Description:** Multimeter / Data Acquisition System**Manufacturer:** Keithley**Model:** 2700**Serial #:** 1116559**Accuracy:** See Manual

... Last Cal: 6/17/2008, Next Cal: 6/17/2009

Equipment #: THC-04**Description:** Temperature/Humidity Chamber**Manufacturer:** Thermotron**Model:** SM-8-3800**Serial #:** 37782**Accuracy:** See Manual

... Last Cal: 04/07/2009, Next Cal: 04/07/2010

Equipment #: THC-01

Description: Temperature/Humidity Chamber

Manufacturer: Thermotron

Model: SM-8-7800

Serial #: 30676

Accuracy: See Manual See Manual

... Last Cal: 04/07/2009, Next Cal: 04/07/2010