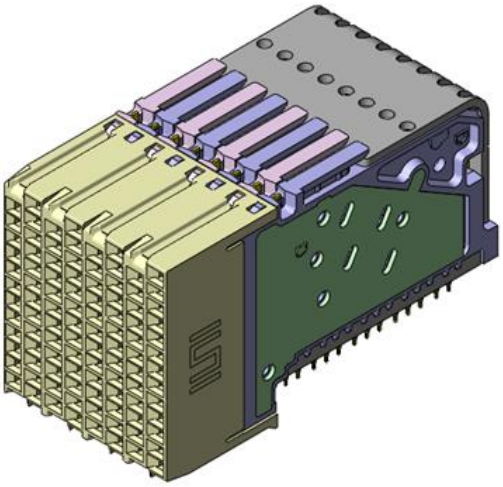
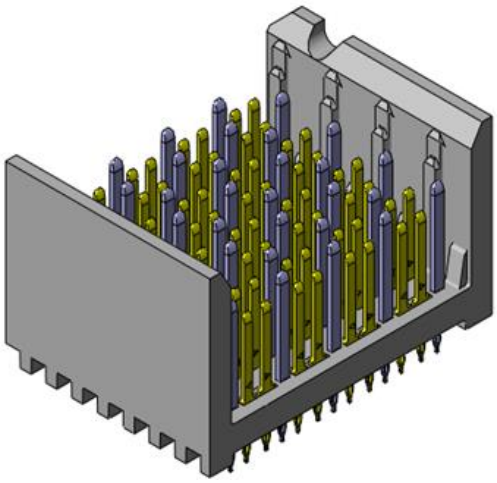
Project Number: Extended Life Test Report	Tracking Code: CR-1025304_Report_Rev_1
Requested by: Leo Lee	Date: 8/30/2024
Part #: HDTF-6-08-S-RA-LC-100/HDTM-6-08-1-S-VT-0-1	
Part description: HDTF/HDTM	Tech: Kason He
Test Start: 11/29/2023	Test Completed: 1/10/2024





EXTENDED LIFE TEST REPORT

HDTF/HDTM
HDTF-6-08-S-RA-LC-100/HDTM-6-08-1-S-VT-0-1

REVISION HISTORY

DATA	REV.NUM.	DESCRIPTION	ENG
8/30/2024	**1**	**Initial test**	**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: Extended life 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 was cleaned according to CO-SC-WI-3029.
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 is 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-108451-TST.

FLOWCHARTS

Extended Life

Group 1 HDTF-6-08-S-RA-LC-100 HDTM-6-08-1-S-VT-0-1 8 Assemblies 100 Cycles		Group 2 HDTF-6-08-S-RA-LC-100 HDTM-6-08-1-S-VT-0-1 8 Assemblies 250 Cycles		Group 3 HDTF-6-08-S-RA-LC-100 HDTM-6-08-1-S-VT-0-1 8 Assemblies 500 Cycles		Group 4 HDTF-6-08-S-RA-LC-100 HDTM-6-08-1-S-VT-0-1 8 Assemblies 1000 Cycles	
Step	**Description**	**Step**	**Description**	**Step**	**Description**	**Step**	**Description**
1.	Plating Thickness Verification (4)	1.	Plating Thickness Verification (4)	1.	Plating Thickness Verification (4)	1.	Plating Thickness Verification (4)
2.	LLCR (2)	2.	LLCR (2)	2.	LLCR (2)	2.	LLCR (2)
3.	Cycles Quantity = 100 Cycles	3.	Cycles Quantity = 250 Cycles	3.	Cycles Quantity = 500 Cycles	3.	Cycles Quantity = 1000 Cycles
4.	LLCR (2) Max Delta = 15 mOhm	4.	LLCR (2) Max Delta = 15 mOhm	4.	LLCR (2) Max Delta = 15 mOhm	4.	LLCR (2) Max Delta = 15 mOhm
5.	Thermal Shock (5)	5.	Thermal Shock (5)	5.	Thermal Shock (5)	5.	Thermal Shock (5)
6.	LLCR (2) Max Delta = 15 mOhm	6.	LLCR (2) Max Delta = 15 mOhm	6.	LLCR (2) Max Delta = 15 mOhm	6.	LLCR (2) Max Delta = 15 mOhm
7.	Humidity (1)	7.	Humidity (1)	7.	Humidity (1)	7.	Humidity (1)
8.	LLCR (2) Max Delta = 15 mOhm	8.	LLCR (2) Max Delta = 15 mOhm	8.	LLCR (2) Max Delta = 15 mOhm	8.	LLCR (2) Max Delta = 15 mOhm
9.	Photos (3)	9.	Photos (3)	9.	Photos (3)	9.	Photos (3)

(1) Humidity = EIA-364-31
Test Condition = B (240 Hours)
Test Method = III (+25°C to +65°C @ 90% RH to 98% RH)
Test Exceptions: ambient pre-condition and delete steps 7a and 7b

(2) LLCR = EIA-364-23
Open Circuit Voltage = 20 mV Max
Test Current = 100 mA Max

(3) Photos
Attach 2-3 photos of contact area

(4) Plating Thickness Verification
Measure, verify, and document plating thickness on both male and female (one group only)
Plating thickness to be measured on loose pins used during assembly

(5) Thermal Shock = EIA-364-32
Exposure Time at Temperature Extremes = 1/2 Hour
Method A, Test Condition = I (-55°C to +85°C)
Test Duration = A-3 (100 Cycles)

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

RESULTS

LLCR Extended Life (128 signal and 64 ground LLCR test points)

Group1 100 Cycles

Signal pin

- **Initial ---------- 28.51 mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms ---------- 126 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 1 Points ---------- Minor**
  - **+10.1 to +15.0 mOhms ---------- 1 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**
- **Thermal**
  - **<= +5.0 mOhms ---------- 127 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 1 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**
- **Humidity**
  - **<= +5.0 mOhms ---------- 126 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 2 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 ---------- 20.45 mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms ---------- 59 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 5 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**
- **Thermal**
  - **<= +5.0 mOhms ---------- 61 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 3 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**
- **Humidity**
  - **<= +5.0 mOhms ---------- 59 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 5 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

Group2 250 Cycles

Signal pin

- **Initial ---------- 26.84 mOhms Max**
- **Durability, 250 Cycles**
  - **<= +5.0 mOhms ---------- 128 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**
- **Thermal**
  - **<= +5.0 mOhms ---------- 127 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 1 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**
- **Humidity**
  - **<= +5.0 mOhms ---------- 128 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 ---------- 19.48 mOhms Max**
- **Durability, 250 Cycles**
  - **<= +5.0 mOhms ---------- 64 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**
- **Thermal**
  - **<= +5.0 mOhms ---------- 52 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 10 Points ---------- Minor**
  - **+10.1 to +15.0 mOhms ---------- 2 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**
- **Humidity**
  - **<= +5.0 mOhms ---------- 61 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 3 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

Group3 500 Cycles

Signal pin

- **Initial ---------- 27.76 mOhms Max**
- **Durability, 500 Cycles**
  - **<= +5.0 mOhms ---------- 128 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**
- **Thermal**
  - **<= +5.0 mOhms ---------- 128 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**
- **Humidity**
  - **<= +5.0 mOhms ---------- 128 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 ---------- 22.03 mOhms Max**
- **Durability, 500 Cycles**
  - **<= +5.0 mOhms ---------- 61 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 3 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**
- **Thermal**
  - **<= +5.0 mOhms ---------- 58 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 5 Points ---------- Minor**
  - **+10.1 to +15.0 mOhms ---------- 1 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**
- **Humidity**
  - **<= +5.0 mOhms ---------- 59 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 5 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

Group4 1000 Cycles

Signal pin

- **Initial ---------- 28.20 mOhms Max**
- **Durability, 1000 Cycles**
  - **<= +5.0 mOhms ---------- 127 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 1 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**
- **Thermal**
  - **<= +5.0 mOhms ---------- 128 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**
- **Humidity**
  - **<= +5.0 mOhms ---------- 128 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 ---------- 20.98 mOhms Max**
- **Durability, 1000 Cycles**
  - **<= +5.0 mOhms ---------- 62 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 2 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**
- **Thermal**
  - **<= +5.0 mOhms ---------- 58 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 6 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**
- **Humidity**
  - **<= +5.0 mOhms ---------- 57 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 7 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

LLCR Extended Life:

1) A total of 128 signal and 64 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

Group1 100 Cycles

LLCR Measurement Summaries by Pin Type				
Date	2023/11/29	2023/12/18	2023/12/26	2024/1/9
Room Temp (Deg C)	22	22	22	22
Rel Humidity (%)	52	52	52	52
Technician	Kason He	Kason He	Kason He	Kason He
mOhm values	Actual **Initial**	**Delta 100 Cycles**	**Delta Therm Shck**	**Delta Humidity**
Pin Type: Signal 1				
Average	20.37	1.17	0.93	0.97
St. Dev.	5.71	1.37	0.86	1.11
Min	10.04	0.02	0.01	0
Max	28.51	13.42	5.18	5.61
Summary Count	128	128	128	128
Total Count	128	128	128	128
Pin Type: GND 1				
Average	15	1.96	1.9	2.13
St. Dev.	3.19	1.79	1.5	1.65
Min	9.22	0.03	0.07	0.03
Max	20.45	8.88	6.9	6.72
Summary Count	64	64	64	64
Total Count	64	64	64	64

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=10**	**>10 & <=15**	**>15 & <=50**	**>50 & <=1000**	**>1000**
100 Cycles	**185**	**6**	**1**	**0**	**0**	**0**
Therm Shck	**188**	**4**	**0**	**0**	**0**	**0**
Humidity	**185**	**7**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

Group2 250 Cycles

	LLCR Measurement Summaries by Pin Type			
Date	2023/11/30	2023/12/18	2023/12/26	2024/1/9
Room Temp (Deg C)	22	22	22	22
Rel Humidity (%)	52	52	52	52
Technician	Kason He	Kason He	Kason He	Kason He
mOhm values	Actual **Initial**	**Delta 250 Cycles**	**Delta Therm Shck**	**Delta Humidity**
	Pin Type: Signal 1			
Average	19.76	0.69	0.97	0.7
St. Dev.	5.83	0.42	1.07	0.65
Min	9.82	0.04	0.01	0.01
Max	26.84	2	5.66	3.75
Summary Count	128	128	128	128
Total Count	128	128	128	128
	Pin Type: GND 1			
Average	14.09	1.21	2.52	1.51
St. Dev.	2.9	1.05	2.7	1.55
Min	8.34	0	0.01	0.02
Max	19.48	4.63	13.83	7.67
Summary Count	64	64	64	64
Total Count	64	64	64	64

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=10**	**>10 & <=15**	**>15 & <=50**	**>50 & <=1000**	**>1000**
250 Cycles	**192**	**0**	**0**	**0**	**0**	**0**
Therm Shck	**179**	**11**	**2**	**0**	**0**	**0**
Humidity	**189**	**3**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

Group3 500 Cycles

	LLCR Measurement Summaries by Pin Type			
Date	2023/11/30	2023/12/18	2023/12/26	2024/1/9
Room Temp (Deg C)	22	22	22	22
Rel Humidity (%)	52	52	52	52
Technician	Kason He	Kason He	Kason He	Kason He
mOhm values	Actual **Initial**	**Delta 500 Cycles**	**Delta Therm Shck**	**Delta Humidity**
	Pin Type: Signal 1			
Average	19.68	1.28	0.93	0.91
St. Dev.	6.04	0.85	0.71	0.88
Min	9.83	0.01	0.04	0
Max	27.76	3.04	3.6	3.5
Summary Count	128	128	128	128
Total Count	128	128	128	128
	Pin Type: GND 1			
Average	14.73	1.88	2.48	2.35
St. Dev.	3.02	1.86	2.07	1.69
Min	8.79	0.01	0.1	0.05
Max	22.03	9.79	10.64	8.01
Summary Count	64	64	64	64
Total Count	64	64	64	64

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=10**	**>10 & <=15**	**>15 & <=50**	**>50 & <=1000**	**>1000**
500 Cycles	**189**	**3**	**0**	**0**	**0**	**0**
Therm Shck	**186**	**5**	**1**	**0**	**0**	**0**
Humidity	**187**	**5**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

Group 4 1000 Cycles

	LLCR Measurement Summaries by Pin Type			
Date	2023/12/4	2023/12/18	2023/12/25	2024/1/10
Room Temp (Deg C)	22	22	22	22
Rel Humidity (%)	52	52	52	52
Technician	Kason He	Kason He	Kason He	Kason He
mOhm values	Actual **Initial**	**Delta 1000 Cycles**	**Delta Therm Shck**	**Delta Humidity**
	Pin Type: Signal 1			
Average	20.33	1.15	1	0.81
St. Dev.	5.78	0.92	0.8	0.81
Min	9.7	0.03	0.01	0
Max	28.2	5.46	3.71	3.6
Summary Count	128	128	128	128
Total Count	128	128	128	128
	Pin Type: GND 1			
Average	13.84	1.24	1.82	2.08
St. Dev.	3.07	1.32	1.83	2.13
Min	8.23	0.01	0.02	0
Max	20.98	6.71	8.93	9.37
Summary Count	64	64	64	64
Total Count	64	64	64	64

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=10**	**>10 & <=15**	**>15 & <=50**	**>50 & <=1000**	**>1000**
1000 Cycles	**189**	**3**	**0**	**0**	**0**	**0**
Therm Shck	**186**	**6**	**0**	**0**	**0**	**0**
Humidity	**185**	**7**	**0**	**0**	**0**	**0**

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: HZ-TCT-01
Description: Normal force analyzer
Manufacturer: Mecmesin Multitester
Model: Mecmesin Multitester 2.5-i
Serial #: 08-1049-04
Accuracy: Last Cal: 4/26/2024, Next Cal: 4/25/2025

Equipment #: HZ-THC-01
Description: Humidity transmitter
Manufacturer: Thermtron
Model: SM-8-8200
Serial #: 38846
Accuracy: Last Cal: 2/28/2024, Next Cal: 2/27/2025

Equipment #: HZ-TSC-01
Description: Vertical Thermal Shock Chamber
Manufacturer: Cincinnatti Sub Zero
Model: VTS-3-6-6-SC/AC
Serial #: 10-VT14994
Accuracy: See Manual
… Last Cal: 06/28/2024, Next Cal: 06/27/2025

Equipment #: HZ-MO-05
Description: Micro-ohmmeter
Manufacturer: Keithley
Model: 3706
Serial #: 1285188
Accuracy: Last Cal: 11/15/2023, Next Cal: 11/14/2024