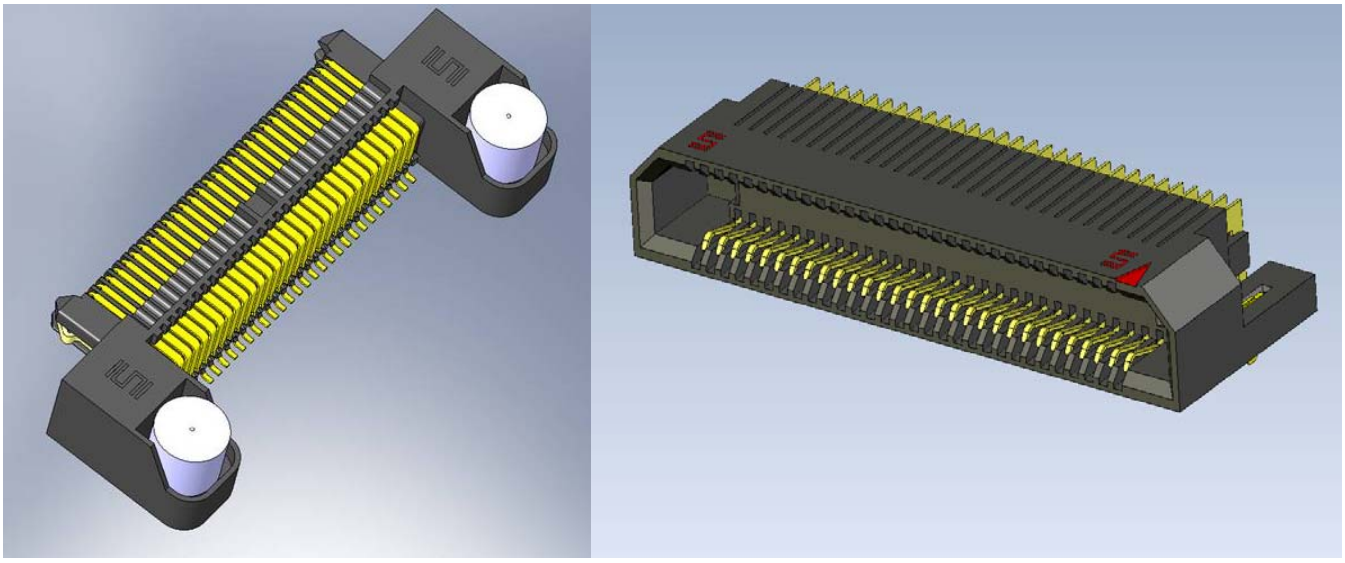
Project Number: 23261	Tracking Code: TC0845--2076_ReportRev2		
Requested by: Jim Hahn	Date: 1/5/2009	Product Rev: See print	
Part #: ERX8-050-01-L-D-RA	Lot #: 1	Tech: Gary Lomax & Rodney Riley	Eng: Troy Cook
Part description: ERX8-RA			Qty to test: 8
Test Start: 11/06/2008	Test Completed: 12/31/2008		



EXTENDED LIFE TEST REPORT

PART DESCRIPTION

ERX8-050-01-L-D-RA

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: See attached test plan. Need durability, gas tight, and shock and vibration. Please return unused samples to me.

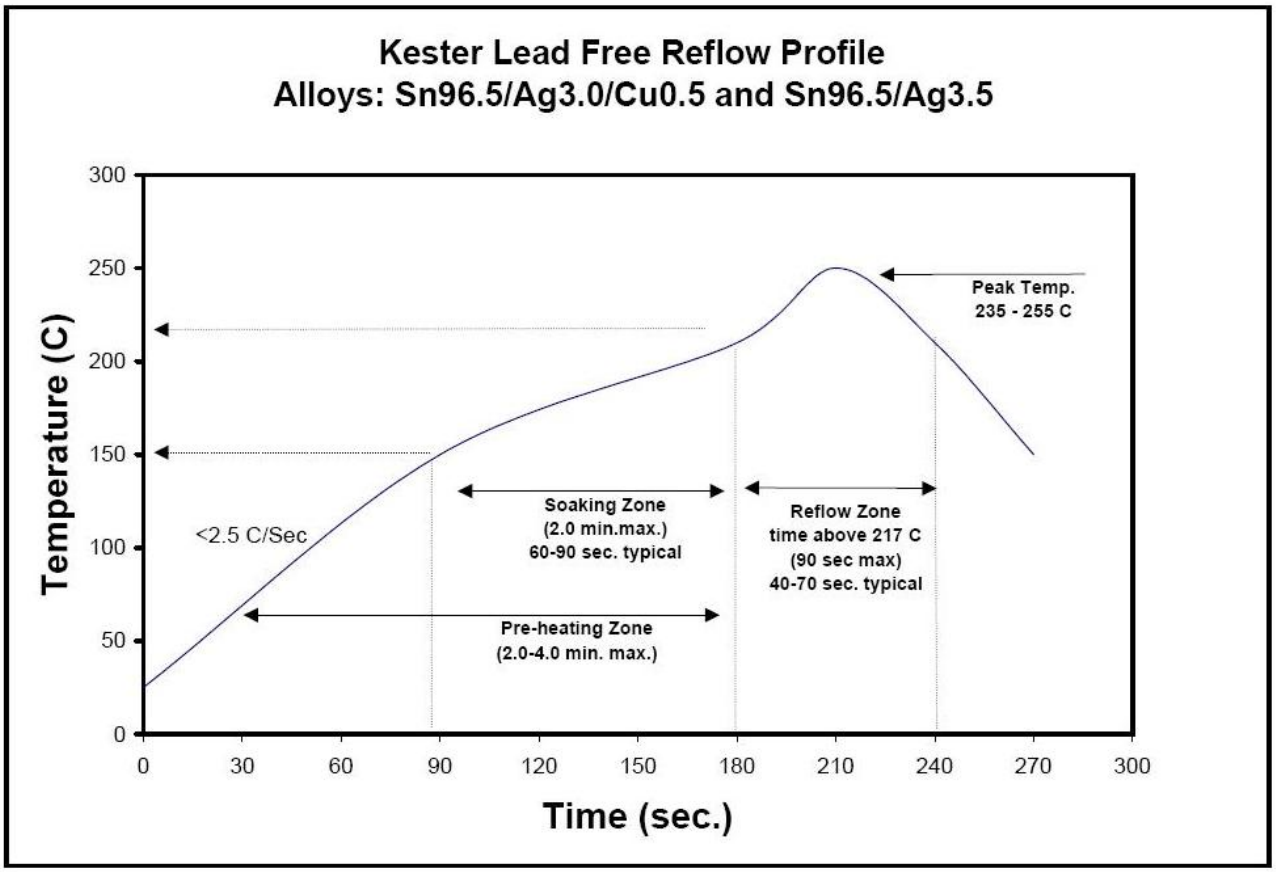
APPLICABLE DOCUMENTS

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-101546-TST-XX

TYPICAL OVEN PROFILE (Soldering Parts to Test Boards)



FLOWCHARTS

Durability/Thermal Age/Cyclic Humidity

TEST STEP	GROUP A 200 Points 100 Cycles
01	LLCR-1
02	Data Review
03	100 Cycles
04	LLCR-2
05	Data Review
06	Thermal Age
07	LLCR-3
08	Data Review
09	Cyclic Humidity
10	LLCR-4

TEST STEP	GROUP B 200 Points 250 Cycles
01	LLCR-1
02	Data Review
03	250 Cycles
04	LLCR-2
05	Data Review
06	Thermal Age
07	LLCR-3
08	Data Review
09	Cyclic Humidity
10	LLCR-4

TEST STEP	GROUP C 200 Points 500 Cycles
01	LLCR-1
02	Data Review
03	500 Cycles
04	LLCR-2
05	Data Review
06	Thermal Age
07	LLCR-3
08	Data Review
09	Cyclic Humidity
10	LLCR-4

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/98% RH)
ambient pre-condition and delete steps 7a and 7b
LLCR = EIA-364-23, LLCR
use Keithley 580 in the dry circuit mode, 10 mA Max

Gas Tight

TEST STEP	GROUP A 200 Points (min)
01	LLCR-1
02	Gas Tight
03	LLCR-2

Gas Tight = EIA-364-36
LLCR = EIA-364-23, LLCR
use Keithley 580 in the dry circuit mode, 10 mA Max

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

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
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^{o} C
        ix. The final LLCR shall be conducted within 1 hour after drying.

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.

RESULTS

LLCR Durability (200 LLCR test points)

- **Initial ---------- 31.7 mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms ---------- 200 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 ---------- 200 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 ---------- 200 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 (200 LLCR test points)

- **Initial ---------- 31.7 mOhms Max**
- **Durability, 250 Cycles**
  - **<= +5.0 mOhms ---------- 200 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 ---------- 193 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 +2000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+2000 mOhms ---------- 0 Points ---------- Open Failure**
- **Humidity**
  - **<= +5.0 mOhms ---------- 195 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 3 Points ---------- Minor**
  - **+10.1 to +15.0 mOhms ---------- 2 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 (200 LLCR test points)

- **Initial ---------- 31.4 mOhms Max**
- **Durability, 500 Cycles**
  - **<= +5.0 mOhms ---------- 200 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 ---------- 193 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 ---------- 1 Points ---------- Marginal**
  - **+50.1 to +2000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+2000 mOhms ---------- 0 Points ---------- Open Failure**
- **Humidity**
  - **<= +5.0 mOhms ---------- 198 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 +2000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+2000 mOhms ---------- 0 Points ---------- Open Failure**

LLCR Gas Tight (200 LLCR test points)

- **Initial ---------- 33.8 mOhms Max**
- **Gas-Tight**
  - **<= +5.0 mOhms ---------- 200 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**

DATA SUMMARIES

LLCR:

1) A total of 200 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

Date	Nov. 18 2008	Nov. 20 2008	Dec. 19 2008	Dec. 31 2008
Room Temp C	24	23.9	23	25
RH	19%	21%	25%	23%
Name	RILEY	LYNCH	Lomax	Lomax
mOhm values	**Actual Initial**	**Delta 100 Cycles**	**Delta Thermal**	**Delta Humidity**
Average	26.6	-0.1	0.4	0.2
St. Dev.	2.8	0.7	1.0	0.8
Min	21.0	-3.6	-4.0	-4.8
Max	31.7	2.3	4.9	2.9
Count	200	200	200	200

Date	Nov. 18 2008	Nov. 24 2008	Dec. 19 2008	Dec. 30 2008
Room Temp C	24	21	23	25
RH	19%	27%	25%	23%
Name	RILEY	Lomax	Lomax	Lomax
mOhm values	**Actual Initial**	**Delta 250 Cycles**	**Delta Thermal**	**Delta Humidity**
Average	26.8	-0.5	0.8	0.7
St. Dev.	2.6	1.0	1.9	1.8
Min	21.8	-4.1	-6.1	-1.6
Max	31.7	2.3	7.4	12.7
Count	200	200	200	200

Date	Nov. 18 2008	Nov. 24 2008	Dec. 19 2008	Dec. 30 2008
Room Temp C	24	23	24	25
RH	20%	33%	26%	23%
Name	RILEY	RILEY	Lomax	Lomax
mOhm values	**Actual Initial**	**Delta 500 Cycles**	**Delta Thermal**	**Delta Humidity**
Average	27.0	-0.1	1.2	0.5
St. Dev.	2.3	0.7	1.9	1.2
Min	22.2	-2.6	-1.8	-2.7
Max	31.4	3.4	16.9	12.8
Count	200	200	200	200

DATA SUMMARIES Continued

GAS TIGHT:

1) A total of 200 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

Date	Nov. 18 2008	Nov. 21 2008
Room Temp C	24	24
RH	20%	18%
Name	RILEY	RILEY
mOhm values	**Actual Initial**	**Delta Gas Tight**
Average	26.4	0.3
St. Dev.	3.0	0.7
Min	21.2	-5.4
Max	33.8	2.2
Count	200	200

DATA

LLCR:

	mOhm values	Actual	Delta	Delta	Delta
Board	Position	Initial	100 Cycles	Thermal	Humidity
1	P1	27.1	0.4	1.6	1.1
1	P2	28.7	0.2	1.3	0.4
1	P3	22.2	-0.5	0.3	-0.2
1	P4	22.5	-0.2	0.8	0.1
1	P5	28.7	-0.2	1.3	0.7
1	P6	22.5	-0.1	-0.1	-0.6
1	P7	22.3	-0.2	0.7	-0.2
1	P8	22.5	-0.9	0.3	-0.3
1	P9	28.9	-0.6	0.9	0.2
1	P10	29.5	-1.3	-0.4	-0.7
1	P11	29.0	-1.0	-0.4	-0.8
1	P12	26.3	-3.6	-4.0	-4.8
1	P13	27.9	0.1	1.0	1.0
1	P14	28.6	-0.5	1.3	0.8
1	P15	28.4	0.2	0.4	-0.1
1	P16	22.2	-0.1	-0.1	0.1
1	P17	21.8	0.0	0.0	0.0
1	P18	28.1	-0.2	0.4	0.1
1	P19	29.2	-0.5	0.5	0.2
1	P20	21.9	-0.2	-0.7	-0.7
1	P21	22.9	-0.7	-1.2	-1.4
1	P22	29.1	0.0	0.2	0.0
1	P23	29.1	-0.7	0.6	0.4
1	P24	21.4	0.1	-0.2	-0.1
1	P25	28.7	-0.3	1.2	0.7
2	P1	28.0	0.9	1.3	1.0
2	P2	28.1	1.1	1.6	1.7
2	P3	21.4	1.3	0.8	0.5
2	P4	21.7	1.0	-0.2	0.6
2	P5	28.5	0.6	2.6	0.9
2	P6	22.1	0.2	-0.8	-0.1
2	P7	22.3	-0.3	-0.5	0.2
2	P8	21.5	1.2	-0.2	0.9
2	P9	28.3	0.4	2.4	1.6
2	P10	28.2	0.7	1.3	1.0
2	P11	28.6	0.3	0.3	-0.4
2	P12	21.4	0.2	0.0	0.3
2	P13	28.5	1.4	1.4	0.6
2	P14	28.7	0.6	1.9	1.4
2	P15	28.3	0.3	1.1	0.6
2	P16	22.1	0.2	-0.4	0.2
2	P17	21.5	0.9	-0.4	-0.1

2	P18	28.1	0.9	1.6	1.9
2	P19	28.6	0.2	0.5	0.5
2	P20	21.6	-0.3	0.2	0.6
2	P21	23.4	-1.3	-1.6	-1.3
2	P22	28.7	0.1	0.7	-0.1
2	P23	28.0	0.5	1.6	1.2
2	P24	21.0	0.0	-0.7	0.0
2	P25	29.3	-1.1	4.9	-0.9
3	P1	27.5	0.9	0.7	0.4
3	P2	29.2	0.3	0.0	-0.4
3	P3	26.7	0.1	-0.2	-0.6
3	P4	25.6	-0.1	1.0	0.6
3	P5	29.3	-0.3	0.0	-0.2
3	P6	26.1	-0.1	1.4	0.3
3	P7	25.8	-0.4	0.8	0.2
3	P8	26.0	0.2	0.0	-0.3
3	P9	29.0	0.0	0.6	-0.3
3	P10	30.2	-1.0	-0.5	-1.3
3	P11	29.0	1.2	1.3	-0.1
3	P12	26.8	0.7	0.1	-0.4
3	P13	28.7	0.0	0.1	-0.3
3	P14	29.7	-0.4	-0.4	-0.3
3	P15	28.9	0.0	-0.1	0.0
3	P16	26.1	0.7	0.3	1.0
3	P17	28.9	-0.3	-1.2	-1.3
3	P18	28.1	-0.1	0.3	0.5
3	P19	28.9	-0.2	0.2	0.9
3	P20	28.6	-1.4	-1.1	-1.7
3	P21	27.5	2.3	-0.2	-0.4
3	P22	31.7	-1.5	-2.4	-2.1
3	P23	29.3	-0.2	-0.1	0.3
3	P24	25.7	0.4	1.2	1.0
3	P25	28.8	-0.1	0.0	0.0
4	P1	27.2	0.9	1.2	0.3
4	P2	28.0	0.4	1.7	1.5
4	P3	23.2	0.2	0.6	-0.1
4	P4	22.9	0.2	0.8	0.7
4	P5	28.0	0.5	1.3	1.3
4	P6	23.1	0.0	-0.6	0.5
4	P7	23.0	0.3	0.3	0.9
4	P8	22.6	1.1	0.3	1.5
4	P9	28.3	0.9	1.6	0.4
4	P10	28.2	0.4	1.5	0.2
4	P11	27.6	0.4	1.0	0.6
4	P12	22.9	0.5	0.1	0.4
4	P13	27.6	-0.1	0.9	-0.2
4	P14	28.3	0.3	0.4	0.2
4	P15	27.6	0.9	1.3	0.1
4	P16	23.4	0.5	0.1	1.6

4	P17	23.3	-0.5	-0.1	0.3
4	P18	27.7	-0.3	1.1	0.0
4	P19	29.1	-0.5	-0.4	-1.1
4	P20	24.6	-0.6	-0.7	-0.8
4	P21	23.7	-0.6	-0.1	-0.1
4	P22	28.9	-0.2	-0.1	-0.4
4	P23	28.3	0.0	-0.1	-0.4
4	P24	22.3	0.3	0.4	0.4
4	P25	28.4	-0.6	-0.9	-0.8
5	P1	28.7	0.4	0.6	0.3
5	P2	29.6	-0.4	0.4	0.1
5	P3	22.8	0.1	0.3	-0.1
5	P4	22.7	0.0	1.0	0.6
5	P5	29.1	0.0	0.5	-0.4
5	P6	23.1	-0.2	-0.2	-0.2
5	P7	22.9	0.0	0.0	-0.3
5	P8	23.7	-1.1	-0.8	-1.1
5	P9	29.4	-0.2	0.1	-0.1
5	P10	29.2	-1.0	0.0	0.0
5	P11	28.0	0.1	1.3	0.6
5	P12	22.7	0.3	0.6	0.1
5	P13	28.6	-0.5	-0.1	-0.2
5	P14	28.7	-0.3	1.2	0.2
5	P15	28.6	0.1	1.2	0.4
5	P16	23.6	0.2	0.2	0.1
5	P17	23.6	0.0	-0.2	0.5
5	P18	28.5	-0.1	0.8	0.6
5	P19	28.7	0.3	0.3	0.2
5	P20	23.1	0.3	-0.1	0.3
5	P21	23.2	-0.2	0.2	0.2
5	P22	30.0	-0.8	-0.3	-0.9
5	P23	28.4	0.3	0.6	0.3
5	P24	22.6	0.2	-0.5	0.1
5	P25	28.5	-0.1	0.4	0.6
6	P1	29.3	-0.8	0.7	1.6
6	P2	29.6	-0.9	0.0	-0.4
6	P3	25.9	-0.8	0.3	0.5
6	P4	27.2	-2.2	0.4	0.0
6	P5	29.9	-0.3	-0.7	-1.0
6	P6	25.9	0.1	0.1	-0.2
6	P7	25.6	-0.4	-0.4	-0.5
6	P8	25.5	0.5	0.8	0.6
6	P9	30.3	-1.5	-0.3	-0.3
6	P10	29.8	-1.4	0.5	0.1
6	P11	28.9	1.1	1.8	0.7
6	P12	26.4	-1.6	0.7	-0.1
6	P13	28.4	0.7	2.2	1.1
6	P14	28.9	-0.2	2.9	1.3
6	P15	29.3	-0.8	1.6	1.1

6	P16	26.9	-0.8	1.3	1.5
6	P17	26.8	-1.7	1.7	1.1
6	P18	28.4	-0.8	2.6	2.2
6	P19	29.0	-0.6	1.1	1.0
6	P20	25.5	-0.3	2.0	1.6
6	P21	26.8	-1.5	2.1	2.0
6	P22	29.7	-1.6	0.6	0.6
6	P23	28.4	0.1	2.4	2.0
6	P24	25.8	-0.9	2.2	1.4
6	P25	28.0	0.1	2.9	2.9
7	P1	27.8	0.1	0.6	0.7
7	P2	28.6	0.9	0.3	0.5
7	P3	26.3	0.3	0.4	-0.5
7	P4	26.4	0.7	-0.3	-0.4
7	P5	29.2	-0.2	0.4	-0.4
7	P6	26.2	1.0	0.1	0.3
7	P7	25.8	0.7	0.5	1.0
7	P8	25.3	0.6	0.2	0.6
7	P9	29.4	-0.2	-0.2	-0.3
7	P10	29.7	-0.4	-0.4	-0.8
7	P11	29.5	-0.6	0.0	-0.7
7	P12	27.1	-0.1	-1.2	-1.0
7	P13	28.3	0.1	0.5	0.5
7	P14	28.9	0.2	0.4	0.2
7	P15	27.6	0.8	0.4	0.4
7	P16	26.6	-0.2	-0.3	0.0
7	P17	26.2	-0.3	-0.1	0.4
7	P18	27.6	0.2	0.5	0.3
7	P19	29.0	0.1	1.0	0.9
7	P20	25.7	-0.2	-0.4	-0.2
7	P21	26.4	0.6	-0.9	-0.6
7	P22	28.7	0.7	1.0	0.2
7	P23	28.3	0.8	1.3	0.6
7	P24	25.0	0.9	0.0	0.5
7	P25	28.1	0.3	0.4	0.0
8	P1	27.9	-1.0	1.1	0.5
8	P2	29.0	-0.7	0.2	-0.2
8	P3	21.6	0.6	0.9	0.6
8	P4	21.9	-0.4	-0.3	-0.3
8	P5	29.1	-1.0	0.9	0.2
8	P6	21.7	-0.4	0.7	0.4
8	P7	21.8	-0.1	-0.2	-0.7
8	P8	21.4	-0.2	0.1	0.4
8	P9	28.9	-0.4	0.8	0.6
8	P10	29.6	-0.9	0.1	-0.4
8	P11	28.9	-0.5	0.1	-0.4
8	P12	22.9	-0.4	-1.2	-1.2
8	P13	28.0	0.5	0.6	0.2
8	P14	29.1	-1.0	0.7	0.2

8	P15	27.8	0.1	1.2	1.0
8	P16	23.0	-0.6	-0.9	-0.6
8	P17	22.2	0.2	0.3	0.6
8	P18	27.8	-0.4	1.3	1.2
8	P19	28.7	-0.5	1.3	1.2
8	P20	22.4	-0.5	-0.5	0.0
8	P21	22.4	0.0	0.0	0.2
8	P22	29.0	0.0	0.6	0.3
8	P23	30.0	-1.4	0.2	-0.8
8	P24	21.9	-0.3	-0.5	-0.3
8	P25	28.2	-0.3	0.7	0.0

	mOhm values	Actual	Delta	Delta	Delta
Board	**Position**	**Initial**	**250 Cycles**	**Thermal**	**Humidity**
1	P1	28.3	-0.5	-0.3	-0.1
1	P2	29.9	-0.7	0.7	-0.5
1	P3	23.8	-0.2	2.3	0.8
1	P4	23.5	0.7	2.9	1.7
1	P5	29.0	0.0	2.7	1.2
1	P6	23.8	0.4	1.3	0.2
1	P7	24.0	-1.0	-0.6	-0.8
1	P8	24.5	-0.4	0.4	0.1
1	P9	29.7	-0.7	0.6	0.1
1	P10	29.6	-0.3	-0.2	0.2
1	P11	29.3	-0.5	0.4	-0.3
1	P12	23.7	0.8	0.4	-0.4
1	P13	28.5	-0.2	2.8	0.7
1	P14	30.5	-0.3	-0.2	4.8
1	P15	28.4	-0.3	0.4	0.4
1	P16	24.2	-1.0	-0.2	-0.2
1	P17	23.7	0.0	0.2	0.1
1	P18	28.1	0.9	0.3	0.5
1	P19	29.5	-0.8	-0.6	-0.5
1	P20	23.3	0.4	0.1	0.2
1	P21	24.0	-0.6	0.0	0.1
1	P22	29.9	-1.3	-1.1	-0.7
1	P23	29.6	-0.5	0.4	0.1
1	P24	23.6	-0.8	0.4	0.0
1	P25	29.2	-0.7	0.4	0.2
2	P1	29.6	-1.0	-0.8	-1.5
2	P2	28.7	-0.3	0.1	0.4
2	P3	23.8	-0.5	-0.9	-0.7
2	P4	23.4	-0.1	1.0	1.2
2	P5	28.5	0.8	1.1	1.0
2	P6	23.3	-0.1	-0.1	0.0
2	P7	23.4	-0.2	-0.4	-0.1
2	P8	23.5	-0.3	-0.6	-0.5
2	P9	28.9	-0.8	1.5	1.6
2	P10	29.5	-0.2	0.3	0.2

2	P11	28.5	0.6	2.8	2.7
2	P12	24.1	-0.8	-0.7	-0.7
2	P13	29.8	0.0	-0.5	-0.7
2	P14	31.7	-1.8	2.0	-1.3
2	P15	29.0	-0.7	0.0	-0.1
2	P16	23.7	-0.3	-0.5	-0.4
2	P17	23.9	0.2	-0.7	-0.6
2	P18	28.2	-0.1	0.9	0.9
2	P19	28.5	-0.2	0.7	0.7
2	P20	24.2	-0.6	0.1	-0.2
2	P21	23.8	-0.6	-0.3	-0.4
2	P22	29.2	-0.6	0.7	0.7
2	P23	28.6	-0.4	0.7	0.7
2	P24	23.2	-0.6	-0.1	-0.3
2	P25	28.2	0.6	0.4	0.3
3	P1	28.3	0.5	1.2	0.5
3	P2	28.7	0.5	-1.5	0.1
3	P3	25.2	-2.8	-2.0	0.4
3	P4	25.3	-1.5	4.5	-1.4
3	P5	29.5	-0.6	-6.1	1.0
3	P6	26.4	-2.9	-0.2	-0.2
3	P7	25.2	-2.1	1.5	12.7
3	P8	23.9	-1.1	6.9	1.0
3	P9	29.8	-1.0	-1.2	0.2
3	P10	29.4	-0.7	-6.1	1.4
3	P11	29.1	-0.7	2.5	0.7
3	P12	23.5	-1.4	-0.3	0.8
3	P13	28.1	0.2	5.9	1.4
3	P14	29.4	-0.3	-6.1	0.6
3	P15	29.2	-1.1	2.7	-0.5
3	P16	23.3	0.2	0.2	3.0
3	P17	24.1	2.3	5.0	3.2
3	P18	27.7	0.2	3.2	1.0
3	P19	29.3	0.6	3.6	-0.3
3	P20	22.3	0.9	0.8	1.1
3	P21	23.1	0.1	0.3	1.2
3	P22	29.8	-0.6	1.6	-0.8
3	P23	29.8	-1.1	1.1	0.3
3	P24	21.8	-0.3	5.8	1.0
3	P25	28.5	0.0	1.0	0.4
4	P1	28.0	-0.2	0.5	0.7
4	P2	29.3	-0.7	-0.1	0.7
4	P3	22.6	0.2	0.6	0.6
4	P4	22.7	0.2	0.5	0.0
4	P5	28.8	-0.3	0.8	0.8
4	P6	23.1	0.0	1.1	0.8
4	P7	23.2	-0.1	0.8	0.8
4	P8	22.6	0.5	0.7	0.7
4	P9	29.5	-1.0	1.5	0.8

4	P10	29.3	-0.1	1.8	0.7
4	P11	29.4	0.6	2.2	0.5
4	P12	23.6	-0.5	-0.3	-0.2
4	P13	29.1	-1.1	2.1	0.0
4	P14	29.3	-0.5	1.6	1.3
4	P15	27.9	0.5	1.5	0.6
4	P16	23.6	0.1	-0.5	-0.2
4	P17	23.4	0.5	-0.9	-0.5
4	P18	27.5	0.3	3.8	1.0
4	P19	28.4	-0.1	3.3	1.3
4	P20	23.1	0.3	-0.7	-0.5
4	P21	22.9	0.1	0.1	0.4
4	P22	29.2	-0.6	0.8	-0.1
4	P23	28.9	-0.2	1.6	1.0
4	P24	22.0	0.7	1.2	1.2
4	P25	28.7	-0.1	-0.1	0.1
5	P1	29.5	-1.0	0.4	0.1
5	P2	28.6	0.3	0.6	0.6
5	P3	22.6	0.3	0.0	0.1
5	P4	23.2	0.1	-0.3	-0.2
5	P5	28.3	0.6	0.6	0.3
5	P6	23.2	0.2	-0.4	0.0
5	P7	22.4	0.3	-0.1	0.1
5	P8	22.7	-0.5	-0.4	-0.2
5	P9	28.9	0.1	0.5	-0.1
5	P10	28.2	1.0	1.2	0.6
5	P11	28.7	-0.5	1.0	-0.5
5	P12	22.6	-0.3	-0.4	-0.5
5	P13	28.3	-0.1	1.2	0.3
5	P14	28.6	0.3	2.0	0.3
5	P15	28.6	-0.8	1.3	0.4
5	P16	24.2	-1.3	-0.5	-0.1
5	P17	22.9	-0.6	0.3	0.3
5	P18	28.7	-0.9	0.1	-0.4
5	P19	28.5	0.1	1.3	0.2
5	P20	23.7	-1.4	-0.5	-0.4
5	P21	24.0	-1.2	-0.7	-0.6
5	P22	28.5	0.0	1.9	0.4
5	P23	27.9	1.0	0.7	0.2
5	P24	22.2	-0.5	0.4	0.5
5	P25	28.0	0.6	0.3	0.2
6	P1	27.3	1.9	1.6	2.0
6	P2	28.6	0.0	1.7	2.0
6	P3	24.7	-2.0	-0.3	0.5
6	P4	24.3	-0.9	0.0	0.3
6	P5	29.2	-1.1	1.1	0.4
6	P6	24.5	-1.2	0.8	2.4
6	P7	24.1	-1.3	0.7	1.4
6	P8	24.5	-0.3	-0.5	-0.1

6	P9	28.5	-0.1	2.2	1.3
6	P10	28.6	-0.8	3.3	2.1
6	P11	28.4	-0.5	3.0	2.0
6	P12	24.5	-1.8	1.0	0.9
6	P13	28.4	0.1	1.9	1.7
6	P14	28.7	-0.7	2.5	2.0
6	P15	27.7	0.9	4.6	2.7
6	P16	24.4	-1.4	0.7	1.8
6	P17	25.2	-2.1	-0.6	0.1
6	P18	28.3	0.4	2.8	1.0
6	P19	28.5	-0.1	2.2	1.1
6	P20	24.1	-1.5	1.2	1.6
6	P21	24.3	-1.7	1.4	1.6
6	P22	28.8	-0.8	2.8	1.0
6	P23	28.3	0.1	2.1	1.1
6	P24	23.3	-1.2	0.9	1.3
6	P25	28.3	-0.6	0.7	0.9
7	P1	29.1	-1.7	-0.6	0.1
7	P2	30.1	-1.7	-0.9	-0.9
7	P3	25.0	-0.3	4.0	2.8
7	P4	23.3	0.5	7.4	5.7
7	P5	30.7	-1.7	-1.7	-1.6
7	P6	23.9	0.6	1.0	1.1
7	P7	23.9	0.1	1.9	2.0
7	P8	24.1	-0.1	1.6	0.2
7	P9	30.1	-1.7	-0.9	-0.7
7	P10	29.5	-1.0	1.0	0.3
7	P11	29.2	-0.8	1.0	0.7
7	P12	25.5	-0.7	1.3	-0.2
7	P13	29.3	-0.4	1.3	0.4
7	P14	29.7	-0.8	3.8	2.3
7	P15	28.5	-1.0	2.6	2.2
7	P16	25.7	-0.8	-0.4	-0.5
7	P17	24.1	0.2	-0.3	-0.1
7	P18	28.5	-0.6	1.1	1.1
7	P19	29.4	-0.9	0.2	0.1
7	P20	25.2	-0.4	-0.1	-0.5
7	P21	24.6	0.9	-0.2	-0.4
7	P22	29.1	0.5	1.2	0.8
7	P23	29.2	-0.4	0.0	0.3
7	P24	23.9	-0.4	-0.3	-0.6
7	P25	29.2	-0.4	-0.4	-0.6
8	P1	28.0	0.3	1.8	1.5
8	P2	29.1	0.2	4.3	3.9
8	P3	27.1	-2.9	-1.1	-1.6
8	P4	27.5	-4.1	-1.0	-0.9
8	P5	29.8	-0.3	1.3	1.1
8	P6	27.9	-3.6	-1.4	-1.3
8	P7	26.9	-3.3	-1.7	-1.6

8	P8	26.4	-3.6	-1.0	-0.9
8	P9	30.1	-0.5	5.5	11.9
8	P10	28.2	1.4	1.5	2.5
8	P11	30.0	0.0	3.0	0.2
8	P12	26.4	-2.1	-0.6	-0.8
8	P13	28.3	0.5	6.5	8.7
8	P14	29.0	0.4	5.6	9.0
8	P15	27.8	0.2	0.1	0.2
8	P16	26.2	-2.3	-0.8	-0.6
8	P17	26.9	-3.2	-1.5	-1.4
8	P18	27.8	-0.1	-0.1	0.2
8	P19	29.6	-0.6	0.4	1.2
8	P20	26.1	-0.6	-0.9	-1.0
8	P21	26.0	-1.6	0.1	-0.2
8	P22	29.3	-0.3	0.3	0.1
8	P23	29.8	-1.0	-0.4	-0.5
8	P24	26.1	-3.1	0.9	-0.6
8	P25	28.9	-0.1	0.4	0.4

	mOhm values	**Actual**	**Delta**	**Delta**	**Delta**
Board	**Position**	**Initial**	**500 Cycles**	**Thermal**	**Humidity**
1	P1	28.7	-0.5	0.2	-0.2
1	P2	28.3	0.0	1.6	1.2
1	P3	26.8	-0.6	0.1	-2.7
1	P4	23.4	0.9	1.2	0.6
1	P5	28.2	-0.1	1.2	0.6
1	P6	25.2	-0.8	-1.1	-1.2
1	P7	23.3	-0.2	0.6	0.8
1	P8	23.9	-0.5	-1.0	-0.4
1	P9	28.6	0.2	0.5	0.5
1	P10	28.9	0.0	0.5	0.5
1	P11	28.5	-0.2	0.4	0.3
1	P12	23.7	-0.8	0.3	0.8
1	P13	28.6	-0.7	-0.3	-0.2
1	P14	28.5	-0.5	-0.4	-0.1
1	P15	28.4	0.2	-0.3	-0.2
1	P16	24.1	-0.8	-0.8	-0.3
1	P17	23.7	-0.4	-0.1	0.4
1	P18	28.1	0.0	-0.1	0.1
1	P19	28.5	0.2	0.1	0.5
1	P20	23.5	0.3	0.7	1.3
1	P21	24.6	-0.5	-0.9	-0.2
1	P22	29.0	0.3	0.0	0.1
1	P23	28.0	0.3	0.7	1.0
1	P24	22.8	-0.3	0.1	0.4
1	P25	27.8	0.3	1.0	0.4
2	P1	27.3	0.3	-0.2	0.4
2	P2	28.4	-0.3	-0.1	0.1
2	P3	26.8	0.1	0.1	0.2

2	P4	26.9	0.3	-0.4	0.1
2	P5	28.3	-0.3	-0.3	-0.2
2	P6	27.5	0.4	-0.2	0.1
2	P7	27.0	0.0	0.0	0.7
2	P8	29.2	-0.9	-1.8	-0.9
2	P9	29.1	-0.5	0.1	0.3
2	P10	29.2	-0.9	-0.2	0.7
2	P11	28.6	0.6	1.9	1.5
2	P12	27.2	0.3	-0.4	0.3
2	P13	29.3	-1.3	0.5	-0.3
2	P14	28.2	0.5	4.7	2.3
2	P15	28.1	-0.1	1.4	1.3
2	P16	27.6	-0.1	-0.5	0.2
2	P17	26.4	1.0	0.5	1.3
2	P18	27.6	0.3	1.5	1.3
2	P19	28.8	-0.5	1.5	1.0
2	P20	26.5	1.1	-0.4	0.5
2	P21	27.3	0.1	0.0	0.7
2	P22	29.0	0.2	1.4	0.4
2	P23	28.9	-0.4	1.0	0.3
2	P24	25.9	0.5	-0.2	0.3
2	P25	28.1	0.4	0.8	0.0
3	P1	29.6	-0.1	-0.8	-0.2
3	P2	29.4	-0.3	-0.1	0.4
3	P3	25.9	0.1	-0.4	0.0
3	P4	25.7	0.4	0.0	-0.2
3	P5	29.0	0.1	0.5	0.3
3	P6	25.9	-0.5	0.1	0.3
3	P7	25.7	0.8	0.2	0.5
3	P8	25.5	0.6	-0.3	-0.1
3	P9	28.9	0.0	0.9	0.6
3	P10	29.1	-0.3	0.4	0.2
3	P11	29.2	-0.7	1.3	0.0
3	P12	25.9	0.6	0.2	0.5
3	P13	29.2	-0.6	1.6	0.1
3	P14	29.2	-0.4	3.4	1.3
3	P15	29.0	-0.7	0.4	0.0
3	P16	26.5	0.2	0.3	0.3
3	P17	26.1	0.4	0.4	0.1
3	P18	29.3	-1.1	0.6	0.2
3	P19	29.4	-1.2	1.2	0.5
3	P20	26.0	0.1	0.1	-0.1
3	P21	26.3	-0.4	0.9	0.3
3	P22	29.9	-0.9	1.3	-0.5
3	P23	31.4	-2.6	-0.9	-1.7
3	P24	25.2	0.2	0.3	-0.2
3	P25	28.8	-0.6	0.4	0.1
4	P1	27.3	-0.1	1.0	0.9
4	P2	28.6	0.1	0.3	0.0

4	P3	22.5	0.0	0.7	0.5
4	P4	22.8	-0.4	0.2	0.1
4	P5	28.9	-0.3	0.7	0.4
4	P6	23.0	-0.1	0.3	0.2
4	P7	22.2	0.2	0.7	0.7
4	P8	22.5	-0.3	2.2	0.8
4	P9	29.1	0.0	0.7	0.3
4	P10	28.3	-0.7	0.9	0.7
4	P11	28.1	0.0	1.8	0.7
4	P12	22.5	0.0	0.7	0.8
4	P13	27.6	-0.1	1.2	0.9
4	P14	28.9	-0.8	1.2	1.0
4	P15	27.6	0.1	0.8	0.7
4	P16	23.2	0.1	1.1	1.2
4	P17	22.9	-0.2	0.9	0.9
4	P18	27.9	-0.6	0.5	0.3
4	P19	28.8	-0.2	0.2	0.3
4	P20	23.8	0.0	-0.5	-0.6
4	P21	23.9	-1.4	0.6	0.2
4	P22	28.8	0.2	0.2	-0.1
4	P23	28.4	0.3	0.7	0.2
4	P24	22.2	0.1	1.7	0.4
4	P25	27.5	0.6	0.6	0.5
5	P1	28.5	-0.8	0.6	0.0
5	P2	29.4	-0.7	0.6	-0.8
5	P3	25.2	-0.2	-0.3	-0.4
5	P4	26.2	0.3	-1.0	-1.4
5	P5	29.1	0.4	0.5	0.0
5	P6	23.9	-0.6	1.8	1.5
5	P7	23.6	-0.5	2.4	1.8
5	P8	24.4	-0.4	1.4	0.5
5	P9	28.9	-0.5	3.1	0.2
5	P10	28.6	-0.2	3.3	0.4
5	P11	28.7	-0.2	5.3	0.0
5	P12	23.9	0.0	1.0	0.2
5	P13	29.3	-0.8	1.8	-0.3
5	P14	28.5	0.3	3.6	0.6
5	P15	28.4	-0.5	6.5	1.3
5	P16	24.1	-0.7	0.4	-0.6
5	P17	23.8	-0.5	-0.4	-0.4
5	P18	28.6	-0.1	3.3	0.8
5	P19	29.3	-0.5	0.3	-0.6
5	P20	23.2	0.3	0.4	0.6
5	P21	24.0	0.0	0.5	0.2
5	P22	28.8	-0.1	1.9	0.3
5	P23	29.1	-0.6	1.1	-0.1
5	P24	23.7	-0.5	0.5	0.8
5	P25	28.2	0.1	1.1	0.3
6	P1	29.6	-0.9	2.1	-0.8

6	P2	29.5	-0.5	1.1	0.8
6	P3	26.3	0.3	1.2	1.0
6	P4	27.8	-0.8	-0.8	-1.2
6	P5	29.5	0.1	2.1	-0.1
6	P6	26.8	-0.6	0.7	0.5
6	P7	26.2	-0.4	0.3	0.7
6	P8	26.4	-0.7	0.6	0.7
6	P9	29.2	-0.4	4.3	0.0
6	P10	28.4	0.5	6.4	0.4
6	P11	28.8	-0.4	3.6	-0.6
6	P12	26.8	-1.4	1.0	0.3
6	P13	29.1	0.0	2.0	1.9
6	P14	28.4	0.5	3.2	1.6
6	P15	28.8	0.7	4.8	0.8
6	P16	28.5	-2.6	0.3	0.0
6	P17	25.5	0.3	1.6	2.6
6	P18	29.1	0.1	7.6	-0.2
6	P19	28.8	-0.1	2.1	0.9
6	P20	26.3	-1.2	2.7	0.5
6	P21	27.3	-1.7	16.9	12.8
6	P22	29.0	-0.1	1.7	-0.4
6	P23	28.7	-0.2	5.2	-0.2
6	P24	25.2	-0.3	1.7	3.5
6	P25	28.9	0.2	2.7	-0.2
7	P1	28.0	0.1	0.7	0.5
7	P2	29.4	-0.1	0.5	0.2
7	P3	23.8	-0.3	0.8	1.4
7	P4	24.3	0.0	1.1	1.5
7	P5	29.2	0.1	0.9	0.5
7	P6	24.4	3.1	0.8	0.8
7	P7	24.2	1.2	-0.1	-0.3
7	P8	24.3	3.4	0.4	-0.3
7	P9	29.1	0.0	1.8	1.0
7	P10	29.1	0.0	1.8	1.1
7	P11	28.5	-0.5	0.6	0.2
7	P12	24.1	2.3	0.9	-0.6
7	P13	28.0	0.1	1.9	0.5
7	P14	28.5	0.6	1.6	1.5
7	P15	29.5	-1.4	-0.5	-0.8
7	P16	24.0	-0.2	0.8	0.2
7	P17	24.0	-0.4	-0.4	0.2
7	P18	28.0	-0.2	1.8	0.6
7	P19	28.7	-0.1	1.3	0.7
7	P20	23.5	0.4	-0.3	-0.1
7	P21	23.5	0.0	0.1	-0.4
7	P22	28.7	-0.3	1.7	0.6
7	P23	28.9	0.2	0.9	0.1
7	P24	22.5	-0.3	0.0	0.4
7	P25	28.9	0.0	0.6	-0.1

8	P1	28.1	-0.1	3.0	0.7
8	P2	29.0	-1.1	2.4	0.9
8	P3	23.6	0.1	-0.1	0.5
8	P4	24.4	-1.7	0.8	-0.5
8	P5	28.4	-0.4	1.7	0.7
8	P6	22.3	1.4	2.9	6.5
8	P7	22.8	0.0	3.6	2.7
8	P8	23.6	-0.5	2.6	2.4
8	P9	28.2	-0.3	2.7	1.6
8	P10	28.0	0.2	6.5	1.7
8	P11	28.3	-0.3	4.1	1.1
8	P12	23.4	-0.5	2.5	2.3
8	P13	28.8	-0.7	4.7	1.3
8	P14	28.9	-0.4	3.1	1.1
8	P15	28.9	-0.5	3.0	2.0
8	P16	23.9	0.2	1.6	1.0
8	P17	22.7	0.2	2.2	1.8
8	P18	28.8	-0.6	2.9	1.3
8	P19	28.3	0.0	2.0	1.6
8	P20	23.1	-0.3	3.5	1.5
8	P21	24.8	-1.0	1.1	1.0
8	P22	28.8	-0.5	3.2	0.7
8	P23	28.4	0.0	2.4	1.0
8	P24	22.8	0.9	3.1	1.5
8	P25	27.6	0.7	0.9	0.7

DATA Continued

GAS TIGHT:

	mOhm values	Actual	Delta
Board	Position	Initial	Gas Tight
1	P1	28.4	0.4
1	P2	29.7	-0.2
1	P3	25.7	1.0
1	P4	25.7	0.5
1	P5	29.7	-0.1
1	P6	26.5	0.6
1	P7	26.1	0.8
1	P8	26.0	0.6
1	P9	29.8	-0.2
1	P10	29.7	-0.2
1	P11	29.1	0.0
1	P12	25.7	0.6
1	P13	28.7	2.2
1	P14	30.0	0.2
1	P15	28.4	0.9
1	P16	26.0	0.3
1	P17	26.2	-0.1
1	P18	29.1	-0.1
1	P19	29.3	0.3
1	P20	24.9	0.9
1	P21	25.3	0.2
1	P22	29.4	0.3
1	P23	29.6	0.1
1	P24	26.3	-0.5
1	P25	28.8	0.2
2	P1	28.3	0.1
2	P2	28.8	0.2
2	P3	21.9	0.4
2	P4	21.6	0.6
2	P5	28.0	0.3
2	P6	21.8	0.4
2	P7	21.9	0.5
2	P8	21.6	0.5
2	P9	28.5	0.4
2	P10	28.6	0.2
2	P11	28.3	0.4
2	P12	22.7	0.5
2	P13	28.1	1.0
2	P14	28.7	0.0
2	P15	28.9	-0.1
2	P16	22.8	0.8

2	P17	21.7	1.0
2	P18	27.9	0.9
2	P19	28.5	-0.2
2	P20	22.1	0.2
2	P21	22.4	0.2
2	P22	28.8	0.7
2	P23	28.2	0.2
2	P24	21.2	0.2
2	P25	28.3	-0.3
3	P1	28.6	0.2
3	P2	29.3	0.2
3	P3	24.7	0.8
3	P4	24.6	1.3
3	P5	28.9	0.7
3	P6	24.6	1.1
3	P7	24.5	-0.1
3	P8	24.5	0.3
3	P9	30.1	-1.2
3	P10	29.7	-1.0
3	P11	28.9	0.5
3	P12	24.6	1.2
3	P13	29.3	0.0
3	P14	28.5	0.4
3	P15	30.0	-1.5
3	P16	24.3	1.2
3	P17	25.2	0.1
3	P18	29.0	-0.2
3	P19	29.0	-0.2
3	P20	24.2	0.5
3	P21	25.2	0.4
3	P22	29.1	0.2
3	P23	28.8	0.4
3	P24	23.7	0.5
3	P25	28.1	1.1
4	P1	33.8	-5.4
4	P2	28.7	0.3
4	P3	22.3	0.8
4	P4	23.0	-0.1
4	P5	28.7	0.3
4	P6	22.2	0.7
4	P7	22.5	0.5
4	P8	22.2	1.0
4	P9	28.8	0.2
4	P10	28.6	0.2
4	P11	28.7	2.1
4	P12	22.4	1.6
4	P13	28.8	0.3
4	P14	28.6	0.6
4	P15	28.0	1.1

4	P16	22.4	0.4
4	P17	23.1	-0.1
4	P18	28.3	0.6
4	P19	28.1	0.7
4	P20	22.4	0.6
4	P21	23.2	0.2
4	P22	28.5	0.9
4	P23	27.8	1.7
4	P24	22.0	0.9
4	P25	28.5	-0.1
5	P1	29.3	0.1
5	P2	29.2	-0.6
5	P3	24.5	0.8
5	P4	24.4	-0.1
5	P5	29.0	0.3
5	P6	24.2	0.0
5	P7	23.6	0.7
5	P8	24.4	-0.2
5	P9	29.7	-0.8
5	P10	28.9	0.7
5	P11	29.2	-0.1
5	P12	23.7	0.5
5	P13	29.2	-0.1
5	P14	29.7	-0.6
5	P15	29.0	-0.1
5	P16	24.0	-0.6
5	P17	23.1	0.1
5	P18	29.0	0.0
5	P19	28.8	0.1
5	P20	23.8	-0.4
5	P21	23.8	0.2
5	P22	29.4	0.1
5	P23	29.8	-1.1
5	P24	23.4	-0.1
5	P25	29.0	-0.3
6	P1	27.5	1.0
6	P2	29.2	1.5
6	P3	23.9	0.1
6	P4	25.2	0.1
6	P5	28.4	0.9
6	P6	23.8	0.5
6	P7	23.9	-0.1
6	P8	23.5	0.2
6	P9	29.4	0.3
6	P10	29.8	-0.3
6	P11	28.5	1.8
6	P12	22.9	0.8
6	P13	28.1	0.8
6	P14	29.0	0.9

6	P15	28.5	0.5
6	P16	23.2	0.9
6	P17	23.6	-0.1
6	P18	28.7	0.6
6	P19	29.1	0.5
6	P20	22.8	1.0
6	P21	23.0	1.0
6	P22	30.3	0.0
6	P23	28.9	0.8
6	P24	22.6	-0.3
6	P25	28.8	0.5
7	P1	27.8	0.8
7	P2	28.7	0.1
7	P3	22.0	-0.2
7	P4	21.9	1.3
7	P5	29.7	-0.5
7	P6	21.9	0.2
7	P7	21.5	0.3
7	P8	21.3	0.4
7	P9	28.2	0.5
7	P10	27.8	0.7
7	P11	28.3	0.6
7	P12	22.1	-0.1
7	P13	28.7	1.1
7	P14	28.7	0.5
7	P15	29.0	-0.8
7	P16	22.8	-0.2
7	P17	22.0	-0.1
7	P18	28.7	-0.2
7	P19	28.4	0.1
7	P20	22.2	0.1
7	P21	21.8	0.6
7	P22	29.5	0.5
7	P23	28.4	0.5
7	P24	21.5	-0.3
7	P25	28.1	0.2
8	P1	28.5	0.4
8	P2	28.1	0.5
8	P3	22.6	0.1
8	P4	22.1	0.4
8	P5	28.8	-0.4
8	P6	22.3	-0.1
8	P7	22.2	-0.2
8	P8	22.6	-0.3
8	P9	30.2	0.3
8	P10	29.5	-0.3
8	P11	28.6	0.0
8	P12	22.9	-0.5
8	P13	28.3	0.6

8	P14	29.8	0.0
8	P15	28.1	0.3
8	P16	22.9	0.6
8	P17	22.3	0.0
8	P18	28.9	-0.7
8	P19	28.2	0.3
8	P20	22.1	0.3
8	P21	22.2	0.2
8	P22	29.3	-0.4
8	P23	29.1	-0.1
8	P24	21.5	0.5
8	P25	28.8	0.2

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: MO-01
Description: Micro-Ohmeter
Manufacturer: Keithley
Model: 580
Serial #: 0772740
Accuracy: See Manual
… Last Cal: 06/22/07, Next Cal: 06/22/08

Equipment #: MO-03
Description: Multimeter /Data Acquisition System
Manufacturer: Keithley
Model: 2700
Serial #: 0791975
Accuracy: See Manual
… Last Cal: 06/22/07, Next Cal: 06/22/08

Equipment #: TCT-03
Description: Dillon Quantrol TC2 Test Stand
Manufacturer: Dillon Quantrol
Model: TC2
Serial #: 02-1033-03
Accuracy: Speed Accuracy: +/- 5% of indicated speed; Displacement: +/- 5 micrometers.
… Last Cal: 5/18/07, Next Cal: 5/18/08

Equipment #: TCT-05
Description: TCT-225 Frame with TLC Console
Manufacturer: Chatillon
Model: TCD-225
Serial #: TCD 0071
Accuracy: See Manual See Manual
… Last Cal: 06/01/2008, Next Cal: 06/01/2009