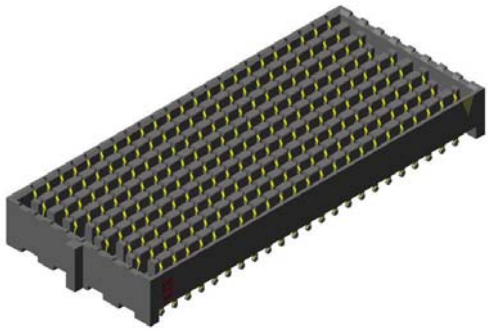
Project Number: DPAM_DPAF	Tracking Code: TC0424-DPAM_DPAF-0454		
Requested by: Jeremy Wooldridge	Date: 6/8/2004	Product Rev: 3	
Part #: DPAM-15/23-01-H-8-1	Lot #: NA	Tech: Troy Cook	Eng: John Tozier
Part description: Differential Pair DPArray			Qty to test: 70
Test Start: 06/30/2004	Test Completed: 8/4/2004		



DPAF depicted

DVT

PART DESCRIPTION

DPAM-15/23-01-H-8-1

Mated with DPAF-15/23-01-H-8-1

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

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: DVT

APPLICABLE DOCUMENTS

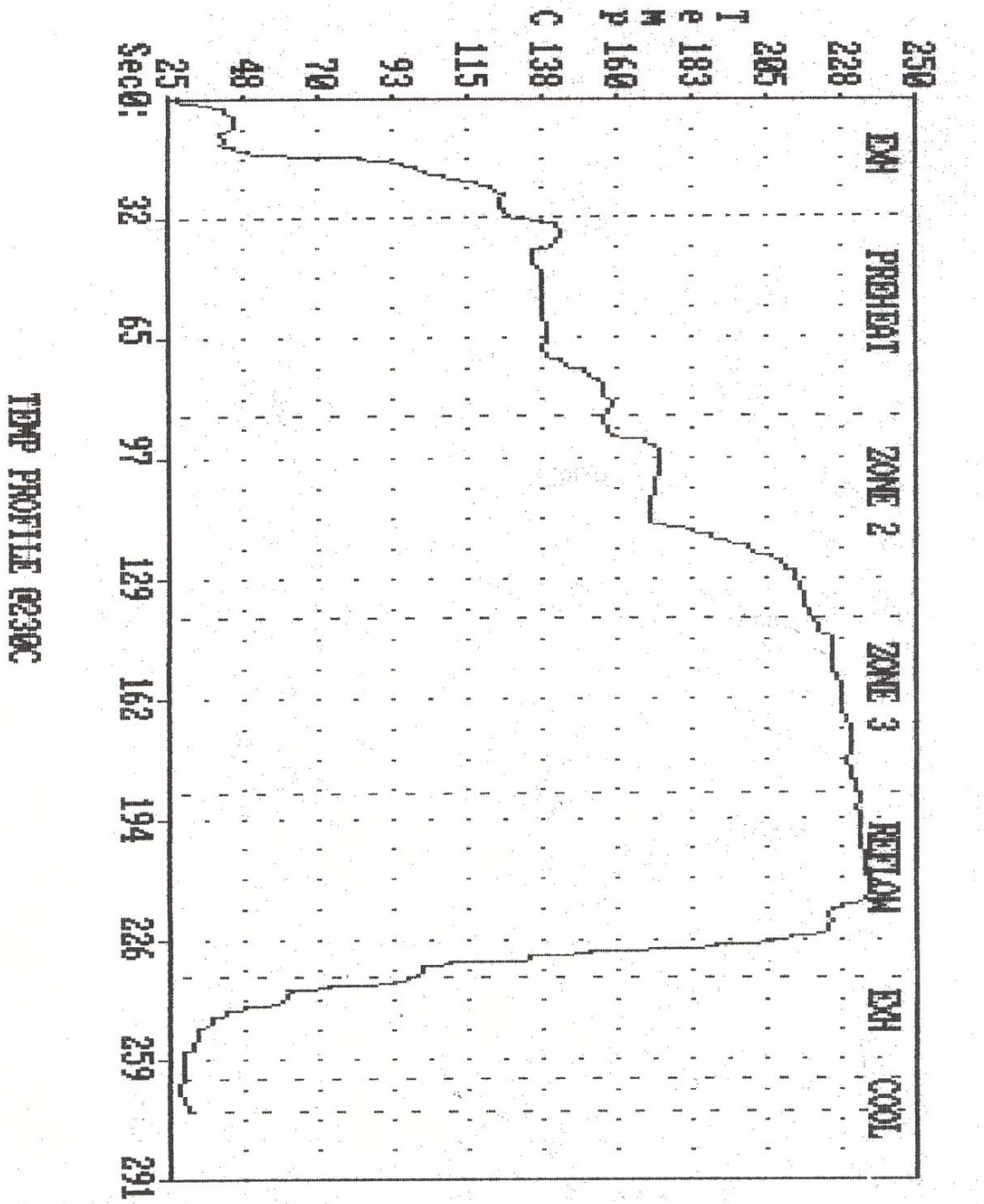
Standards: EIA Publication 364

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) The ultrasonic procedure can be used with either aqueous or non-aqueous soldering components and follows:
    a. Sample test boards are to be ultrasonically cleaned after test lead attachment, preparation and/or soldering.
    b. Sample test boards are immersed into Branson 3510 cleaner containing Kyzen Ionox HC1 (or equivalent) with the following conditions:
        i. Temperature: -------55° C+/- 5° C
        ii. Frequency:----------40 KHz
        iii. Immersion Time: ---5 to 10 Minutes
    c. Sample test boards are removed and placed into the Branson 3510 cleaner containing deionized water with the following conditions:
        i. Temperature: --------55° C +/- 5° C
        ii. Frequency:----------40 KHz
        iii. Immersion Time: ---5 to 10 Minutes
    d. Sample test boards are removed and placed in a beaker positioned on a hot plate with a magnetic stirrer containing deionized water warmed to 55° C +/- 5° C for 1/2 to 1 minute.
    e. Upon removal, the sample boards are rinsed for ½ to 1 minute at room temperature with free flowing deionized water.
    f. After the final rinse, the sample test boards are dried in an air-circulating oven for 10 to 15 minutes at 50° C +/- 5° C.
    g. Sample test boards are then allowed to set and recover to room ambient condition prior to testing.
7) Parts not intended for testing LLCR and DWV/IR are visually inspected and cleaned if necessary.
8) Any additional preparation will be noted in the individual test sequences.
9) Solder Information: Sn63Pb37
10) Re-Flow Time/Temp: See accompanying profile.
11) Internal Test PCBs used: 100167-TST-XX

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

OVEN PROFILE (Soldering Parts to Test Boards)



Screen: Calib Data Current Job: E130-230

```
:
:
:
:                              TC1
:        Peak Temperature(Deg C):  236
:        Maximum Slope (Deg/Sec):  -18
:        Seconds Above Threshold:   35
:
:
```

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

FLOWCHARTS

TEST STEP	GROUP A 1 board min 6 Contacts in series (both Linear and Clustered configurations)
01	CCC

Tabulate calculated current at RT, 85° C, 95° C and 115° C
after derating 20% and based on 125° C
CCC, Temp rise = EIA-364-70

TEST STEP	GROUP A1 15 Position	GROUP A2 23 Position	GROUP B1 Individual Contacts	GROUP B2 Individual Contacts
01	Contact Gaps	Contact Gaps	Setup Approve	Setup Approve
02	Mating / Unmating	Mating / Unmating	Normal Force	Thermal Aging (Mated)
03	Data Review	Data Review	Data Review	Normal Force
04	100 Cycles	100 Cycles		
05	Mating / Unmating	Mating / Unmating		
06	Contact Gaps	Contact Gaps		
07	Data Review	Data Review		
08	Thermal Aging (Mated)	Thermal Aging (Mated)		
09	Mating / Unmating	Mating / Unmating		
10	Contact Gaps	Contact Gaps		
11	Data Review	Data Review		
12	Humidity (Mated)	Humidity (Mated)		
13	Contact Gaps	Contact Gaps		
14	Mating / Unmating	Mating / Unmating		

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)
delete steps 7a and 7b
Mating/Un-Mating Forces = EIA-364-13
Normal Force = EIA-364-04
Contact Gaps/Height - No standard method. Usually measured optically

FLOWCHARTS Continued

TEST STEP	GROUP A
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

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)
delete steps 7a and 7b
LLCR = EIA-364-23, LLCR
use Keithley 580 in the dry circuit mode, 10 mA Max

TEST STEP	GROUP A
01	LLCR-1
02	Gas Tight
03	LLCR-2

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

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

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) Connectors are mated and pre-conditioned at ambient.

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) Connectors are mated and pre-conditioned at ambient.

TEMPERATURE RISE (Current Carrying Capacity, CCC):

1) EIA-364-70, *Temperature Rise versus Current Test Procedure for Electrical Connectors and Sockets*.
2) When current passes through a contact, the temperature of the contact increases as a result of I^2R (resistive) heating.
3) The number of contacts being investigated plays a significant part in power dissipation and therefore temperature rise.
4) The size of the temperature probe can affect the measured temperature.
5) Copper traces on PC boards will contribute to temperature rise:
    a. Self heating (resistive)
    b. Reduction in heat sink capacity affecting the heated contacts
6) A de-rating curve, usually 20%, is calculated.
7) Calculated de-rated currents at three temperature points are reported:
    a. Ambient
    b. 85^{o} C
    c. 95^{o} C
    d. 115^{o} C
8) Typically, neighboring contacts (in close proximity to maximize heat build up) are energized.
9) The thermocouple (or temperature measuring probe) will be positioned at a location to sense the maximum temperature in the vicinity of the heat generation area.
10) A computer program, *TR 803.exe*, ensures accurate stability for data acquisition.
11) Hook-up wire cross section is larger than the cross section of any connector leads/PC board traces, jumpers, etc.
12) Hook-up wire length is longer than the minimum specified in the referencing standard.

CONTACT GAPS:

1) Gaps between mating surfaces were measured before and after stressing the contacts (e.g. thermal aging, mechanical cycling, etc.).
2) Typically, all contacts on the connector are measured.

ATTRIBUTE DEFINITIONS Continued

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.

NORMAL FORCE:

1) Reference document: EIA-364-04, *Normal Force Test Procedure for Electrical Connectors*.
2) The contacts shall be tested in the connector housing.
3) If necessary, a "window" shall be made in the connector body to allow a probe to engage and deflect the contact at the same attitude and distance (plus 0.05 mm [0.002"]) as would occur in actual use.
4) The connector housing shall be placed in a holding fixture that does not interfere with or otherwise influence the contact force or deflection.
5) Said holding fixture shall be mounted on a floating, adjustable, X-Y table on the base of the Dillon TC^2, computer controlled test stand with a deflection measurement system accuracy of 5.0 µm (0.0002").
6) The nominal deflection rate shall be 5 mm (0.2")/minute.
7) Unless otherwise noted a minimum of five contacts shall be tested.
8) The force/deflection characteristic to load and unload each contact shall be repeated five times.
9) The system shall utilize the TC^2 software in order to acquire and record the test data.
10) The permanent set of each contact shall be measured within the TC^2 software.
11) The acquired data shall be graphed with the deflection data on the X-axis and the force data on the Y-axis and a print out will be stored with the Tracking Code paperwork.

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

ATTRIBUTE DEFINITIONS Continued

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 less than 10.
        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.

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

RESULTS

Temperature Rise, CCC at 20% de-rating, 6 contacts powered

- **At 95°C, relative to 125°C----------2.9 A clustered 2 X 3 configuration**

Contact Gaps

- **Initial**
  - **Min**
    - **15 Position Part ---------- 0.0727”**
    - **23 Position Part ---------- 0.0721”**
  - **Max**
    - **15 Position Part ---------- 0.0759”**
    - **23 Position Part ---------- 0.0758”**
- **After 100 Cycles**
  - **Min**
    - **15 Position Part ---------- 0.0718”**
    - **23 Position Part ---------- 0.0716”**
  - **Max**
    - **15 Position Part ---------- 0.0751”**
    - **23 Position Part ---------- 0.0751”**
- **Thermal**
  - **Min**
    - **15 Position Part ---------- 0.0702”**
    - **23 Position Part ---------- 0.0682”**
  - **Max**
    - **15 Position Part ---------- 0.0728”**
    - **23 Position Part ---------- 0.0732”**
- **Humidity**
  - **Min**
    - **15 Position Part ---------- 0.0699”**
    - **23 Position Part ---------- 0.0681”**
  - **Max**
    - **15 Position Part ---------- 0.0731”**
    - **23 Position Part ---------- 0.0730”**

Mating – Unmating Forces

- **Initial**
  - **Mating**
    - **Min**
      - **15 Position Part ----------17.0 lbs**
      - **23 Position Part ----------21.8 lbs**
    - **Max**
      - **15 Position Part ----------20.7 lbs**
      - **23 Position Part ----------26.0 lbs**
  - **Unmating**
    - **Min**
      - **15 Position Part ----------11.1 lbs**
      - **23 Position Part ----------13.6 lbs**
    - **Max**
      - **15 Position Part ----------14.6 lbs**
      - **23 Position Part ----------17.1 lbs**

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

RESULTS Continued

- **After 100 Cycles**
  - **Mating**
    - **Min**
      - **15 Position Part ----------13.5 lbs**
      - **23 Position Part ----------18.6 lbs**
    - **Max**
      - **15 Position Part ----------24.9 lbs**
      - **23 Position Part ----------20.6 lbs**
  - **Unmating**
    - **Min**
      - **15 Position Part ---------- 8.8 lbs**
      - **23 Position Part ----------11.7 lbs**
    - **Max**
      - **15 Position Part ----------12.2 lbs**
      - **23 Position Part ----------14.3 lbs**
- **Thermal**
  - **Mating**
    - **Min**
      - **15 Position Part ----------11.1 lbs**
      - **23 Position Part ----------14.8 lbs**
    - **Max**
      - **15 Position Part ----------12.4 lbs**
      - **23 Position Part ----------17.1 lbs**
  - **Unmating**
    - **Min**
      - **15 Position Part ---------- 6.1 lbs**
      - **23 Position Part ---------- 9.3 lbs**
    - **Max**
      - **15 Position Part ---------- 8.6 lbs**
      - **23 Position Part ----------12.2 lbs**
- **Humidity**
  - **Mating**
    - **Min**
      - **15 Position Part ----------11.5 lbs**
      - **23 Position Part ----------13.5 lbs**
    - **Max**
      - **15 Position Part ----------14.1 lbs**
      - **23 Position Part ----------17.6 lbs**
  - **Unmating**
    - **Min**
      - **15 Position Part ---------- 7.0 lbs**
      - **23 Position Part ---------- 7.7 lbs**
    - **Max**
      - **15 Position Part ---------- 9.6 lbs**
      - **23 Position Part ----------10.8 lbs**

Normal Force

- **Initial at 0.010” deflection**
  - **Min----------65.8 gr** **Set ----- 0.0000”**
  - **Max ----------71.6 gr** **Set ----- 0.0005”**
- **Thermal at 0.007” deflection**
  - **Min----------54.9 gr**
  - **Max ----------62.2 gr**

RESULTS Continued

LLCR Durability (200 LLCR test points)

- **Initial ---------- 9.7 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 Gas Tight (195 LLCR test points)

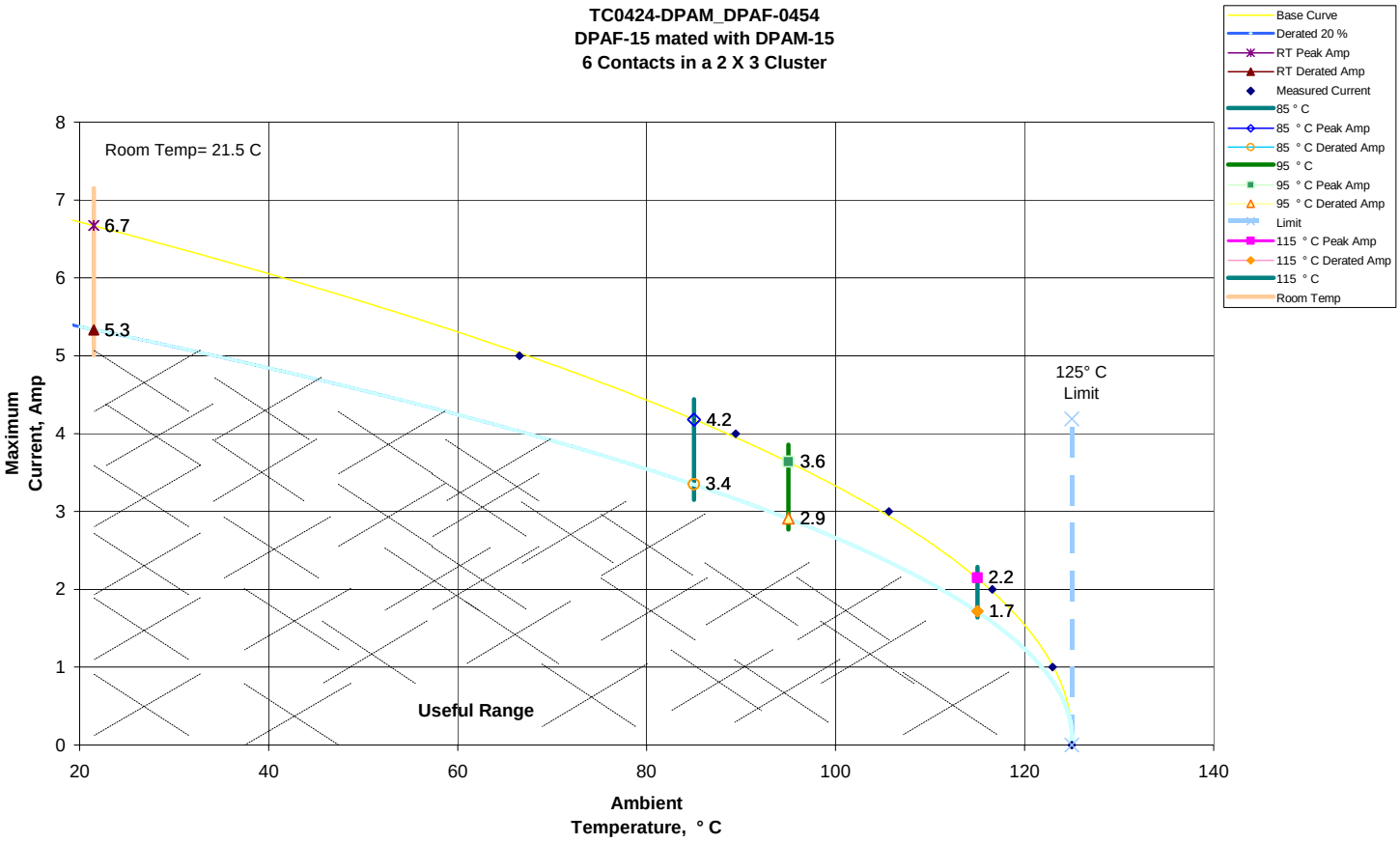
- **Initial ---------- 9.9 mOhms Max**
- **Gas-Tight**
  - **<= +5.0 mOhms ---------- 195 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 0 Points ---------- Minor**
  - **+10.1 to +15.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+15.1 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.1 to +2000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+2000 mOhms ---------- 0 Points ---------- Open Failure**

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA SUMMARIES

TEMPERATURE RISE (Current Carrying Capacity, CCC):

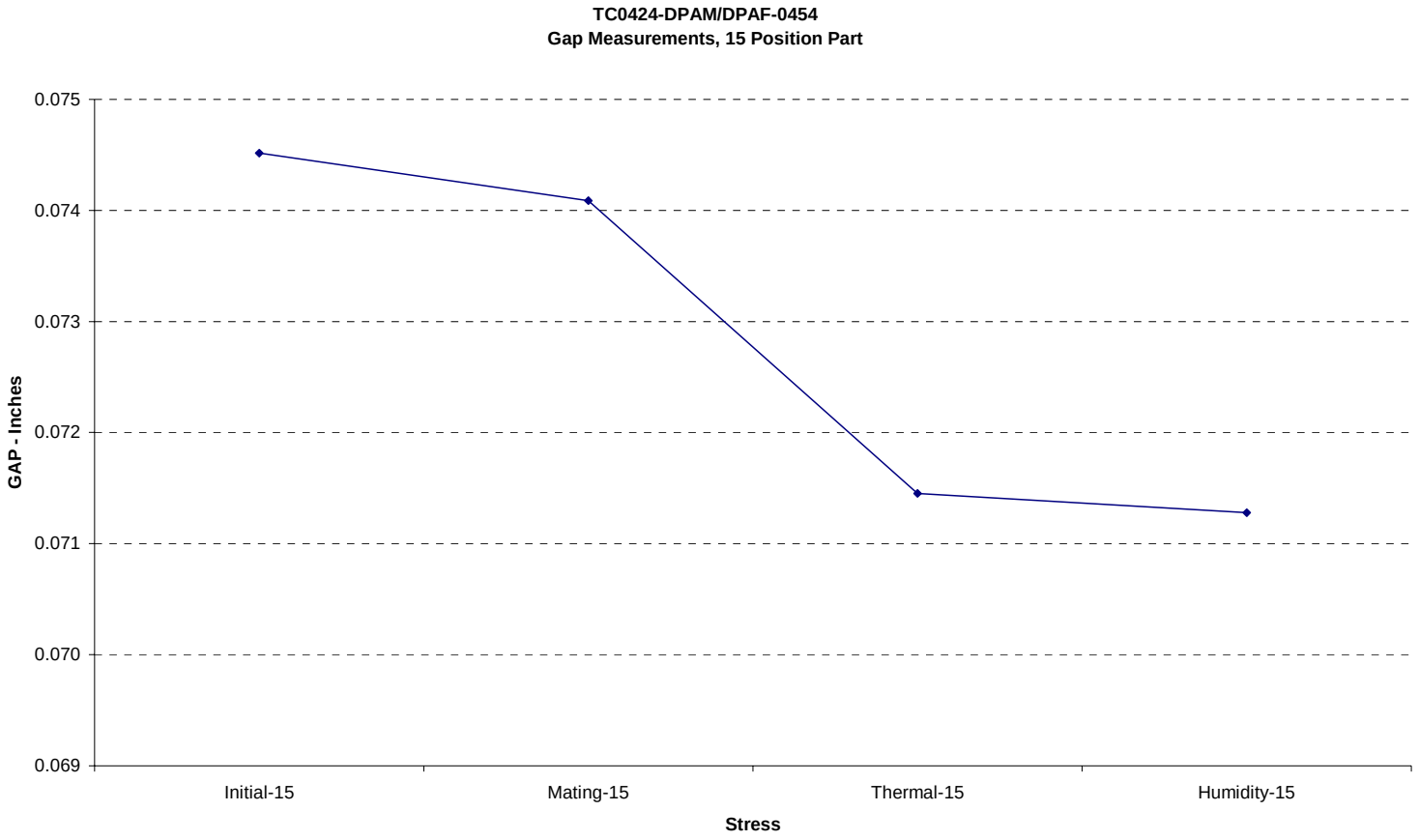
1) High quality thermocouples whose temperature slopes track one another were used for temperature monitoring.
2) The thermocouples were placed at a location to sense the maximum temperature generated during testing.
3) Temperature readings recorded are those for which three successive readings, 15 minutes apart, differ less than 1° C (computer controlled data acquisition).
4) Adjacent contacts were powered:
    a. Clustered
        i. Six contacts powered in a 2 X 3 configuration



Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA SUMMARIES Continued

CONTACT GAPS, 15 Position Part:

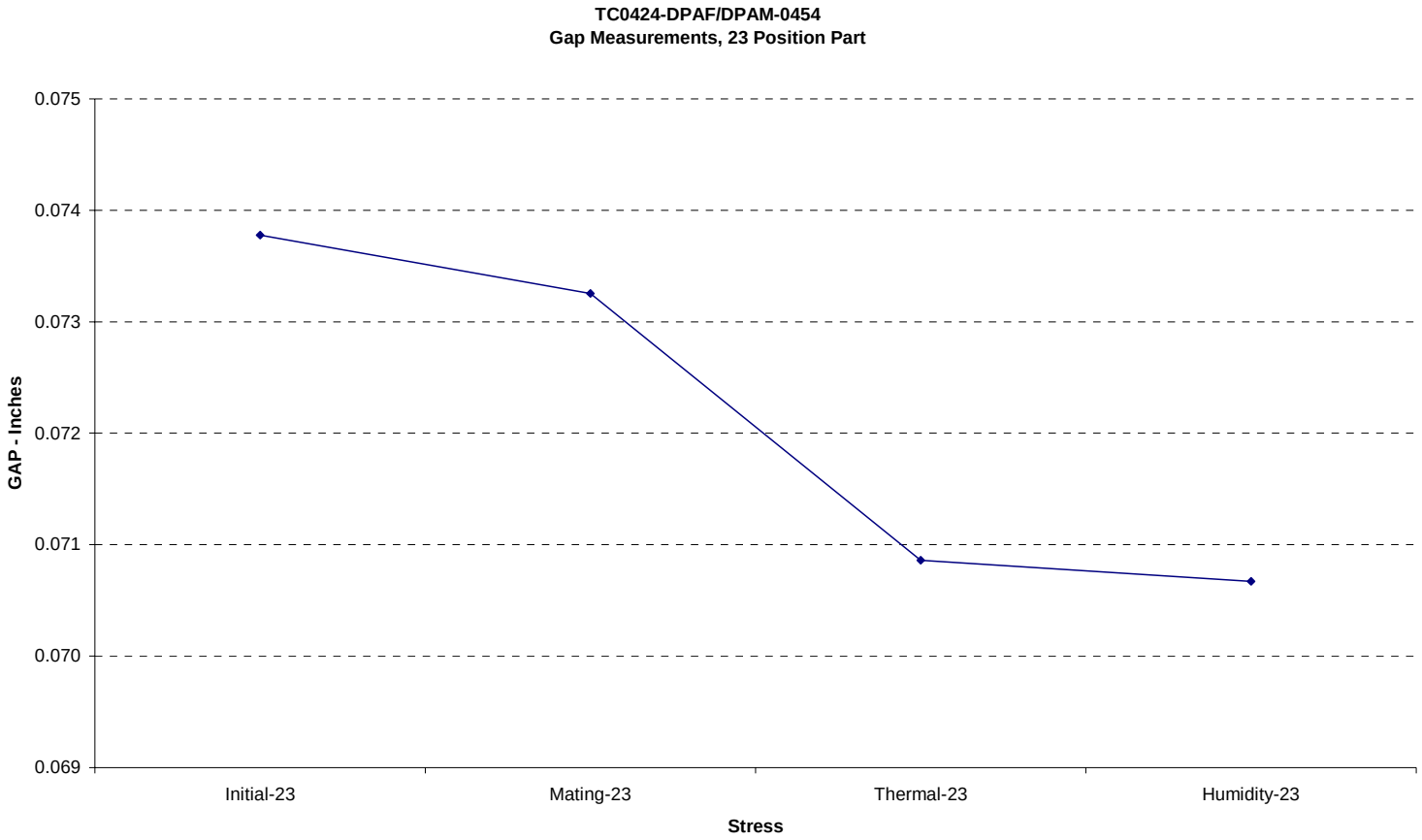


Inches	
Initial-15	
Minimum	0.0727
Maximum	0.0759
Average	0.0745
St. Dev.	0.0006
Mating-15	
Minimum	0.0718
Maximum	0.0751
Average	0.0741
St. Dev.	0.0006
Thermal-15	
Minimum	0.0702
Maximum	0.0728
Average	0.0715
St. Dev.	0.0005
Humidity-15	
Minimum	0.0699
Maximum	0.0731
Average	0.0713
St. Dev.	0.0005

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA SUMMARIES Continued

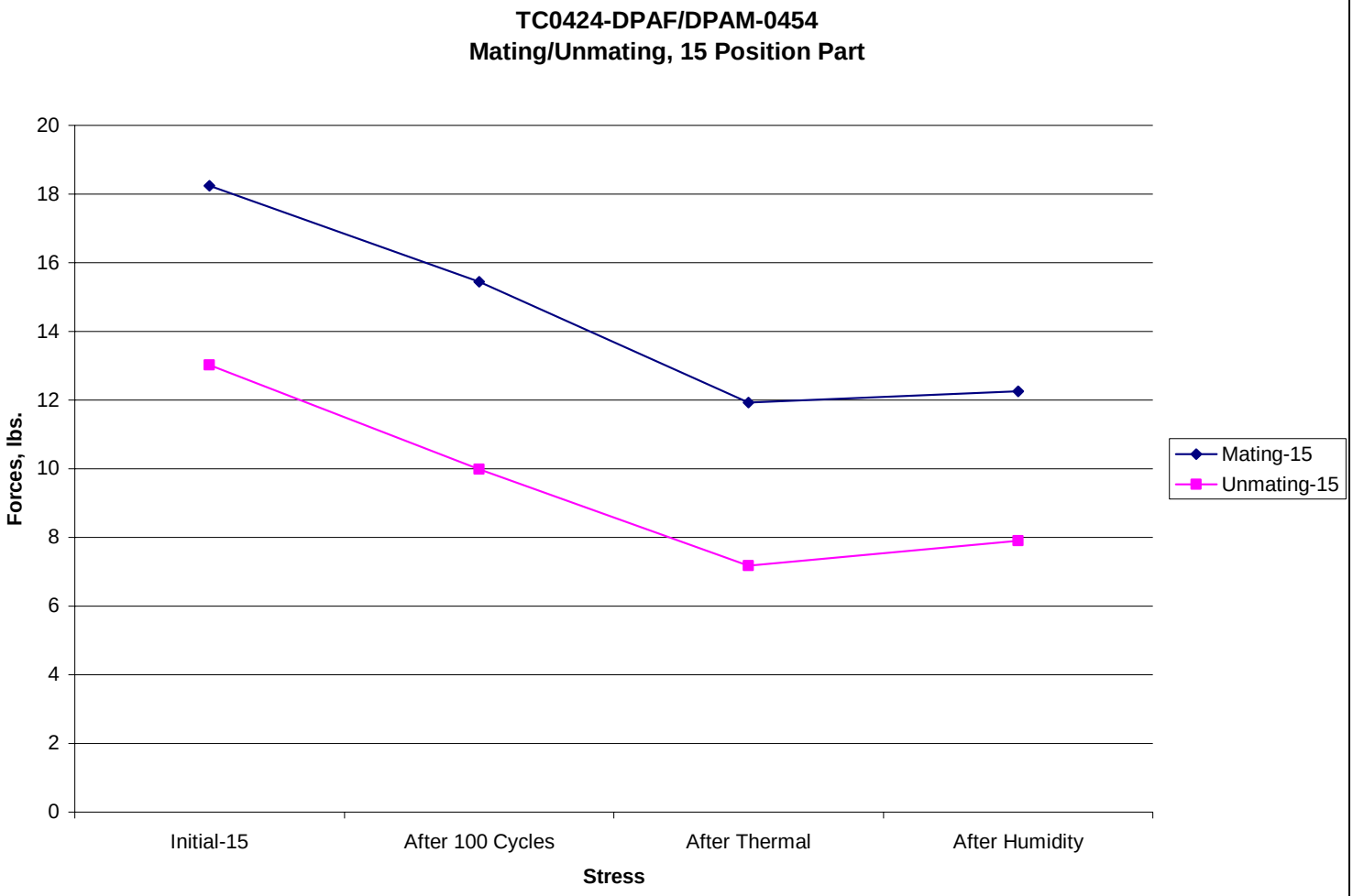
CONTACT GAPS, 23 Position Part:



Inches	
Initial-23	
Minimum	0.0721
Maximum	0.0758
Average	0.0738
St. Dev.	0.0006
Mating-23	
Minimum	0.0716
Maximum	0.0751
Average	0.0733
St. Dev.	0.0006
Thermal-23	
Minimum	0.0682
Maximum	0.0732
Average	0.0709
St. Dev.	0.0007
Humidity-23	
Minimum	0.0681
Maximum	0.0730
Average	0.0707
St. Dev.	0.0007

DATA SUMMARIES Continued

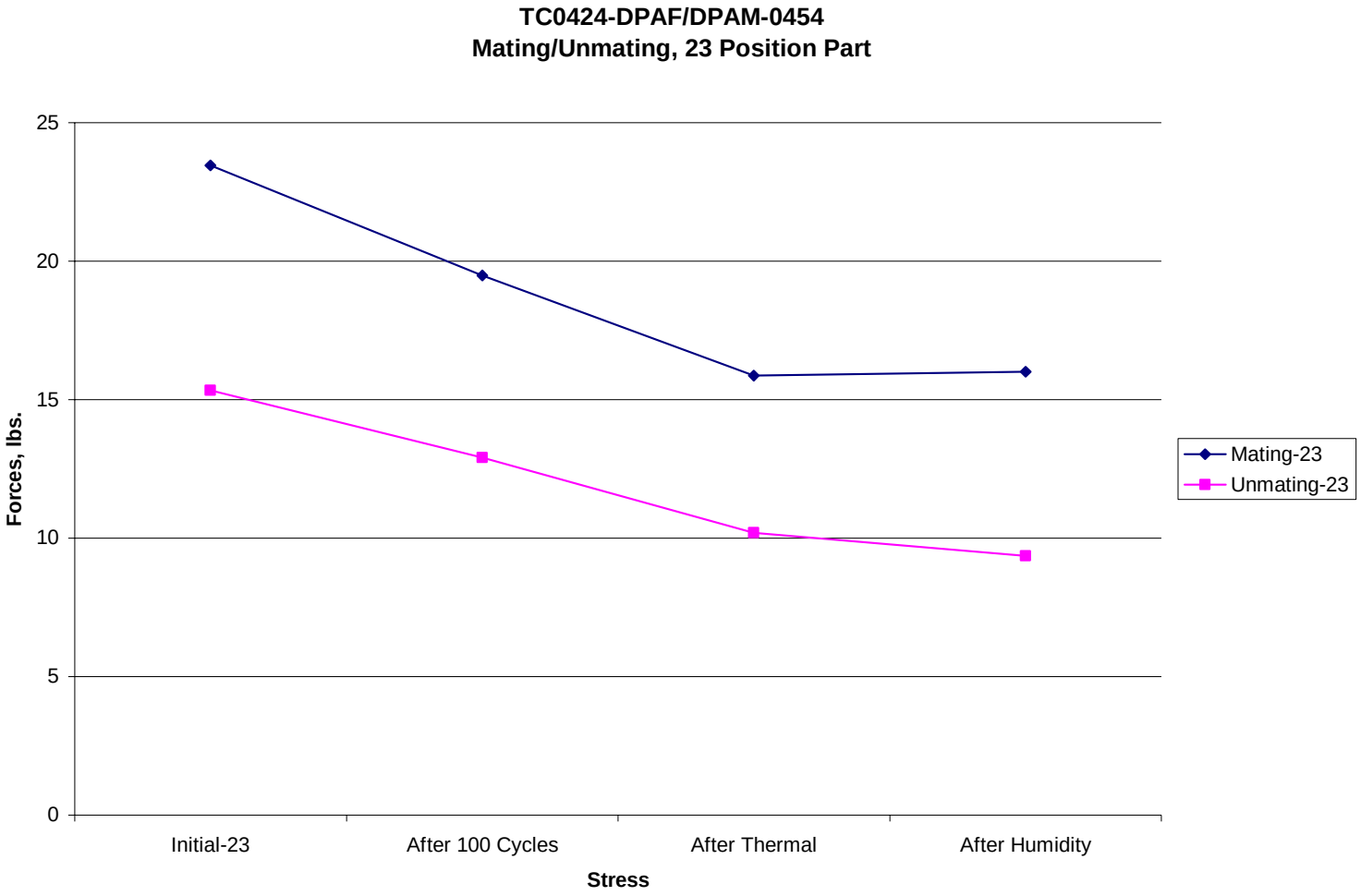
MATING/UNMATING, 15 Position Part:



	Initial-15				After 100 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
Minimum	270.9	17.0	177.1	11.1	216.0	13.5	140.8	8.8
Maximum	331.4	20.7	234.1	14.6	398.1	24.9	194.4	12.2
Average	**291.9**	**18.2**	**208.3**	**13.0**	**247.0**	**15.4**	**159.9**	**10.0**
	After Thermal				After Humidity			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
Minimum	177.8	11.1	97.0	6.1	183.8	11.5	112.2	7.0
Maximum	198.2	12.4	137.1	8.6	225.1	14.1	153.0	9.6
Average	**190.8**	**11.9**	**114.7**	**7.2**	**196.2**	**12.3**	**126.5**	**7.9**

DATA SUMMARIES Continued

MATING/UNMATING, 23 Position Part:



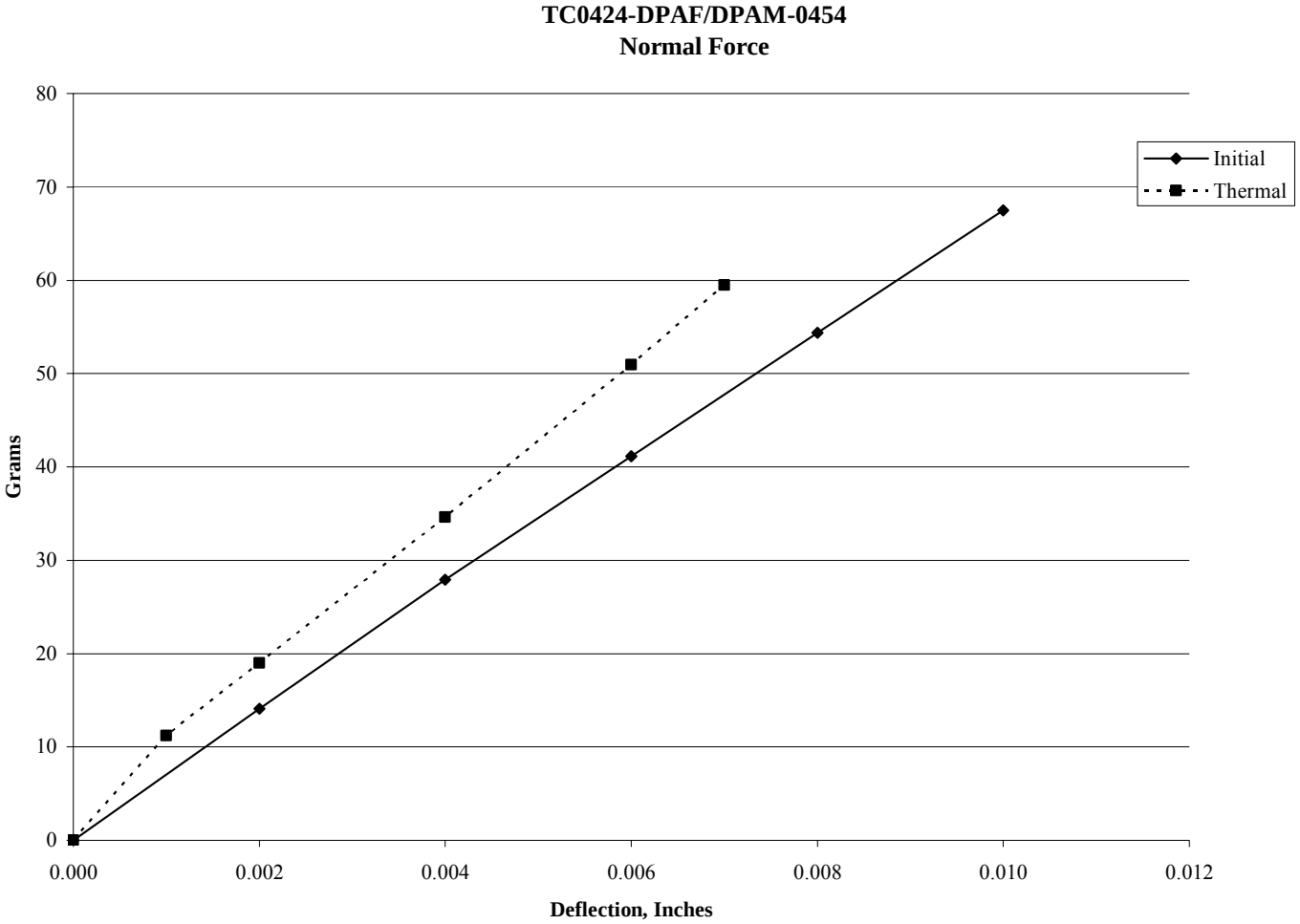
	Initial-23				After 100 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
Minimum	348.8	21.8	217.3	13.6	297.3	18.6	186.6	11.7
Maximum	416.6	26.0	274.2	17.1	329.3	20.6	229.4	14.3
Average	**375.3**	**23.5**	**245.5**	**15.3**	**311.9**	**19.5**	**206.6**	**12.9**
	After Thermal				After Humidity			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
Minimum	236.2	14.8	149.1	9.3	216.6	13.5	123.5	7.7
Maximum	273.4	17.1	195.7	12.2	281.6	17.6	173.0	10.8
Average	**253.8**	**15.9**	**163.1**	**10.2**	**256.1**	**16.0**	**149.6**	**9.4**

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA SUMMARIES Continued

NORMAL FORCE:

1) Calibrated force gauges are used along with computer controlled positioning equipment.
2) Typically, 8-10 readings are taken and the averages reported.



Initial	Deflections in inches Forces in Grams					
	0.002	**0.004**	**0.006**	**0.008**	**0.010**	**SET**
Averages	14.1	27.9	41.1	54.4	67.5	0.0002
Min	12.3	26.9	39.4	52.4	65.8	0.0000
Max	15.0	30.1	43.7	57.6	71.6	0.0005
St. Dev	0.8	1.0	1.5	1.5	1.7	0.0002

Thermal	Deflections in inches, Forces in Grams				
	0.001	**0.002**	**0.004**	**0.006**	**0.007**
Averages	11.2	19.0	34.6	50.9	59.5
Min	8.3	15.3	31.8	47.2	54.9
Max	13.4	21.3	36.5	53.5	62.2
St. Dev	1.6	1.8	1.5	1.8	2.2

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

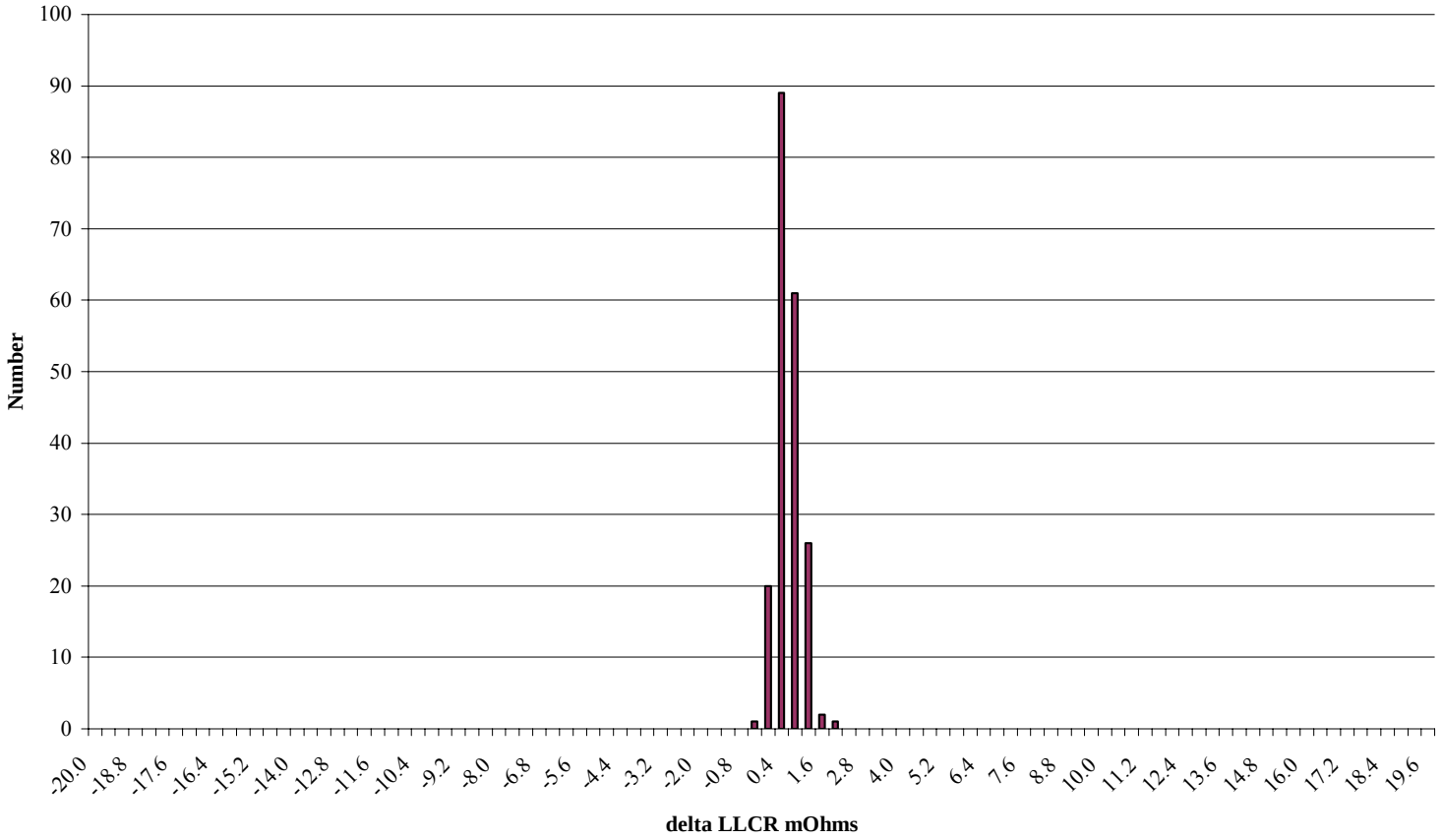
DATA SUMMARIES Continued

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

mOhm values	Actual Initial	Delta 100 Cycles	Delta Thermal	Delta Humidity
Average	7.3	0.3	0.4	0.4
St. Dev.	0.8	0.3	0.4	0.4
Min	5.1	-0.6	-0.5	-0.5
Max	9.7	1.5	1.7	1.9
Count	200	200	200	200

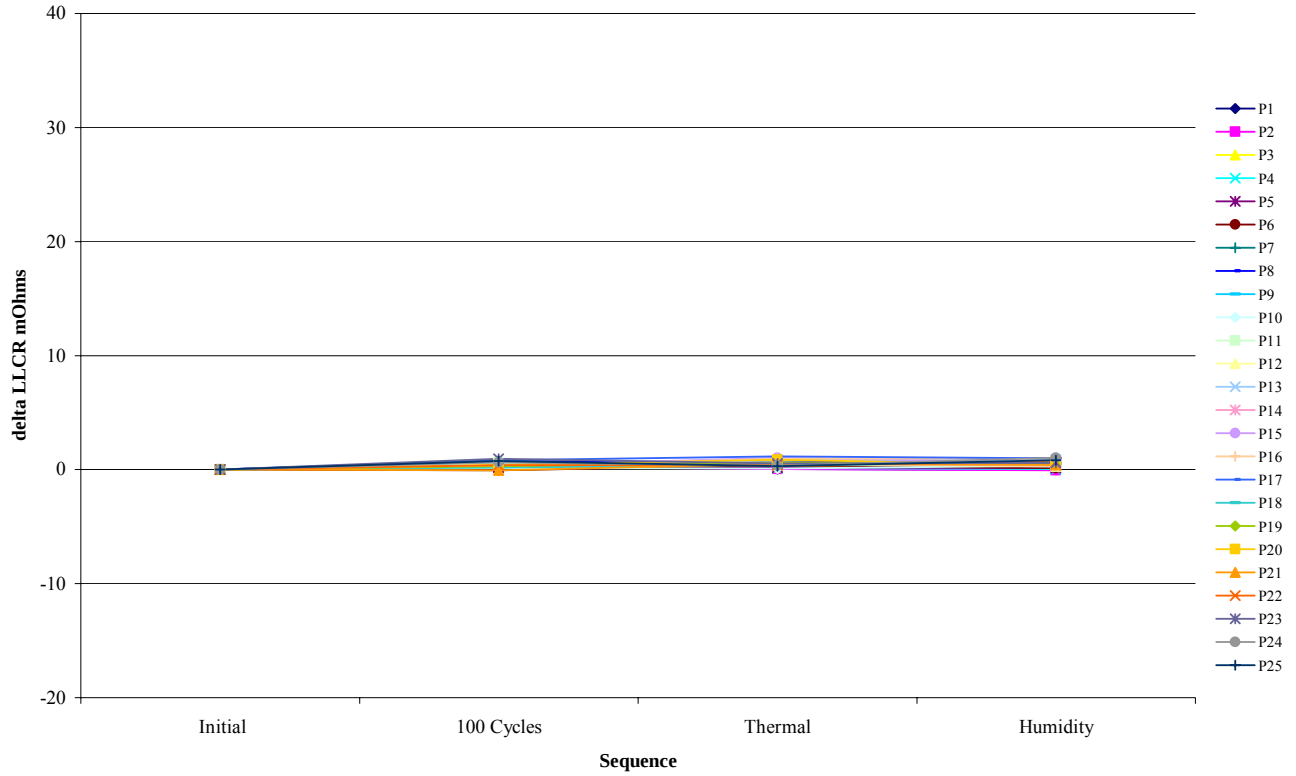
TC0424-DPAF/DPAM-0454 Count
After Environmental Stressing



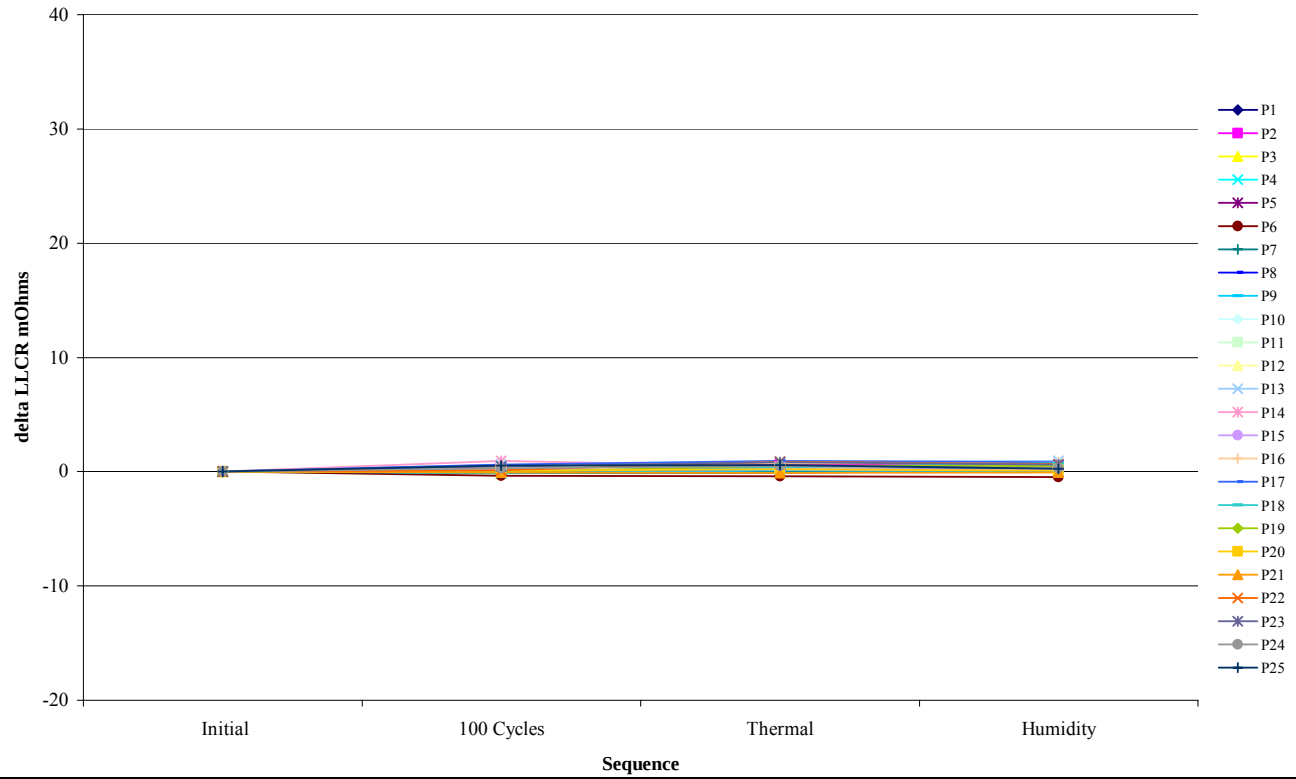
Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA SUMMARIES Continued

Board #1



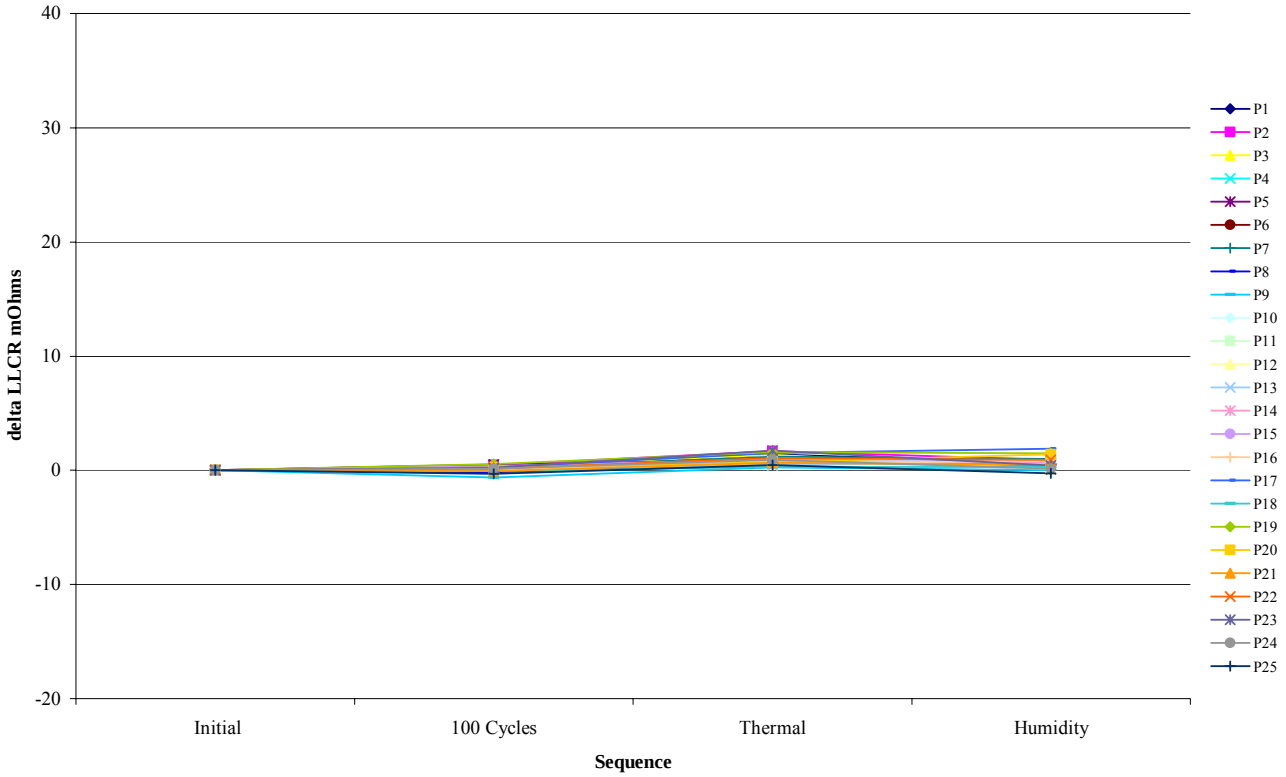
Board #2



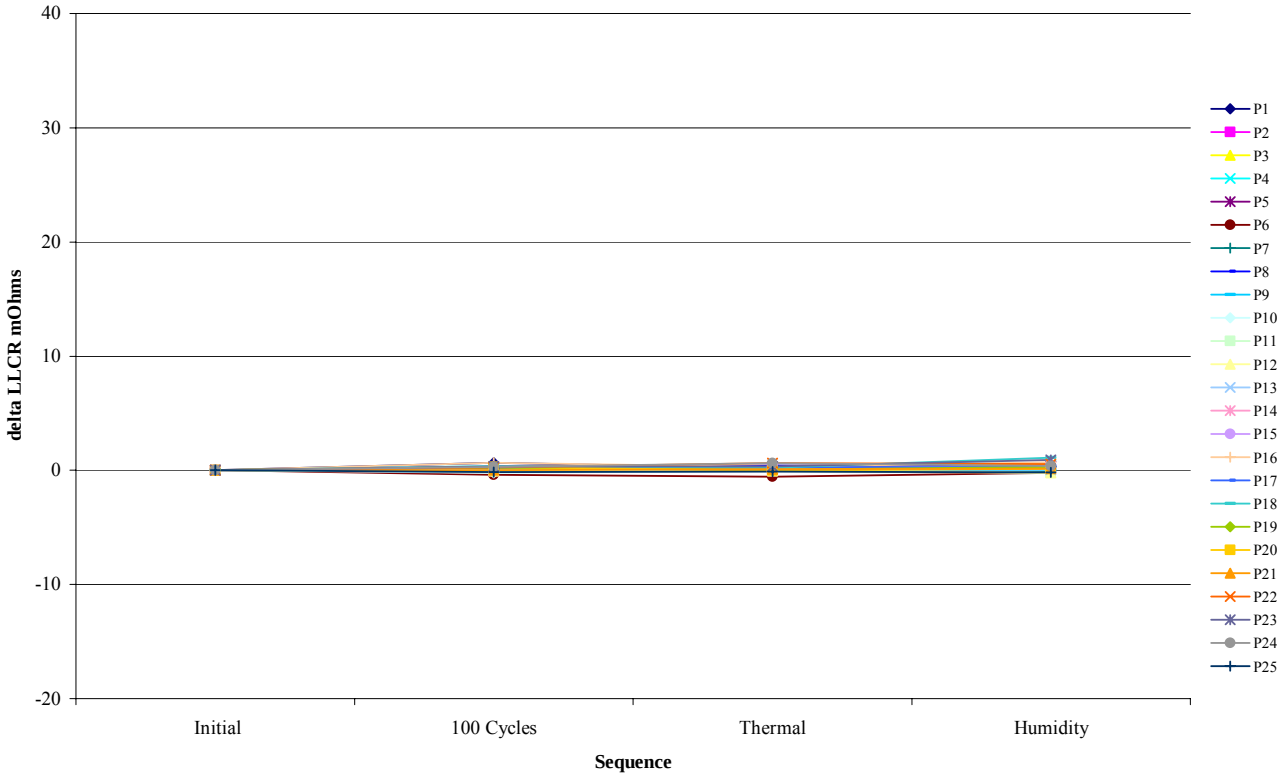
Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA SUMMARIES Continued

Board #3



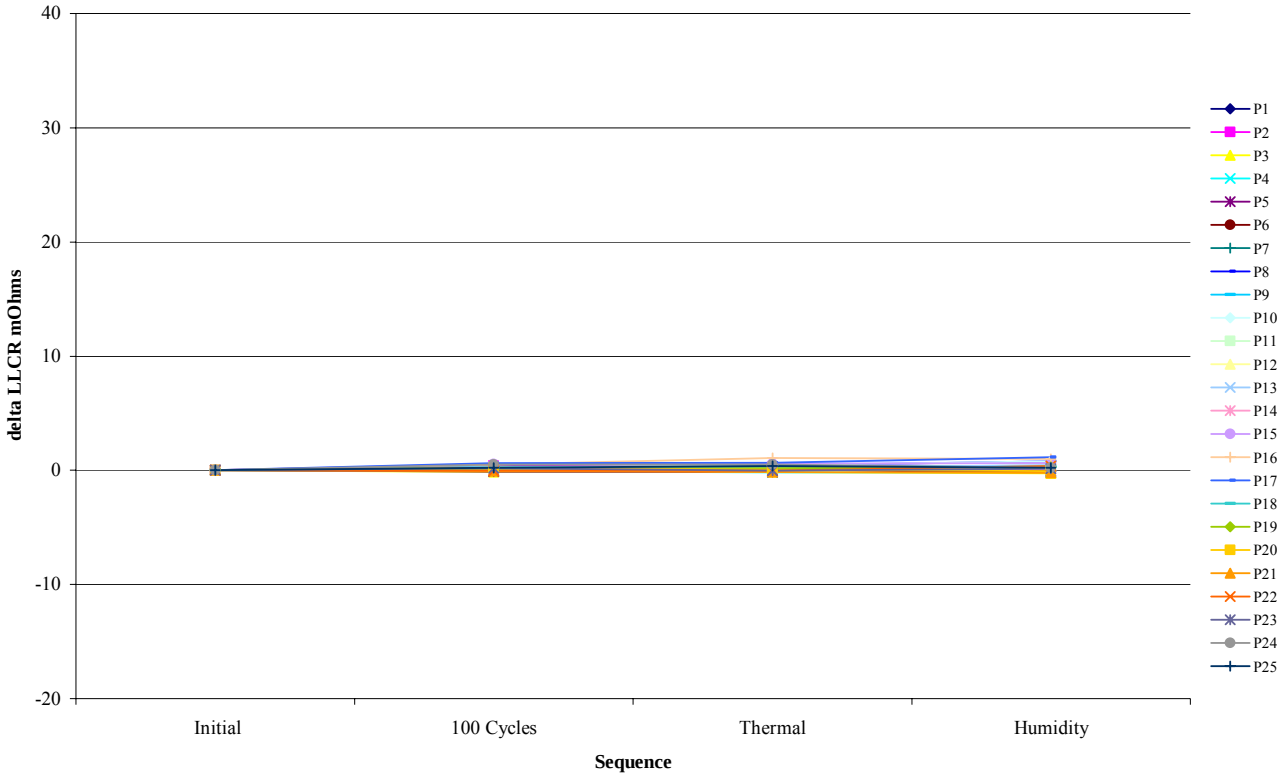
Board #4



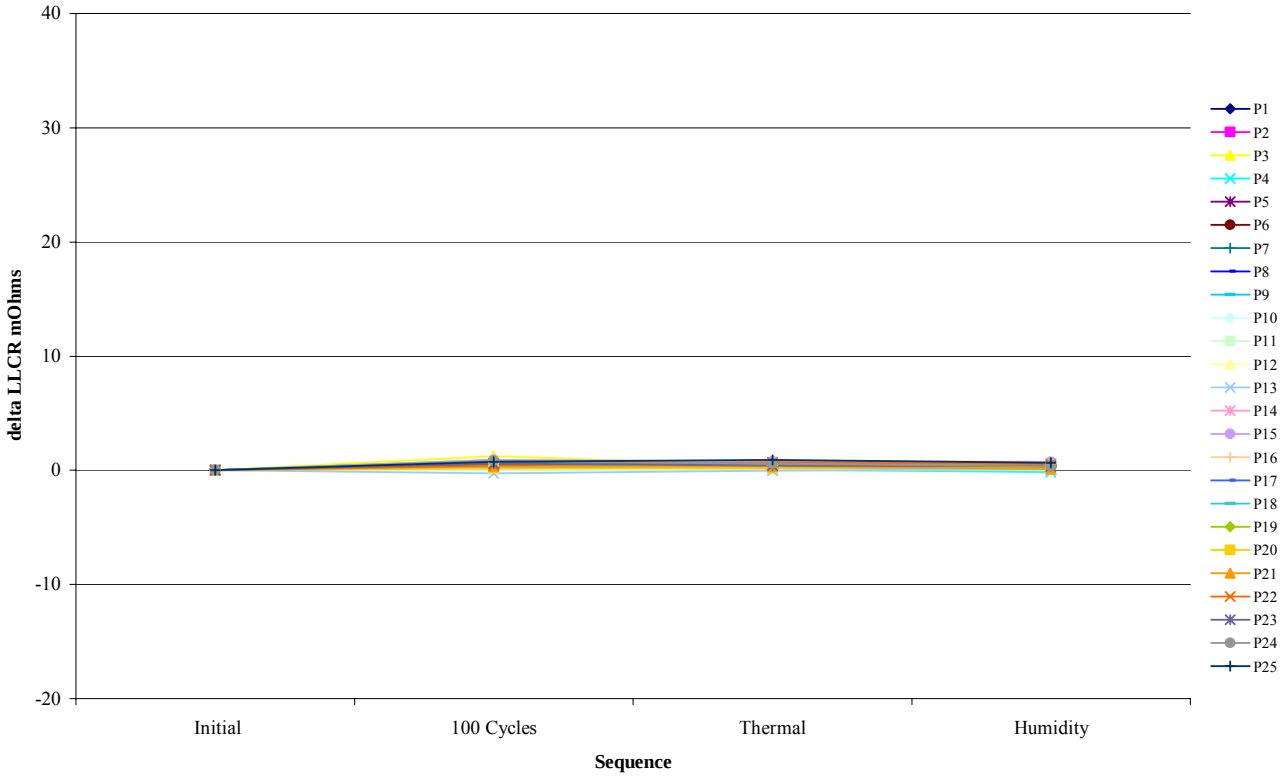
Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA SUMMARIES Continued

Board #5



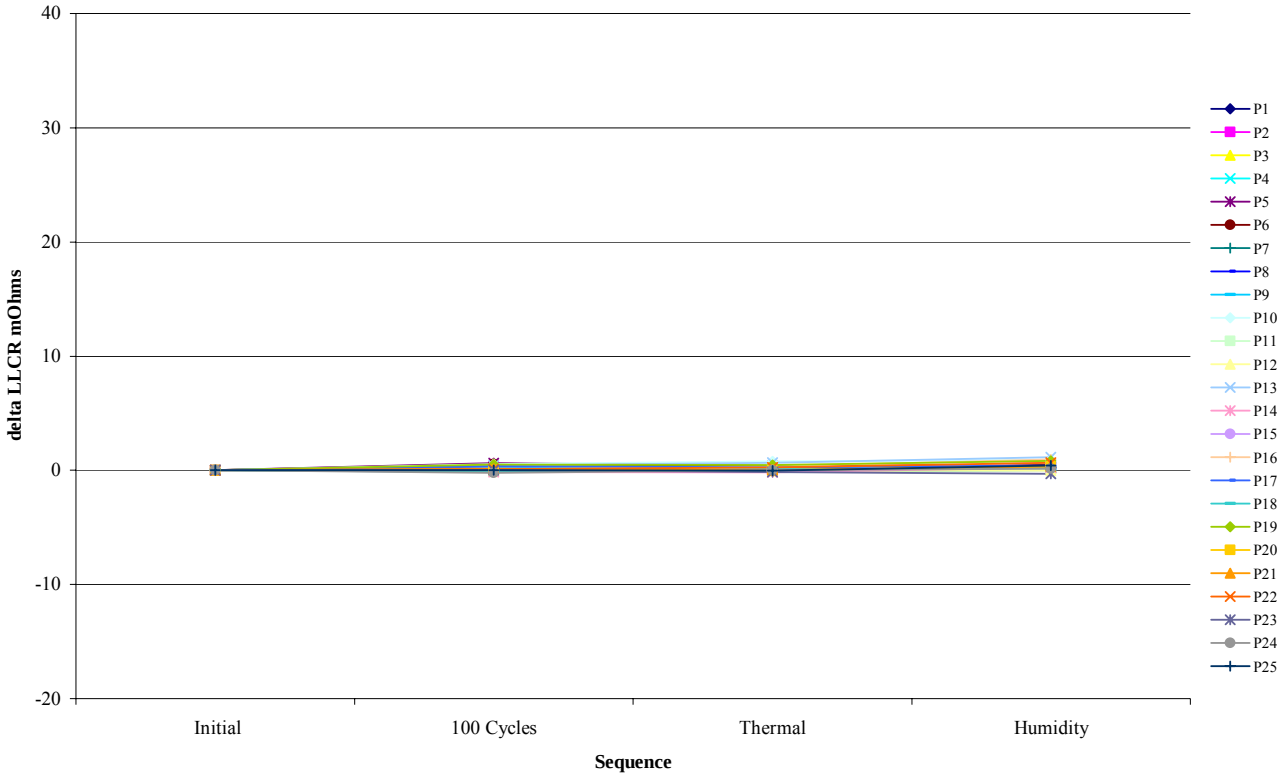
Board #6



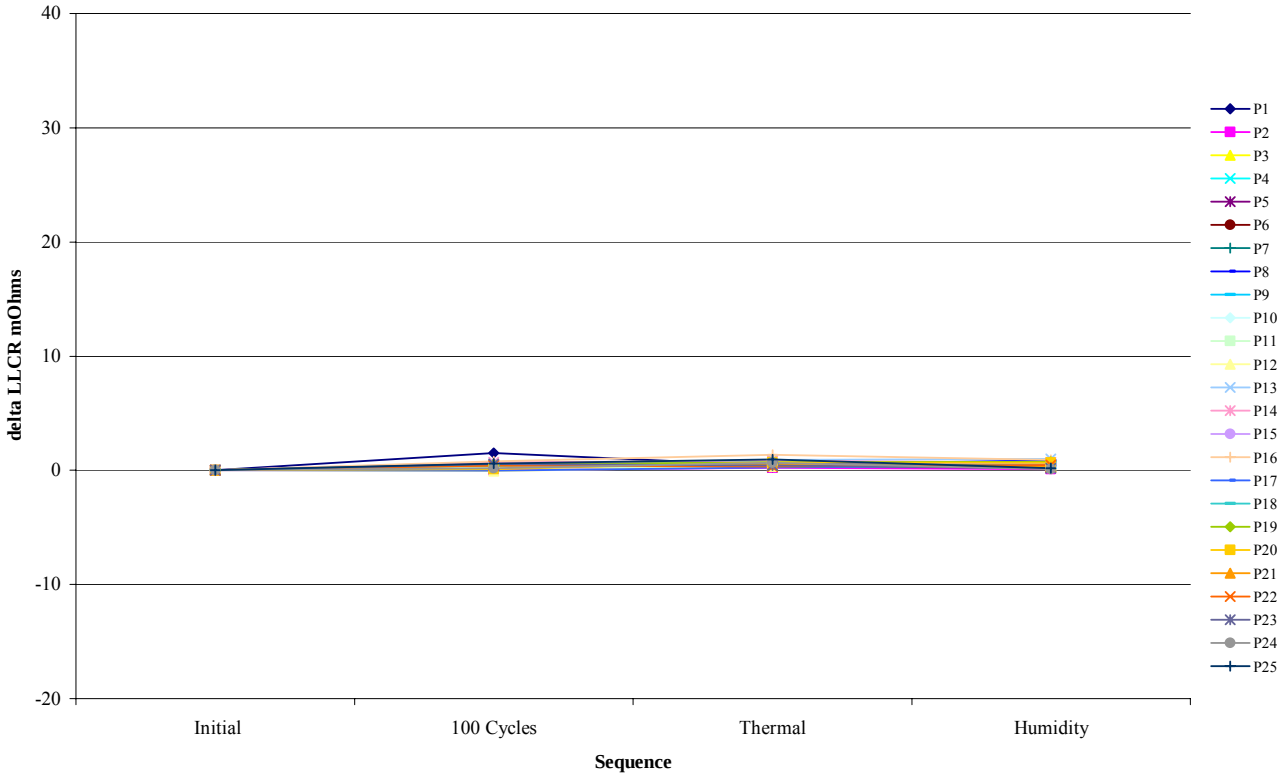
Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA SUMMARIES Continued

Board #7



Board #8



Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

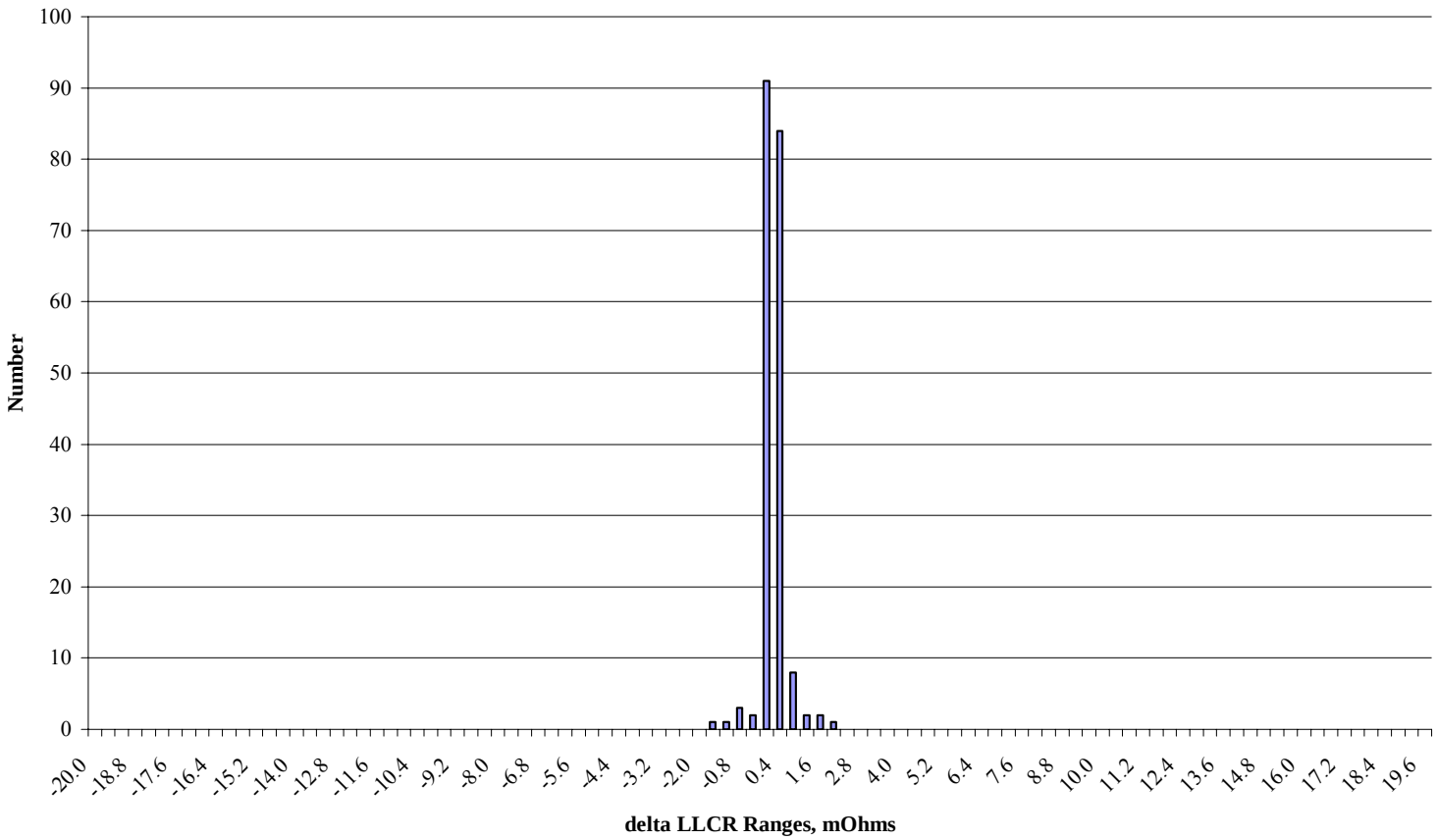
DATA SUMMARIES Continued

GAS TIGHT:

1) A total of 195 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

mOhm values	Actual Initial	Delta Gas Tight
Average	7.4	0.0
St. Dev.	0.8	0.4
Min	6.3	-1.9
Max	9.9	1.8
Count	195	195

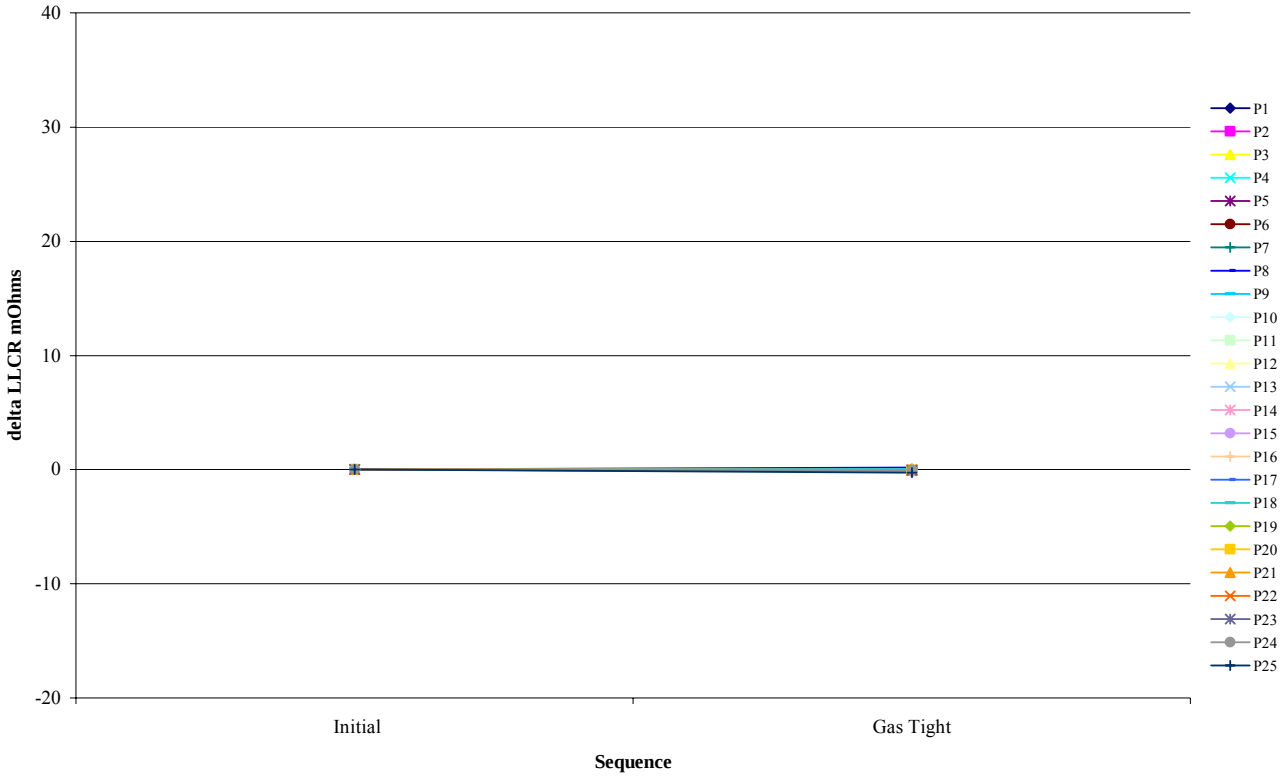
TC0424-DPAF/DPAM-0454 Count After Gas Tight



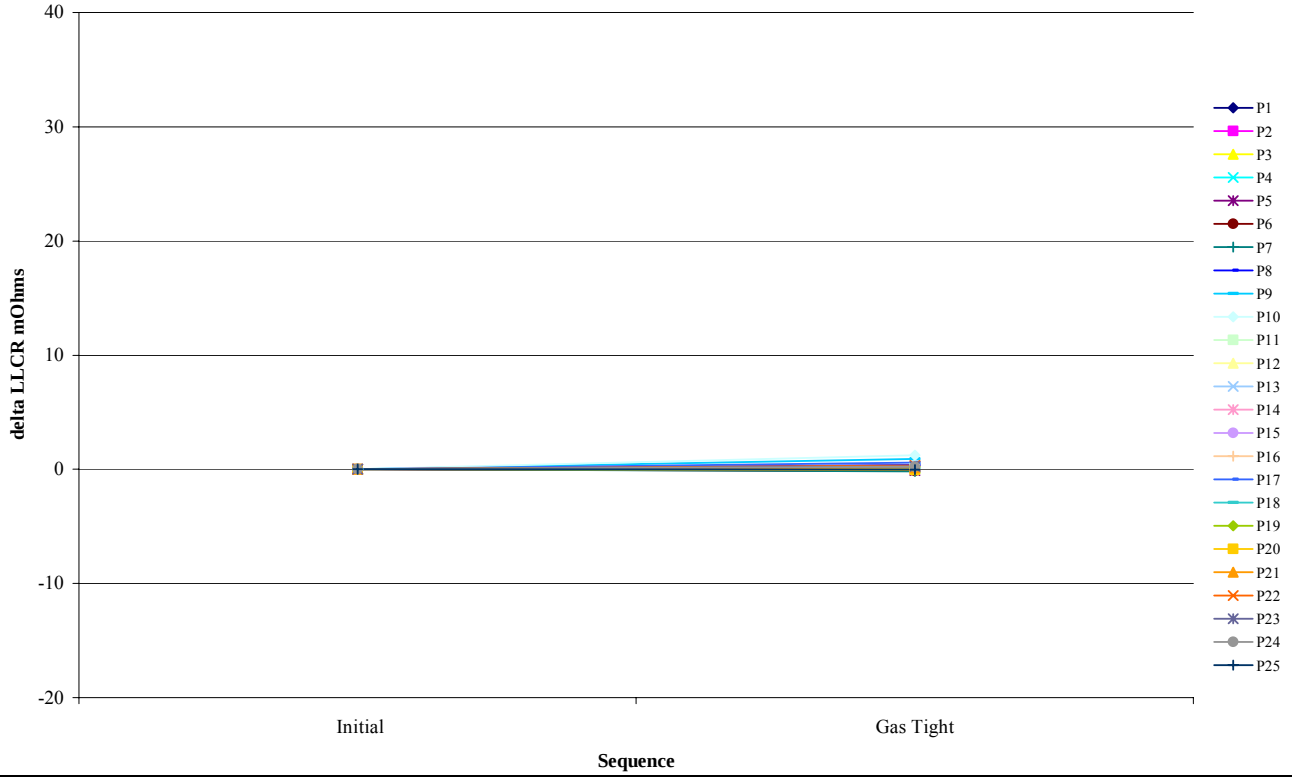
Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA SUMMARIES Continued

Board #1



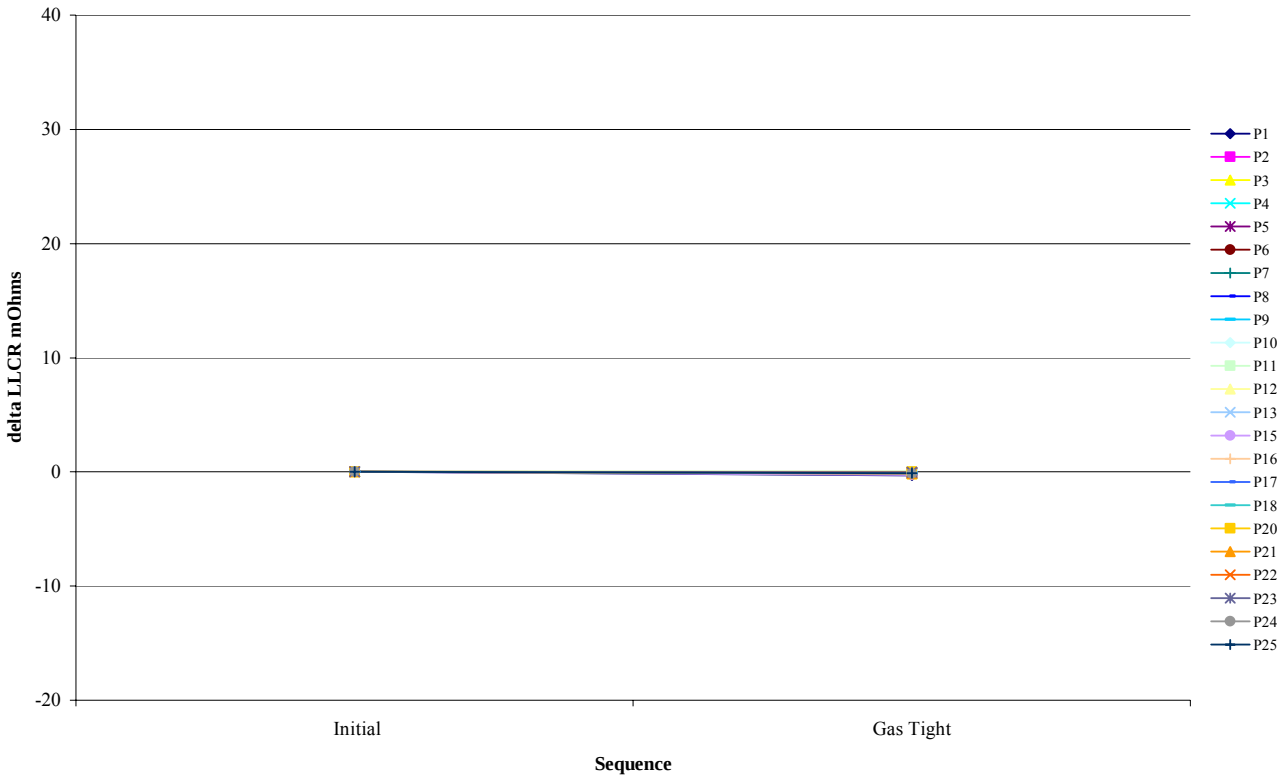
Board #2



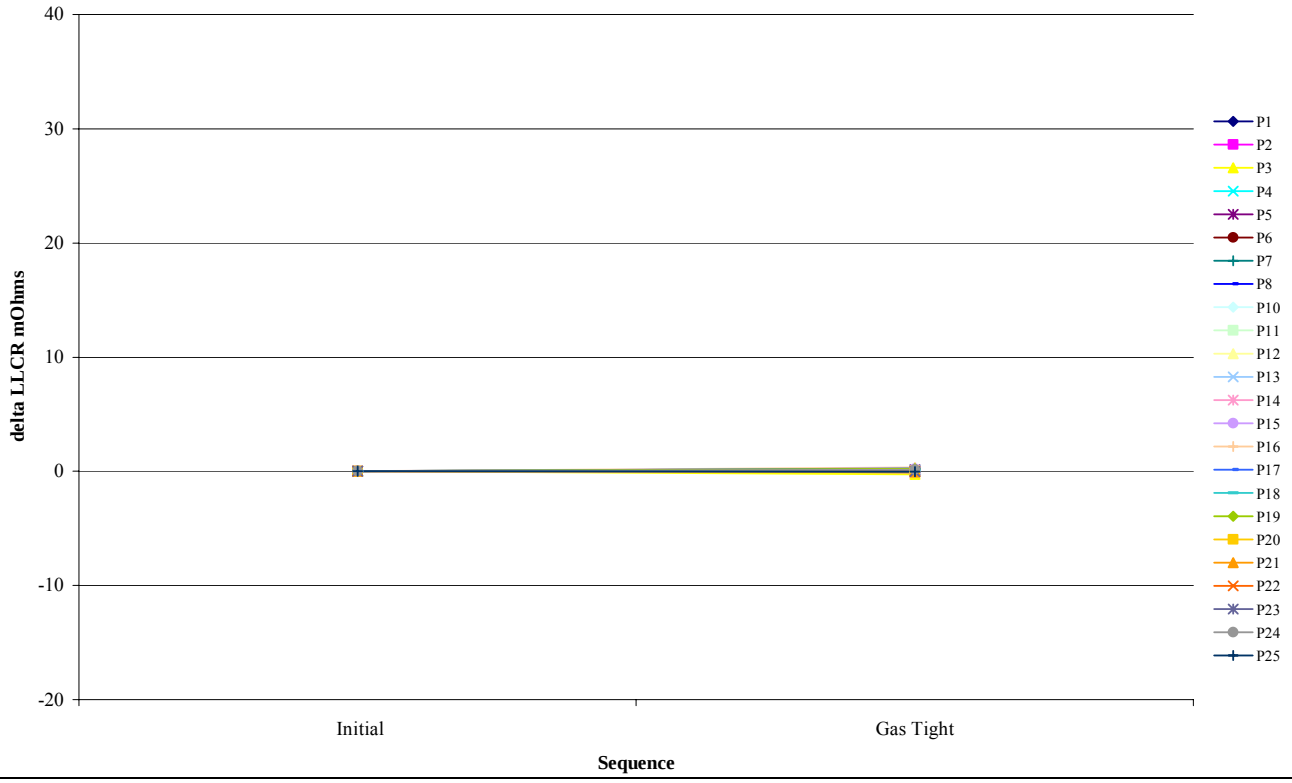
Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA SUMMARIES Continued

Board #3



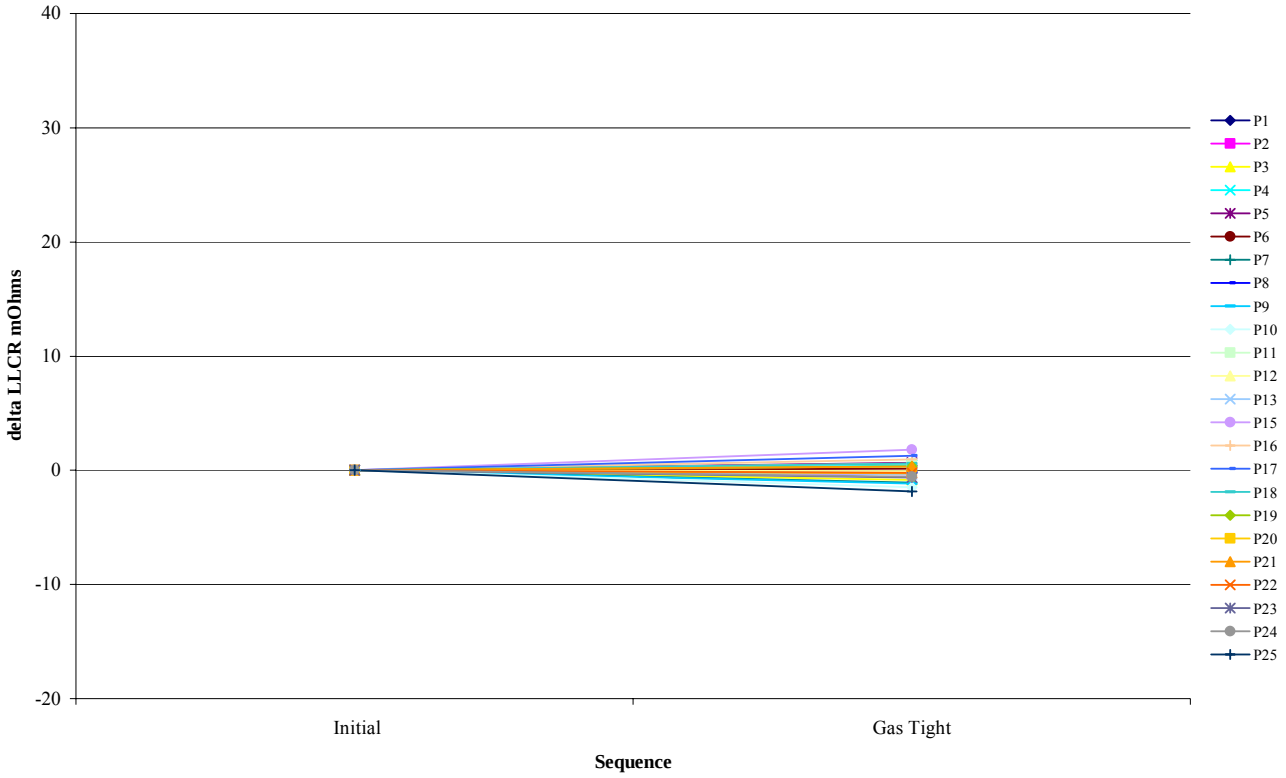
Board #4



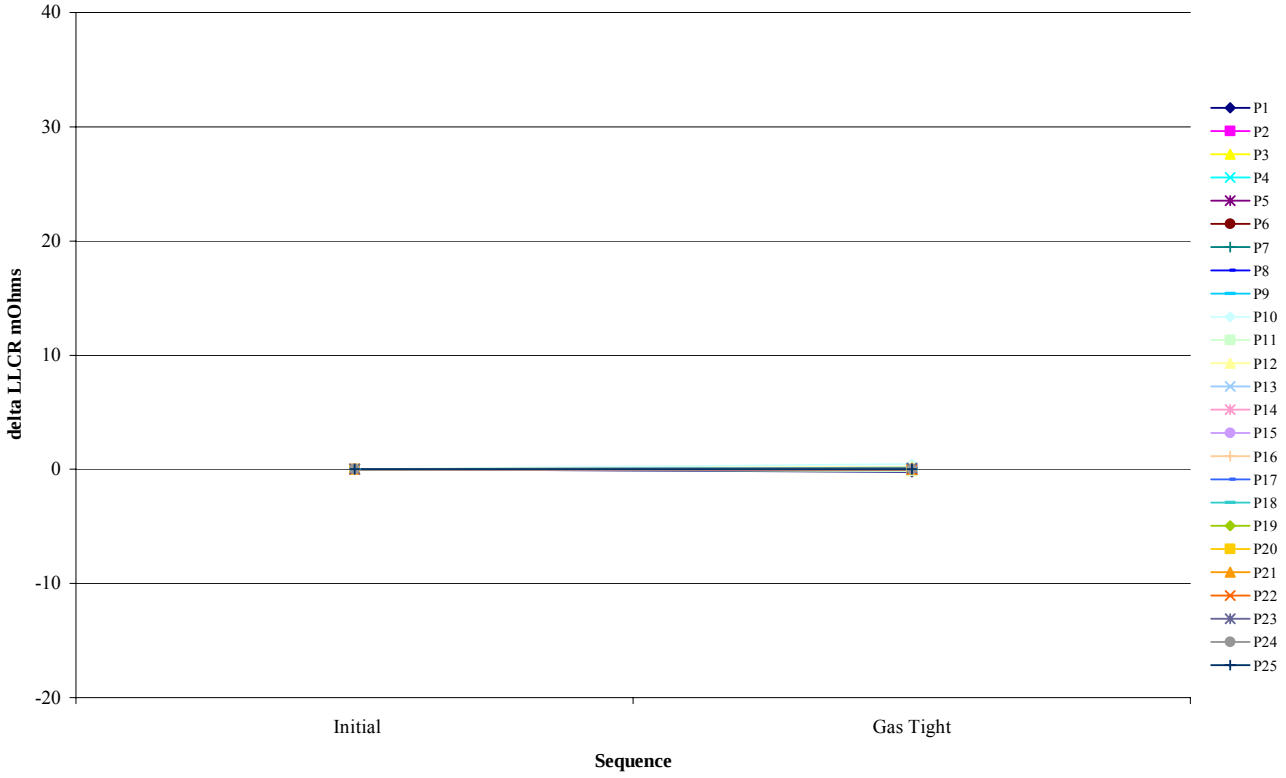
Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA SUMMARIES Continued

Board #5



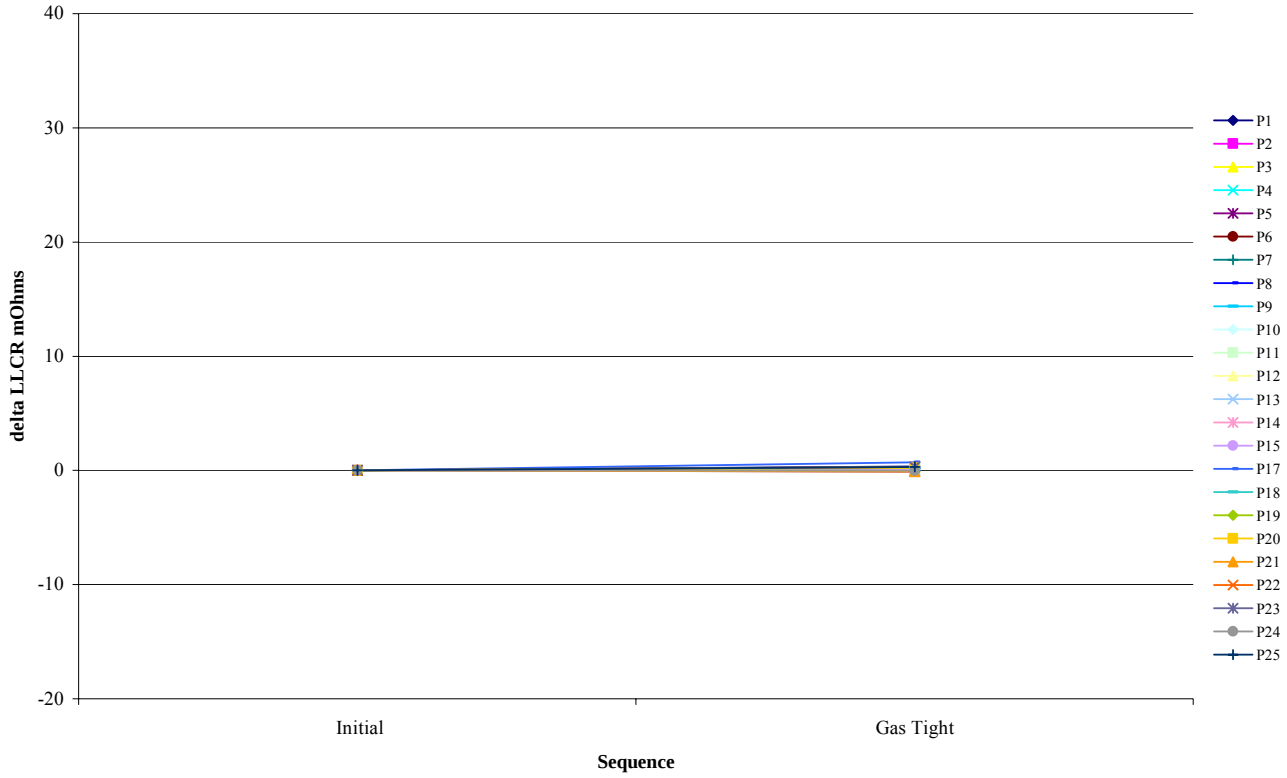
Board #6



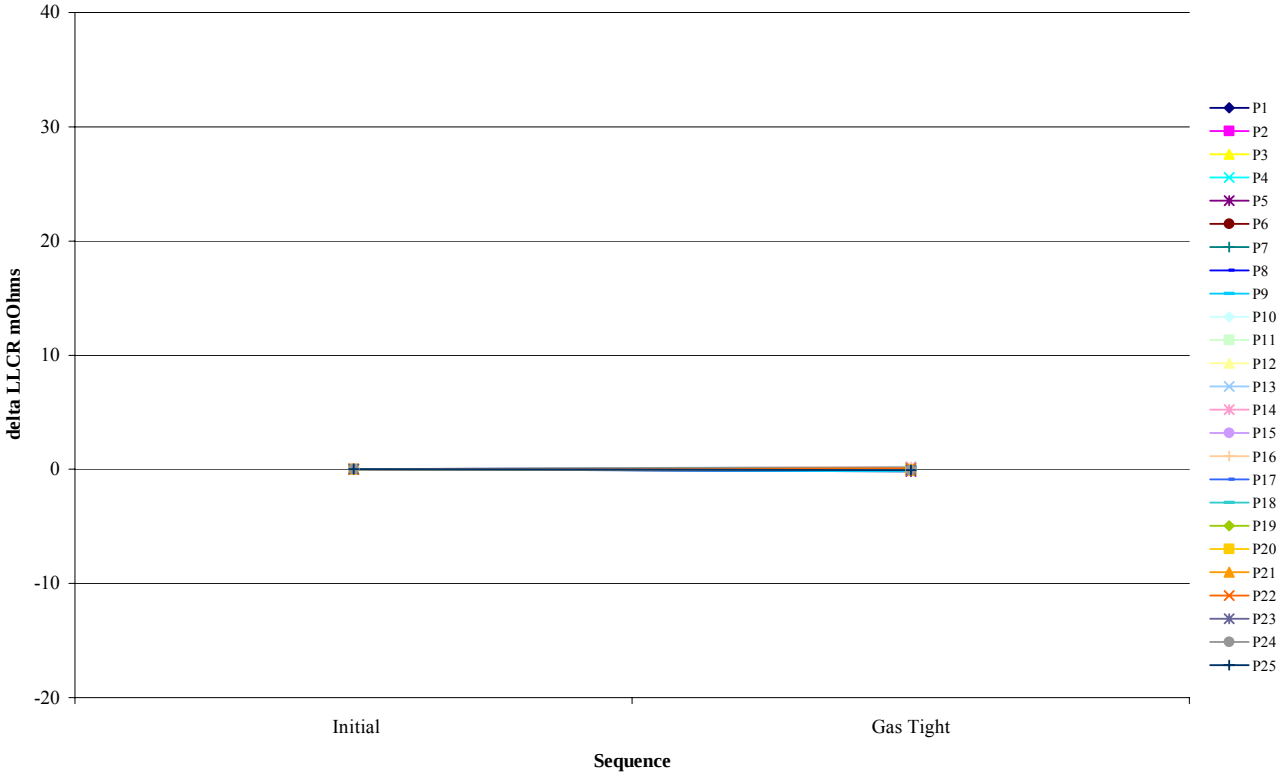
Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA SUMMARIES Continued

Board #7



Board #8



Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA

CONTACT GAPS, 15 Position Part, Initial:

Test Date:	7/1/2004
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	56%
Equipment ID:	OGP-01

Initial-15			
Measurements in inches			
Sample#	**B1**		**B2**
1	0.0745		0.0759
2	0.0745		0.0746
3	0.0747		0.0747
4	0.0740		0.0745
5	0.0744		0.0739
6	0.0742		0.0745
7	0.0747		0.0745
8	0.0744		0.0740
9	0.0737		0.0735
10	0.0741		0.0731
11	0.0735		0.0735
12	0.0737		0.0727
13	0.0739		0.0739
14	0.0745		0.0747
15	0.0733		0.0734
16	0.0750		0.0738
17	0.0750		0.0744
18	0.0751		0.0749
19	0.0747		0.0748
20	0.0752		0.0746
21	0.0746		0.0744
22	0.0750		0.0746
23	0.0752		0.0747
24	0.0747		0.0747
25	0.0753		0.0745
26	0.0743		0.0746
27	0.0746		0.0746
28	0.0751		0.0746
29	0.0745		0.0749
30	0.0748		0.0750
31	0.0749		0.0750
32	0.0748		0.0755
33	0.0742		0.0755
34	0.0749		0.0749
35	0.0744		0.0746
36	0.0750		0.0753
37	0.0748		0.0752
38	0.0751		0.0755
39	0.0748		0.0755
40	0.0749		0.0750
41	0.0749		0.0747
42	0.0748		0.0745

43	0.0750		0.0748
44	0.0749		0.0751
45	0.0745		0.0746
46	0.0742		0.0748
47	0.0753		0.0751
48	0.0743		0.0753
49	0.0749		0.0746
50	0.0744		0.0748
51	0.0747		0.0743
52	0.0742		0.0750
53	0.0753		0.0736
54	0.0740		0.0737
55	0.0744		0.0734
56	0.0737		0.0728
57	0.0749		0.0736
58	0.0741		0.0746
59	0.0742		0.0734
60	0.0741		0.0740

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA Continued

CONTACT GAPS, 15 Position Part, Mating:

Test Date:	7/2/2004
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	51%
Equipment ID:	OGP-01

Mating-15			
Measurements in inches			
Sample#	**B1**		**B2**
1	0.0744		0.0739
2	0.0742		0.0732
3	0.0742		0.0737
4	0.0739		0.0733
5	0.0746		0.0739
6	0.0741		0.0742
7	0.0747		0.0735
8	0.0738		0.0739
9	0.0731		0.0728
10	0.0743		0.0728
11	0.0729		0.0726
12	0.0738		0.0718
13	0.0731		0.0725
14	0.0744		0.0740
15	0.0731		0.0731
16	0.0743		0.0725
17	0.0742		0.0730
18	0.0746		0.0736
19	0.0747		0.0741
20	0.0750		0.0742
21	0.0747		0.0740
22	0.0748		0.0740
23	0.0751		0.0742
24	0.0743		0.0743
25	0.0747		0.0743
26	0.0743		0.0740
27	0.0746		0.0741
28	0.0751		0.0744
29	0.0740		0.0745
30	0.0744		0.0742
31	0.0745		0.0733
32	0.0748		0.0743
33	0.0744		0.0746
34	0.0749		0.0743
35	0.0742		0.0744
36	0.0747		0.0738
37	0.0745		0.0749
38	0.0750		0.0747
39	0.0748		0.0748
40	0.0749		0.0746
41	0.0747		0.0744
42	0.0747		0.0744

43	0.0747		0.0745
44	0.0747		0.0741
45	0.0746		0.0735
46	0.0732		0.0727
47	0.0739		0.0742
48	0.0739		0.0743
49	0.0747		0.0744
50	0.0743		0.0740
51	0.0749		0.0743
52	0.0740		0.0747
53	0.0751		0.0733
54	0.0738		0.0737
55	0.0743		0.0739
56	0.0739		0.0732
57	0.0750		0.0741
58	0.0748		0.0736
59	0.0739		0.0732
60	0.0740		0.0733

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA Continued

CONTACT GAPS, 15 Position Part, Thermal:

Test Date:	7/16/2004
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	53%
Equipment ID:	OGP-01

Thermal-15			
Measurements in inches			
Sample#	**B1**		**B2**
1	0.0720		0.0705
2	0.0719		0.0709
3	0.0719		0.0710
4	0.0717		0.0712
5	0.0720		0.0711
6	0.0717		0.0713
7	0.0714		0.0712
8	0.0715		0.0714
9	0.0709		0.0706
10	0.0710		0.0709
11	0.0705		0.0708
12	0.0708		0.0708
13	0.0707		0.0702
14	0.0716		0.0716
15	0.0708		0.0707
16	0.0713		0.0707
17	0.0714		0.0713
18	0.0715		0.0716
19	0.0715		0.0717
20	0.0719		0.0717
21	0.0716		0.0718
22	0.0715		0.0708
23	0.0722		0.0716
24	0.0716		0.0720
25	0.0721		0.0719
26	0.0712		0.0713
27	0.0720		0.0712
28	0.0720		0.0712
29	0.0712		0.0719
30	0.0711		0.0712
31	0.0714		0.0711
32	0.0718		0.0717
33	0.0715		0.0716
34	0.0718		0.0724
35	0.0717		0.0721
36	0.0715		0.0720
37	0.0718		0.0725
38	0.0726		0.0722
39	0.0721		0.0721
40	0.0728		0.0720
41	0.0721		0.0722
42	0.0723		0.0715

43	0.0722		0.0715
44	0.0717		0.0712
45	0.0714		0.0712
46	0.0707		0.0703
47	0.0711		0.0714
48	0.0711		0.0714
49	0.0721		0.0718
50	0.0715		0.0709
51	0.0714		0.0712
52	0.0711		0.0717
53	0.0720		0.0709
54	0.0714		0.0714
55	0.0714		0.0707
56	0.0710		0.0710
57	0.0715		0.0712
58	0.0717		0.0714
59	0.0715		0.0713
60	0.0715		0.0709

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA Continued

CONTACT GAPS, 15 Position Part, Humidity:

Test Date:	8/3/2004
Operator:	Troy Cook
Temperature (C):	22
Humidity (RH):	50%
Equipment ID:	OGP-01

Humidity-15			
Measurements in inches			
Sample#	**B1**		**B2**
1	0.0717		0.0711
2	0.0714		0.0708
3	0.0719		0.0711
4	0.0716		0.0714
5	0.0722		0.0713
6	0.0712		0.0714
7	0.0711		0.0712
8	0.0706		0.0712
9	0.0703		0.0704
10	0.0711		0.0707
11	0.0708		0.0703
12	0.0704		0.0704
13	0.0708		0.0707
14	0.0711		0.0713
15	0.0702		0.0701
16	0.0722		0.0702
17	0.0714		0.0710
18	0.0715		0.0715
19	0.0716		0.0721
20	0.0718		0.0716
21	0.0721		0.0717
22	0.0721		0.0710
23	0.0724		0.0710
24	0.0719		0.0714
25	0.0721		0.0711
26	0.0712		0.0711
27	0.0714		0.0706
28	0.0715		0.0712
29	0.0710		0.0713
30	0.0712		0.0706
31	0.0717		0.0706
32	0.0716		0.0714
33	0.0713		0.0715
34	0.0718		0.0718
35	0.0719		0.0720
36	0.0715		0.0717
37	0.0714		0.0719
38	0.0725		0.0720
39	0.0721		0.0720
40	0.0731		0.0716
41	0.0720		0.0715
42	0.0721		0.0713

43	0.0715		0.0716
44	0.0719		0.0711
45	0.0715		0.0707
46	0.0707		0.0704
47	0.0714		0.0711
48	0.0713		0.0716
49	0.0714		0.0715
50	0.0711		0.0709
51	0.0714		0.0717
52	0.0712		0.0717
53	0.0716		0.0707
54	0.0709		0.0704
55	0.0720		0.0706
56	0.0703		0.0706
57	0.0712		0.0708
58	0.0710		0.0708
59	0.0712		0.0699
60	0.0711		0.0707

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA Continued

CONTACT GAPS, 23 Position Part, Initial:

Test Date:	7/1/2004
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	55%
Equipment ID:	OGP-01

Initial-23			
Measurements in inches			
Sample#	B1		B2
1	0.0740		0.0737
2	0.0735		0.0745
3	0.0735		0.0742
4	0.0733		0.0736
5	0.0735		0.0743
6	0.0728		0.0736
7	0.0733		0.0739
8	0.0739		0.0743
9	0.0738		0.0740
10	0.0734		0.0734
11	0.0726		0.0734
12	0.0731		0.0741
13	0.0725		0.0735
14	0.0725		0.0738
15	0.0729		0.0735
16	0.0738		0.0739
17	0.0734		0.0741
18	0.0739		0.0739
19	0.0737		0.0743
20	0.0727		0.0750
21	0.0729		0.0733
22	0.0729		0.0727
23	0.0737		0.0734
24	0.0738		0.0742
25	0.0724		0.0732
26	0.0725		0.0735
27	0.0735		0.0738
28	0.0732		0.0741
29	0.0739		0.0743
30	0.0736		0.0743
31	0.0735		0.0741
32	0.0736		0.0743
33	0.0739		0.0740
34	0.0741		0.0744
35	0.0737		0.0742
36	0.0735		0.0745
37	0.0736		0.0741
38	0.0736		0.0746
39	0.0745		0.0740
40	0.0738		0.0746
41	0.0736		0.0748
42	0.0739		0.0738

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

43	0.0732		0.0731
44	0.0732		0.0732
45	0.0736		0.0734
46	0.0734		0.0740
47	0.0734		0.0739
48	0.0730		0.0747
49	0.0732		0.0745
50	0.0731		0.0751
51	0.0739		0.0748
52	0.0741		0.0751
53	0.0742		0.0756
54	0.0736		0.0753
55	0.0733		0.0758
56	0.0732		0.0755
57	0.0735		0.0752
58	0.0741		0.0746
59	0.0733		0.0748
60	0.0739		0.0753
61	0.0734		0.0754
62	0.0741		0.0753
63	0.0742		0.0746
64	0.0735		0.0746
65	0.0732		0.0746
66	0.0738		0.0741
67	0.0734		0.0744
68	0.0732		0.0744
69	0.0731		0.0743
70	0.0725		0.0744
71	0.0729		0.0742
72	0.0726		0.0743
73	0.0729		0.0739
74	0.0737		0.0746
75	0.0736		0.0749
76	0.0738		0.0744
77	0.0740		0.0744
78	0.0736		0.0750
79	0.0728		0.0740
80	0.0725		0.0744
81	0.0721		0.0740
82	0.0729		0.0741
83	0.0728		0.0746
84	0.0723		0.0747
85	0.0725		0.0745
86	0.0725		0.0740
87	0.0729		0.0734
88	0.0730		0.0735
89	0.0730		0.0739
90	0.0726		0.0743
91	0.0728		0.0737
92	0.0727		0.0741

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA Continued

CONTACT GAPS, 23 Position Part, Mating:

Test Date:	7/2/2004
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	48%
Equipment ID:	OGP-01

Mating-23			
Measurements in inches			
Sample#	**B1**		**B2**
1	0.0737		0.0732
2	0.0733		0.0733
3	0.0729		0.0735
4	0.0727		0.0733
5	0.0723		0.0733
6	0.0728		0.0733
7	0.0727		0.0731
8	0.0734		0.0734
9	0.0730		0.0729
10	0.0726		0.0724
11	0.0717		0.0727
12	0.0716		0.0735
13	0.0717		0.0730
14	0.0716		0.0726
15	0.0721		0.0726
16	0.0726		0.0728
17	0.0730		0.0733
18	0.0728		0.0732
19	0.0722		0.0733
20	0.0718		0.0734
21	0.0726		0.0725
22	0.0722		0.0723
23	0.0731		0.0726
24	0.0733		0.0730
25	0.0720		0.0734
26	0.0720		0.0729
27	0.0724		0.0736
28	0.0728		0.0739
29	0.0736		0.0740
30	0.0738		0.0742
31	0.0735		0.0737
32	0.0735		0.0737
33	0.0729		0.0739
34	0.0734		0.0736
35	0.0732		0.0734
36	0.0732		0.0741
37	0.0735		0.0737
38	0.0738		0.0740
39	0.0737		0.0740
40	0.0736		0.0740
41	0.0735		0.0740
42	0.0735		0.0732

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

43	0.0735		0.0727
44	0.0733		0.0728
45	0.0737		0.0729
46	0.0735		0.0736
47	0.0737		0.0742
48	0.0729		0.0736
49	0.0734		0.0740
50	0.0734		0.0742
51	0.0739		0.0743
52	0.0739		0.0751
53	0.0735		0.0743
54	0.0742		0.0747
55	0.0734		0.0750
56	0.0733		0.0746
57	0.0732		0.0739
58	0.0736		0.0741
59	0.0729		0.0737
60	0.0736		0.0746
61	0.0732		0.0746
62	0.0735		0.0746
63	0.0731		0.0742
64	0.0726		0.0736
65	0.0732		0.0742
66	0.0731		0.0735
67	0.0729		0.0741
68	0.0733		0.0737
69	0.0728		0.0742
70	0.0724		0.0736
71	0.0728		0.0737
72	0.0726		0.0736
73	0.0726		0.0728
74	0.0735		0.0740
75	0.0744		0.0737
76	0.0727		0.0740
77	0.0736		0.0738
78	0.0731		0.0744
79	0.0730		0.0736
80	0.0721		0.0733
81	0.0722		0.0729
82	0.0722		0.0729
83	0.0723		0.0735
84	0.0725		0.0741
85	0.0723		0.0729
86	0.0718		0.0729
87	0.0729		0.0730
88	0.0730		0.0727
89	0.0722		0.0731
90	0.0717		0.0734
91	0.0724		0.0740
92	0.0727		0.0739

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA Continued

CONTACT GAPS, 23 Position Part, Thermal:

Test Date:	7/16/2004
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	56%
Equipment ID:	OGP-01

Thermal-23			
Measurements in inches			
Sample#	**B1**	-	**B2**
1	0.0704		0.0707
2	0.0703		0.0709
3	0.0701		0.0710
4	0.0701		0.0694
5	0.0686		0.0705
6	0.0688		0.0698
7	0.0695		0.0707
8	0.0705		0.0711
9	0.0700		0.0706
10	0.0702		0.0699
11	0.0682		0.0703
12	0.0698		0.0707
13	0.0698		0.0708
14	0.0697		0.0706
15	0.0698		0.0706
16	0.0706		0.0707
17	0.0708		0.0712
18	0.0705		0.0710
19	0.0699		0.0707
20	0.0696		0.0710
21	0.0702		0.0694
22	0.0697		0.0701
23	0.0706		0.0698
24	0.0707		0.0709
25	0.0706		0.0705
26	0.0703		0.0701
27	0.0701		0.0710
28	0.0708		0.0715
29	0.0701		0.0719
30	0.0706		0.0715
31	0.0711		0.0709
32	0.0713		0.0712
33	0.0709		0.0715
34	0.0711		0.0712
35	0.0709		0.0713
36	0.0710		0.0719
37	0.0712		0.0721
38	0.0714		0.0718
39	0.0716		0.0714
40	0.0710		0.0717
41	0.0712		0.0718
42	0.0707		0.0715

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

43	0.0708		0.0708
44	0.0707		0.0705
45	0.0707		0.0705
46	0.0701		0.0711
47	0.0706		0.0714
48	0.0706		0.0713
49	0.0706		0.0715
50	0.0701		0.0718
51	0.0710		0.0718
52	0.0716		0.0720
53	0.0710		0.0722
54	0.0708		0.0719
55	0.0709		0.0728
56	0.0705		0.0721
57	0.0709		0.0720
58	0.0712		0.0717
59	0.0711		0.0716
60	0.0713		0.0723
61	0.0713		0.0720
62	0.0712		0.0732
63	0.0707		0.0719
64	0.0710		0.0718
65	0.0705		0.0725
66	0.0711		0.0716
67	0.0711		0.0718
68	0.0705		0.0718
69	0.0701		0.0717
70	0.0695		0.0718
71	0.0704		0.0717
72	0.0701		0.0716
73	0.0700		0.0708
74	0.0712		0.0716
75	0.0711		0.0719
76	0.0704		0.0718
77	0.0711		0.0716
78	0.0709		0.0717
79	0.0705		0.0715
80	0.0699		0.0716
81	0.0703		0.0719
82	0.0706		0.0712
83	0.0701		0.0714
84	0.0702		0.0712
85	0.0706		0.0710
86	0.0693		0.0714
87	0.0705		0.0709
88	0.0700		0.0713
89	0.0699		0.0712
90	0.0696		0.0713
91	0.0699		0.0713
92	0.0698		0.0713

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA Continued

CONTACT GAPS, 23 Position Part, Humidity:

Test Date:	8/3/2004
Operator:	Troy Cook
Temperature (C):	22
Humidity (RH):	50%
Equipment ID:	OGP-01

Humidity-23			
Measurements in inches			
Sample#	**B1**		**B2**
1	0.0702		0.0705
2	0.0699		0.0703
3	0.0699		0.0709
4	0.0704		0.0691
5	0.0681		0.0705
6	0.0690		0.0695
7	0.0687		0.0701
8	0.0704		0.0704
9	0.0707		0.0706
10	0.0701		0.0702
11	0.0684		0.0700
12	0.0693		0.0706
13	0.0698		0.0707
14	0.0692		0.0705
15	0.0703		0.0704
16	0.0706		0.0712
17	0.0705		0.0715
18	0.0704		0.0707
19	0.0698		0.0703
20	0.0697		0.0711
21	0.0701		0.0698
22	0.0695		0.0698
23	0.0704		0.0699
24	0.0709		0.0711
25	0.0699		0.0704
26	0.0699		0.0699
27	0.0700		0.0709
28	0.0699		0.0715
29	0.0704		0.0717
30	0.0700		0.0716
31	0.0707		0.0706
32	0.0705		0.0717
33	0.0704		0.0713
34	0.0703		0.0711
35	0.0709		0.0713
36	0.0705		0.0720
37	0.0705		0.0715
38	0.0709		0.0718
39	0.0713		0.0717
40	0.0702		0.0715
41	0.0708		0.0716
42	0.0708		0.0709

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

43	0.0702		0.0701
44	0.0704		0.0704
45	0.0704		0.0701
46	0.0704		0.0709
47	0.0699		0.0715
48	0.0703		0.0710
49	0.0705		0.0717
50	0.0706		0.0716
51	0.0710		0.0719
52	0.0709		0.0721
53	0.0711		0.0725
54	0.0712		0.0717
55	0.0707		0.0724
56	0.0708		0.0727
57	0.0710		0.0726
58	0.0710		0.0719
59	0.0704		0.0718
60	0.0709		0.0718
61	0.0708		0.0722
62	0.0708		0.0730
63	0.0711		0.0724
64	0.0706		0.0711
65	0.0700		0.0718
66	0.0708		0.0712
67	0.0698		0.0714
68	0.0706		0.0715
69	0.0700		0.0717
70	0.0699		0.0713
71	0.0702		0.0710
72	0.0701		0.0715
73	0.0697		0.0711
74	0.0701		0.0712
75	0.0709		0.0713
76	0.0701		0.0716
77	0.0702		0.0713
78	0.0706		0.0723
79	0.0702		0.0712
80	0.0696		0.0717
81	0.0695		0.0709
82	0.0703		0.0710
83	0.0695		0.0716
84	0.0701		0.0719
85	0.0702		0.0709
86	0.0689		0.0710
87	0.0699		0.0708
88	0.0696		0.0709
89	0.0697		0.0712
90	0.0696		0.0713
91	0.0698		0.0710
92	0.0695		0.0710

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA Continued

MATING/UNMATING, 15 Position Part:

Test Date:	7/2/2004
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	53%
Equipment ID:	TCT-03
Load Cell ID:	LC-2500N(icell)
Part #	DPAF/DPAM-15

	Initial-15				After 100 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
Sample#	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
1	279.4	17.5	223.8	14.0	217.8	13.6	140.8	8.8
2	274.6	17.2	234.1	14.6	229.6	14.4	161.1	10.1
3	271.5	17.0	212.3	13.3	227.7	14.2	154.7	9.7
4	277.8	17.4	196.6	12.3	237.3	14.8	169.8	10.6
5	297.8	18.6	211.5	13.2	238.9	14.9	176.0	11.0
6	286.4	17.9	177.1	11.1	237.1	14.8	154.4	9.7
7	309.0	19.3	223.2	14.0	238.7	14.9	164.5	10.3
8	331.4	20.7	215.4	13.5	216.0	13.5	194.4	12.2
9	320.2	20.0	220.3	13.8	229.3	14.3	130.9	8.2
10	270.9	16.9	169.0	10.6	398.1	24.9	152.2	9.5

Test Date:	7/15/2004
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	44%
Equipment ID:	TCT-03
Load Cell ID:	LC-2500N(icell)

Test Date:	8/3/2004
Operator:	Troy Cook
Temperature (C):	21
Humidity (RH):	44%
Equipment ID:	TCT-03
Load Cell ID:	LC-2500N(icell)

	After Thermal				After Humidity			
	Mating		**Unmating**		**Mating**		**Unmating**	
Sample#	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
1	177.8	11.1	114.9	7.2	190.2	11.9	120.3	7.5
2	183.5	11.5	97.0	6.1	187.4	11.7	112.2	7.0
3	198.2	12.4	121.3	7.6	194.2	12.1	153.0	9.6
4	197.4	12.3	107.7	6.7	183.8	11.5	122.7	7.7
5	195.5	12.2	119.4	7.5	212.6	13.3	126.2	7.9
6	187.7	11.7	109.4	6.8	197.8	12.4	121.3	7.6
7	193.4	12.1	114.1	7.1	185.0	11.6	114.6	7.2
8	192.3	12.0	137.1	8.6	225.1	14.1	145.1	9.1
9	190.2	11.9	112.8	7.1	199.5	12.5	124.5	7.8
10	192.0	12.0	113.8	7.1	186.1	11.6	124.8	7.8

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA Continued

MATING/UNMATING, 23 Position Part:

Test Date:	7/2/2004
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	49%
Equipment ID:	TCT-03
Load Cell ID:	LC-2500N(icell)
Part #	DPAF/DPAM-23

	Initial-23				After 100 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
Sample#	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
1	348.8	21.8	255.2	16.0	297.3	18.6	186.6	11.7
2	369.8	23.1	217.3	13.6	298.2	18.6	221.3	13.8
3	379.8	23.7	246.4	15.4	325.9	20.4	204.0	12.8
4	377.1	23.6	263.7	16.5	321.6	20.1	218.2	13.6
5	409.0	25.6	266.1	16.6	319.8	20.0	229.4	14.3
6	375.0	23.4	231.2	14.5	298.1	18.6	192.6	12.0
7	365.8	22.9	250.4	15.7	316.3	19.8	193.8	12.1
8	352.0	22.0	226.9	14.2	304.2	19.0	197.9	12.4
9	416.6	26.0	274.2	17.1	329.3	20.6	226.1	14.1
10	358.9	22.4	223.7	14.0	308.3	19.3	196.0	12.3

Test Date:	7/15/2004
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	44%
Equipment ID:	TCT-03
Load Cell ID:	LC-2500N(icell)

Test Date:	8/3/2004
Operator:	Troy Cook
Temperature (C):	21
Humidity (RH):	44%
Equipment ID:	TCT-03
Load Cell ID:	LC-2500N(icell)

	After Thermal				After Humidity			
	Mating		**Unmating**		**Mating**		**Unmating**	
Sample#	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
1	242.1	15.1	161.3	10.1	216.6	13.5	136.3	8.5
2	265.6	16.6	171.4	10.7	236.6	14.8	173.0	10.8
3	251.0	15.7	166.7	10.4	239.4	15.0	134.2	8.4
4	259.0	16.2	169.8	10.6	256.3	16.0	129.3	8.1
5	251.0	15.7	160.8	10.1	268.0	16.8	158.6	9.9
6	236.2	14.8	149.9	9.4	266.6	16.7	157.9	9.9
7	251.8	15.7	154.4	9.7	267.4	16.7	158.6	9.9
8	266.4	16.7	152.0	9.5	257.3	16.1	164.3	10.3
9	273.4	17.1	195.7	12.2	271.0	16.9	160.8	10.1
10	241.1	15.1	149.1	9.3	281.6	17.6	123.5	7.7

Tracking Code: TC0424-DPAM_DPAF-0454	Part #: DPAM-15/23-01-H-8-1
Part description: Differential Pair DPArray	

DATA Continued

NORMAL FORCE:

Test Date:	8/4/2004
Operator:	Troy Cook
Temperature:	23
Humidity:	46%
Equipment ID:	TCT-03
Load Cell ID:	LC-5N(icell)
Contact:	N/A
Used In:	DPAF

Initial	Deflections in inches Forces in Grams					
Sample #	**0.002**	**0.004**	**0.006**	**0.008**	**0.010**	***SET***
1	14.6	28.2	39.6	53.5	67.2	0.00000
2	14.3	27.9	41.1	54.9	68.3	0.00000
3	14.6	28.9	42.8	55.5	68.5	0.00054
4	14.1	27.0	39.4	53.3	67.3	0.00031
5	15.0	30.1	43.7	57.6	71.6	0.00000
6	13.4	26.9	40.3	53.5	66.7	0.00046
7	14.3	27.8	41.2	53.5	65.8	0.00000
8	14.1	27.3	40.5	54.0	67.2	0.00038
9	14.3	27.9	43.0	55.4	65.9	0.00038
10	12.3	27.3	39.9	52.4	66.3	0.00025

Test Date:	8/4/2004
Operator:	Troy Cook
Temperature:	23
Humidity:	46%
Equipment ID:	TCT-03
Load Cell ID:	LC-5N(icell)
Contact:	N/A
Used In:	DPAF

Thermal	Deflections in inches Forces in Grams				
Sample #	**0.001**	**0.002**	**0.004**	**0.006**	**0.007**
1	11.5	19.2	34.5	50.4	59.8
2	13.4	20.7	36.4	52.9	60.6
3	13.4	21.3	35.9	52.0	60.6
4	10.7	19.2	34.9	51.6	60.0
5	9.1	16.7	32.8	49.3	57.0
6	11.7	19.9	35.3	51.2	61.6
7	8.3	15.3	31.8	47.2	54.9
8	11.6	19.9	36.5	53.5	62.2
9	11.1	18.4	34.0	50.6	58.8
10	11.5	19.2	34.3	50.8	59.3

DATA Continued

LLCR:

		Jun. 30 2004	Jul. 01 2004	Jul. 14 2004	Aug. 02 2004
Date					
Room Temp C		24	25	24	24
RH		36%	53%	54%	42%
Name		Troy Cook	Troy Cook	Troy Cook	Troy Cook
mOhm values		**Actual**	**Delta**	**Delta**	**Delta**
Board	**Position**	**Initial**	**100 Cycles**	**Thermal**	**Humidity**
1	P1	6.6	0.3	0.1	0.0
1	P2	7.3	0.3	0.1	-0.1
1	P3	7.3	0.4	0.2	0.3
1	P4	6.8	0.2	0.1	0.1
1	P5	6.8	0.2	0.2	0.2
1	P6	7.0	-0.1	0.4	0.2
1	P7	6.9	0.3	0.5	0.4
1	P8	7.2	0.7	0.6	1.0
1	P9	7.8	0.5	0.4	0.5
1	P10	8.4	0.1	0.1	0.3
1	P11	7.0	0.6	0.5	0.3
1	P12	6.7	0.4	0.5	0.3
1	P13	7.3	0.4	0.8	0.9
1	P14	6.6	0.4	0.5	0.3
1	P15	6.6	0.3	1.0	0.6
1	P16	6.4	0.3	1.0	1.0
1	P17	6.5	0.8	1.2	1.0
1	P18	6.7	0.2	0.4	0.6
1	P19	6.9	0.3	0.6	0.6
1	P20	6.7	0.4	0.9	0.4
1	P21	7.0	-0.1	0.5	0.4
1	P22	7.4	0.4	0.4	0.7
1	P23	7.5	0.9	0.6	0.6
1	P24	8.9	0.6	0.4	1.0
1	P25	9.0	0.8	0.3	0.8
2	P1	6.3	0.1	0.2	0.2
2	P2	7.2	0.6	0.6	0.5
2	P3	7.2	-0.1	0.2	0.2
2	P4	6.9	-0.2	0.2	0.0
2	P5	6.6	0.2	0.3	0.4
2	P6	7.0	-0.4	-0.4	-0.5
2	P7	7.2	-0.1	-0.1	0.2
2	P8	7.4	0.1	0.2	0.3
2	P9	8.0	-0.1	0.1	0.1
2	P10	7.9	0.3	0.5	0.6
2	P11	7.0	0.6	0.3	0.4
2	P12	6.6	0.3	0.2	0.2
2	P13	7.1	0.6	0.9	0.9

2	P14	6.7	1.0	0.5	0.5
2	P15	6.7	0.1	0.2	0.1
2	P16	6.5	0.5	0.8	0.8
2	P17	6.5	0.6	1.0	0.8
2	P18	6.8	0.0	0.4	0.8
2	P19	6.9	0.0	0.5	0.5
2	P20	6.9	0.1	0.2	0.1
2	P21	6.9	-0.1	-0.1	-0.1
2	P22	7.2	0.1	0.9	0.7
2	P23	7.5	0.5	0.8	0.6
2	P24	9.0	0.3	0.5	0.3
2	P25	9.2	0.6	0.6	0.3
3	P1	6.4	0.1	1.4	0.6
3	P2	7.2	0.5	1.7	0.9
3	P3	7.2	0.3	1.4	0.1
3	P4	6.7	0.1	0.8	0.6
3	P5	7.0	0.5	0.9	0.1
3	P6	6.8	-0.1	0.6	0.5
3	P7	7.2	0.2	1.2	1.0
3	P8	7.5	-0.2	0.6	0.5
3	P9	8.9	-0.6	0.3	0.0
3	P10	8.4	0.2	0.7	0.1
3	P11	7.1	0.0	1.0	0.7
3	P12	7.2	0.2	0.8	0.3
3	P13	7.5	0.1	0.4	0.8
3	P14	6.8	0.0	0.7	0.7
3	P15	6.8	0.4	0.9	0.9
3	P16	6.9	0.0	0.6	0.8
3	P17	6.7	0.3	1.5	1.9
3	P18	6.9	0.0	0.3	0.3
3	P19	7.1	0.5	1.6	1.5
3	P20	7.2	0.3	0.7	1.4
3	P21	7.2	-0.1	0.7	0.4
3	P22	7.4	0.1	1.1	0.9
3	P23	7.8	0.2	1.7	0.4
3	P24	9.3	0.1	0.9	0.1
3	P25	9.6	-0.3	0.4	-0.3
4	P1	6.6	0.7	0.2	0.4
4	P2	7.6	-0.1	0.1	0.2
4	P3	7.5	0.3	0.2	0.5
4	P4	6.7	0.2	0.3	0.4
4	P5	6.9	0.3	0.3	0.4
4	P6	7.5	-0.4	-0.5	-0.2
4	P7	7.4	-0.1	0.0	-0.1
4	P8	7.6	0.2	0.4	0.3
4	P9	8.1	0.0	0.0	0.0
4	P10	8.3	-0.2	0.0	0.2
4	P11	7.2	0.0	0.0	-0.2
4	P12	7.2	-0.1	-0.1	-0.2
4	P13	7.8	0.1	0.1	0.1

4	P14	6.8	0.3	0.1	0.3
4	P15	6.6	0.3	0.1	0.4
4	P16	6.7	0.7	0.3	0.7
4	P17	6.9	0.2	0.3	0.3
4	P18	7.0	0.4	0.2	1.1
4	P19	7.3	0.2	0.0	0.3
4	P20	7.4	0.3	0.0	0.1
4	P21	7.2	0.0	0.1	0.1
4	P22	7.3	0.2	0.6	0.6
4	P23	7.9	0.3	0.3	0.9
4	P24	9.0	0.3	0.6	0.4
4	P25	9.3	-0.2	-0.1	-0.2
5	P1	6.7	0.0	-0.1	-0.1
5	P2	7.6	0.4	0.3	0.2
5	P3	8.0	-0.1	-0.1	-0.3
5	P4	7.1	0.0	-0.2	-0.1
5	P5	7.1	-0.1	-0.2	-0.1
5	P6	7.1	0.0	0.0	0.0
5	P7	7.3	0.3	0.2	0.3
5	P8	7.4	0.2	0.4	0.8
5	P9	8.7	0.0	0.4	0.3
5	P10	8.5	0.2	0.5	0.8
5	P11	7.6	0.2	-0.1	0.2
5	P12	7.0	0.1	0.0	0.4
5	P13	7.6	0.3	0.2	0.5
5	P14	7.1	0.0	0.0	0.1
5	P15	6.7	0.5	0.6	0.6
5	P16	7.0	0.5	1.1	1.0
5	P17	6.5	0.6	0.7	1.2
5	P18	7.2	0.2	0.2	0.4
5	P19	7.1	0.1	0.2	0.3
5	P20	7.9	0.2	0.0	-0.1
5	P21	7.2	0.0	-0.2	-0.2
5	P22	7.7	0.0	0.0	0.4
5	P23	8.1	0.2	0.0	0.2
5	P24	9.4	0.5	0.5	0.2
5	P25	9.4	0.2	0.4	0.2
6	P1	5.1	0.1	0.3	0.3
6	P2	7.5	0.4	0.2	0.0
6	P3	7.1	1.2	0.4	0.5
6	P4	6.7	0.2	0.0	-0.1
6	P5	6.6	0.5	0.4	0.1
6	P6	6.7	0.4	0.6	0.4
6	P7	7.3	0.7	0.4	0.4
6	P8	7.3	0.2	0.1	0.3
6	P9	7.9	0.9	0.3	0.4
6	P10	7.8	0.1	0.0	0.2
6	P11	6.9	0.0	0.0	0.0
6	P12	6.6	0.3	0.6	0.6
6	P13	7.7	-0.3	0.0	0.1

6	P14	6.6	0.4	0.6	0.5
6	P15	6.5	0.9	0.8	0.7
6	P16	6.6	0.3	0.3	0.6
6	P17	6.5	0.6	0.4	0.4
6	P18	6.6	0.2	0.5	0.6
6	P19	6.8	0.6	0.3	0.5
6	P20	6.9	0.2	0.2	0.2
6	P21	6.7	0.3	0.4	0.1
6	P22	7.1	0.4	0.7	0.5
6	P23	7.8	0.6	0.4	0.4
6	P24	8.8	0.8	0.6	0.3
6	P25	8.7	0.7	0.9	0.6
7	P1	6.8	-0.1	0.0	0.2
7	P2	8.0	0.3	0.0	0.3
7	P3	7.7	0.5	0.2	0.1
7	P4	7.0	0.2	0.3	0.3
7	P5	7.0	0.6	0.4	0.2
7	P6	6.9	0.5	0.3	0.5
7	P7	7.2	0.4	0.3	0.3
7	P8	7.7	0.1	0.1	0.2
7	P9	8.6	-0.1	-0.2	0.0
7	P10	8.1	0.5	0.8	0.9
7	P11	7.2	0.0	0.2	0.1
7	P12	7.2	-0.1	-0.1	0.0
7	P13	7.7	0.4	0.6	1.2
7	P14	7.0	-0.2	-0.2	0.3
7	P15	7.2	0.1	0.0	0.7
7	P16	6.8	0.1	0.4	0.9
7	P17	6.5	0.4	0.3	0.4
7	P18	7.1	-0.1	0.1	0.2
7	P19	7.3	0.5	0.5	0.8
7	P20	7.2	0.0	0.0	0.4
7	P21	7.3	0.1	0.0	0.3
7	P22	7.4	0.1	0.3	0.7
7	P23	8.1	0.0	-0.1	-0.3
7	P24	9.7	-0.2	0.0	0.1
7	P25	9.5	0.0	0.0	0.4
8	P1	6.2	1.5	0.4	0.4
8	P2	7.1	0.0	0.2	0.1
8	P3	6.9	0.3	0.4	0.3
8	P4	6.5	0.3	0.4	0.4
8	P5	6.8	0.4	0.3	0.3
8	P6	6.6	0.5	0.5	0.4
8	P7	6.9	0.5	0.6	0.5
8	P8	7.1	0.6	0.5	0.9
8	P9	7.8	0.4	0.5	0.2
8	P10	7.7	0.2	0.4	0.4
8	P11	6.6	0.2	0.3	0.4
8	P12	6.7	-0.1	0.3	0.4
8	P13	7.3	0.5	0.9	1.0

8	P14	6.4	0.7	0.8	0.7
8	P15	6.5	0.5	0.8	0.6
8	P16	6.6	0.8	1.4	0.9
8	P17	6.5	0.0	0.2	0.4
8	P18	6.6	0.4	0.7	0.7
8	P19	6.9	0.5	0.7	0.7
8	P20	6.6	0.1	0.7	0.6
8	P21	6.6	0.4	0.5	0.3
8	P22	7.0	0.4	0.4	0.5
8	P23	7.4	0.5	0.4	0.2
8	P24	8.5	0.2	0.7	0.1
8	P25	8.8	0.6	0.9	0.2

DATA Continued

GAS TIGHT:

		Jul. 01 2004	Aug. 03 2004
	Date		
	Room Temp C	25	23
	RH	46%	48%
	Name	Troy Cook	Troy Cook
mOhm values		**Actual**	**Delta**
Board	**Position**	**Initial**	**Gas Tight**
1	P1	6.7	-0.2
1	P2	7.9	-0.1
1	P3	7.6	0.0
1	P4	6.9	0.0
1	P5	7.2	0.0
1	P6	7.1	0.0
1	P7	7.1	0.0
1	P8	7.3	0.2
1	P9	8.1	0.0
1	P10	7.9	0.0
1	P11	6.8	0.0
1	P12	7.1	-0.1
1	P13	7.3	0.0
1	P14	6.7	-0.1
1	P15	6.8	-0.1
1	P16	6.7	0.0
1	P17	6.7	0.1
1	P18	6.8	0.1
1	P19	7.4	0.0
1	P20	7.2	0.0
1	P21	7.3	-0.1
1	P22	7.4	0.0
1	P23	8.2	-0.1
1	P24	9.4	0.0
1	P25	9.9	-0.3
2	P1	6.8	0.0
2	P2	7.8	0.0
2	P3	7.7	0.0
2	P4	6.7	0.1
2	P5	7.1	-0.1
2	P6	7.1	-0.2
2	P7	7.5	-0.2
2	P8	7.4	0.4
2	P9	8.3	0.9
2	P10	8.2	1.2
2	P11	7.0	0.1
2	P12	7.0	0.1
2	P13	7.3	0.3

2	P14	7.0	0.3
2	P15	6.8	0.2
2	P16	6.8	0.3
2	P17	6.6	0.6
2	P18	6.7	0.1
2	P19	7.4	0.2
2	P20	7.3	-0.1
2	P21	7.1	0.1
2	P22	7.5	0.3
2	P23	7.6	0.3
2	P24	9.4	0.2
2	P25	9.9	0.0
3	P1	6.7	-0.3
3	P2	7.8	-0.1
3	P3	7.4	-0.2
3	P4	7.1	-0.1
3	P5	6.9	-0.1
3	P6	7.1	-0.1
3	P7	7.5	-0.1
3	P8	7.9	-0.2
3	P9	8.4	0.0
3	P10	8.2	0.0
3	P11	7.1	0.0
3	P12	7.1	-0.1
3	P13	7.9	-0.1
3	P15	7.2	-0.3
3	P16	7.0	-0.1
3	P17	6.6	-0.1
3	P18	6.9	-0.1
3	P20	7.0	0.0
3	P21	7.7	-0.2
3	P22	7.3	0.0
3	P23	7.6	0.0
3	P24	9.2	-0.1
3	P25	9.2	-0.1
4	P1	6.4	-0.1
4	P2	8.0	-0.1
4	P3	8.2	-0.3
4	P4	6.6	0.1
4	P5	6.8	0.1
4	P6	6.9	0.0
4	P7	7.2	0.2
4	P8	7.4	0.1
4	P10	8.4	0.0
4	P11	6.9	0.0
4	P12	6.9	-0.1
4	P13	7.3	0.1
4	P14	6.8	0.0
4	P15	6.7	0.2
4	P16	6.8	0.4

4	P17	6.3	0.3
4	P18	6.6	0.1
4	P19	7.0	0.2
4	P20	6.9	0.0
4	P21	7.2	-0.1
4	P22	7.8	0.0
4	P23	7.9	0.0
4	P24	9.7	0.1
4	P25	9.5	0.0
5	P1	6.3	0.4
5	P2	7.3	-0.4
5	P3	7.9	-0.9
5	P4	6.7	0.5
5	P5	6.6	0.7
5	P6	7.0	0.1
5	P7	7.4	-1.1
5	P8	7.6	-0.2
5	P9	8.4	-1.2
5	P10	8.4	-1.5
5	P11	6.8	0.6
5	P12	6.9	-0.1
5	P13	7.5	-0.4
5	P15	6.6	1.8
5	P16	6.6	0.9
5	P17	6.3	1.3
5	P18	6.7	0.6
5	P19	7.0	0.3
5	P20	7.3	-0.3
5	P21	7.0	0.4
5	P22	7.2	-0.2
5	P23	7.8	-0.6
5	P24	8.9	-0.6
5	P25	9.3	-1.9
6	P1	7.4	-0.2
6	P2	7.4	0.1
6	P3	7.8	-0.1
6	P4	6.8	0.0
6	P5	6.6	0.0
6	P6	7.1	0.0
6	P7	7.1	0.1
6	P8	7.0	0.2
6	P9	7.8	0.0
6	P10	7.6	0.5
6	P11	6.8	-0.1
6	P12	6.9	0.2
6	P13	7.4	0.1
6	P14	6.7	0.0
6	P15	7.0	-0.1
6	P16	6.7	0.1
6	P17	6.7	0.0

6	P18	6.6	0.1
6	P19	6.9	0.1
6	P20	7.2	0.0
6	P21	7.2	0.0
6	P22	7.4	0.0
6	P23	7.7	0.1
6	P24	8.7	0.0
6	P25	9.0	0.0
7	P1	6.5	0.3
7	P2	7.7	0.2
7	P3	7.3	0.2
7	P4	6.5	0.0
7	P5	6.8	-0.1
7	P6	6.7	0.2
7	P7	7.2	0.2
7	P8	7.0	0.2
7	P9	7.9	0.0
7	P10	7.6	0.1
7	P11	6.8	0.2
7	P12	6.9	0.3
7	P13	7.2	0.1
7	P14	7.1	0.0
7	P15	6.6	0.0
7	P17	6.5	0.7
7	P18	6.6	0.2
7	P19	6.9	0.2
7	P20	6.9	0.2
7	P21	6.9	-0.1
7	P22	7.3	0.3
7	P23	7.3	0.3
7	P24	8.9	0.0
7	P25	9.0	0.3
8	P1	6.4	-0.2
8	P2	7.7	0.0
8	P3	7.6	-0.1
8	P4	6.8	0.0
8	P5	7.2	-0.2
8	P6	6.8	0.0
8	P7	7.4	0.0
8	P8	7.7	-0.1
8	P9	8.5	-0.2
8	P10	8.4	0.0
8	P11	7.1	0.0
8	P12	7.6	0.1
8	P13	7.8	0.2
8	P14	7.0	0.2
8	P15	6.8	0.0
8	P16	7.0	0.2
8	P17	6.7	0.2
8	P18	6.6	0.1

8	P19	7.2	0.0
8	P20	7.1	0.0
8	P21	7.1	-0.1
8	P22	7.4	0.1
8	P23	7.9	-0.1
8	P24	9.5	-0.1
8	P25	9.7	-0.1

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: THL-02
Description: Temperature/Humidity Chart Recorder
Manufacturer: Dickson
Model: THDX
Serial #: 00120351
Accuracy: Temp: +/- 1C; Humidity: +/-2% RH (0 - 60%) +/- 3% RH (61 - 95%).
… Last Cal: 6/02/04, Next Cal: 6/02/05

Equipment #: PS-01
Description: System Power Supply
Manufacturer: Hewlett Packard
Model: HP 6033A
Serial #: (HP) 3329A-07330
Accuracy: See Manual
… Last Cal6/12/03, Next Cal: 6/12/04

Equipment #: MO-02
Description: Multimeter /Data Acquisition System
Manufacturer: Keithley
Model: 2700
Serial #: 0780546
Accuracy: See Manual
… Last Cal: 6/12/03, Next Cal: 6/12/04

Equipment #: MO-04
Description: Multimeter /Data Acquisition System
Manufacturer: Keithley
Model: 2700
Serial #: 0798688
Accuracy: See Manual
… Last Cal: 6/12/03, Next Cal: 6/12/04

Equipment #: TC090601-103/105
Description: IC Thermocouple-103/105
Manufacturer: Samtec
Serial #: TC090601-103/105
Accuracy: +/- 1 degree C

Equipment #: OGP-01
Description: 6"X 6" Video Measuring Machine
Manufacturer: Optical Gauging Products
Model: Smartscope 200 CFOV
Serial #: SF2001956
Accuracy: See Manual
… Last Cal: 3/12/04, Next Cal: 3/31/04

EQUIPMENT AND CALIBRATION SCHEDULES Continued

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; Speed Accuracy: +/- 5% of indicated speed;
… Last Cal: 6/12/03, Next Cal: 6/12/04

Equipment #: LC-2500N(icell)
Description: 2500 N Load Cell for Dillon Quantrol
Manufacturer: Dillon Quantrol
Model: icell
Serial #: 01-0132-01
Accuracy: .10% of capacity
… Last Cal: 4/27/04, Next Cal: 4/27/05

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: 6/20/03, Next Cal: 6/30/04

Equipment #: THC-01
Description: Temperature/Humidity Chamber
Manufacturer: Thermotron
Model: SM-8-7800
Serial #: 30676
Accuracy: See Manual
… Last Cal: 4/22/2004, Next Cal: 5/22/2005

Equipment #: TCT-02
Description: Dillon Quantrol TC2 Test Stand
Manufacturer: Dillon
Model: PCM
Serial #: 00120351
Accuracy: Speed Accuracy: +/- 5% of indicated speed; Displacement: +/- 5 micrometers.
… Last Cal: 6/12/02, Next Cal: 6/12/04

Equipment #: LC-5N
Description: 5 N Load Cell
Manufacturer: Dillon
Model: TC2 Load Cell
Serial #: 5370
Accuracy: +/- 0.2% of Full Scale +/- 1 LSC
… Last Cal: 5/19/04, Next Cal: 5/19/05

EQUIPMENT AND CALIBRATION SCHEDULES Continued

Equipment #: MO-01
Description: Micro-Ohmeter
Manufacturer: Keithley
Model: 580
Serial #: 0772740
Accuracy: See Manual
… Last Cal: 6/12/03, Next Cal: 6/12/04

Equipment #: MO-03
Description: Multimeter /Data Acquisition System
Manufacturer: Keithley
Model: 2700
Serial #: 0791975
Accuracy: See Manual
… Last Cal: 6/12/03, Next Cal: 6/12/04