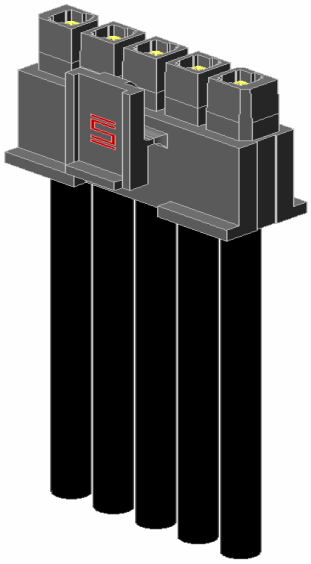
Project Number:	Tracking Code: TC067--0940		
Requested by: Brandon Harpenau	Date: 2/17/2006	Product Rev: 1	
Part #: PMSS-110-16-SP-10.00-D-LUS	Lot #: 0	Tech: Troy Cook/ Tony Wagoner	Eng: Dave Scopelliti
Part description: Power Mate Cable Assembly			Qty to test: 50
Test Start: 03/17/2006	Test Completed: 4/20/2006		



PMSS-1XX-XX-SP-XX.-X-XX
DVT Report

Mated with IPBT-110-H1-T-S

Tracking Code: TC067--0940	Part #: PMSS-110-16-SP-10.00-D-LUS
Part description: Power Mate Cable Assembly	

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: Modified DVT. PCB-100375-TST-XX. I will e-mail what I want you to test, please send me a flow chart and we will go from there, I just wanted the prepping to start. Mating connector IPBT-110-01-T-S.

APPLICABLE DOCUMENTS

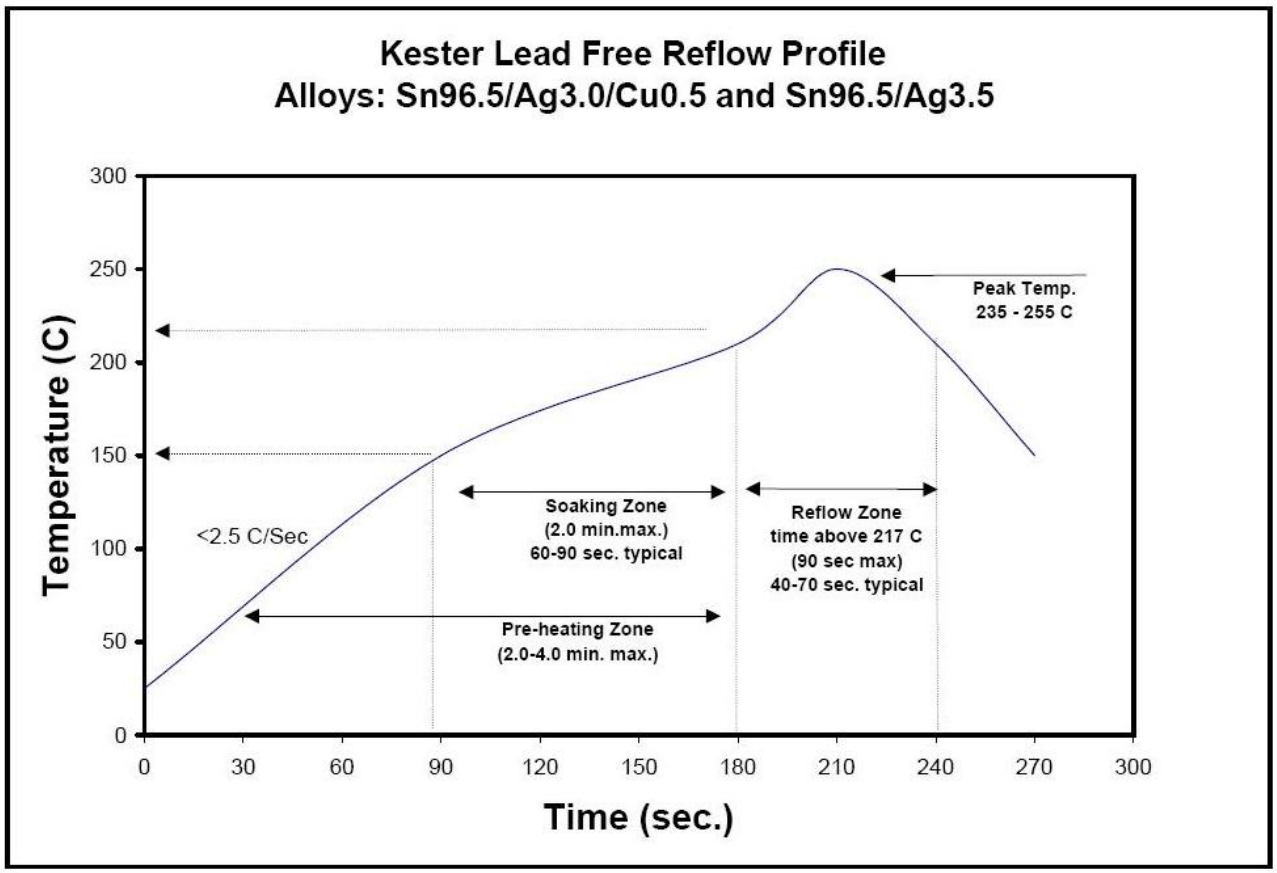
Standards: EIA Publication 364

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:
    - Sample test boards are to be ultrasonically cleaned after test lead attachment, preparation and/or soldering.
    - Sample test boards are immersed into Branson 3510 cleaner containing Kyzen Ionox HC1 (or equivalent) with the following conditions:
        - Temperature: -------55° C+/- 5° C
        - Frequency:----------40 KHz
        - Immersion Time: ---5 to 10 Minutes
    - Sample test boards are removed and placed into the Branson 3510 cleaner containing deionized water with the following conditions:
        - Temperature: --------55° C +/- 5° C
        - Frequency:----------40 KHz
        - Immersion Time: ---5 to 10 Minutes
    - 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.
    - Upon removal, the sample boards are rinsed for ½ to 1 minute at room temperature with free flowing deionized water.
    - 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.
    - 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:
10) Re-Flow Time/Temp: See accompanying profile.
11) Internal Test PCBs used: PCB-100375-TST-XX

Tracking Code: TC067--0940	Part #: PMSS-110-16-SP-10.00-D-LUS
Part description: Power Mate Cable Assembly	

OVEN PROFILE (Soldering Parts to Test Boards)



Tracking Code: TC067--0940	Part #: PMSS-110-16-SP-10.00-D-LUS
Part description: Power Mate Cable Assembly	

FLOWCHARTS

Current Carrying Capacity

TEST STEP	GROUP A 1 connector min 6 contacts powered
01	CCC

Tabulate calculated current at RT, 65° C, 75° C and 95° C
after derating 20% and based on 105° C
CCC, Temp rise = EIA-364-70

Mating/Unmating/Normal Force

TEST STEP	GROUP A 10 Connectors 50 Cycles	GROUP B1 5 Connectors Setup Approve	GROUP B2 5 Connectors Setup Approve
01	Contact Gaps	Normal Force	Thermal Aging (Mated)
02	Mating / Unmating	Data Review	Normal Force
03	Data Review		
04	50 Cycles		
05	Mating / Unmating		
06	Contact Gaps		
07	Data Review		
08	Thermal Aging (Mated)		
09	Mating / Unmating		
10	Contact Gaps		
11	Data Review		
12	Humidity (Mated)		
13	Mating / Unmating		
14	Contact Gaps		

Thermal Aging = EIA-364-17, Test Condition 4, 105 deg C;
Time Condition 'B' (250 hours)
Humidity =EIA-364-31, Test Condition 'B' (240 Hours)
and Method III (+25 ° C to +65 ° C @ 90%RH to 98% RH)
ambient pre-condition and delete steps 7a and 7b
Mating/Un-Mating Forces = EIA-364-13
Normal Force = EIA-364-04
Contact Gaps/Height - No standard method. Usually measured optically

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FLOWCHARTS Continued

IR / DWV

TEST STEP	GROUP A 3 Connectors Ambient	GROUP B1 3 Connectors Ambient	GROUP B2 3 Connectors Thermal	GROUP B3 3 Connectors Humidity
01	IR	DWV/Working Voltage	Thermal Aging	Humidity
02	Data Review		DWV/Working Voltage	DWV/Working Voltage
03	Thermal Aging			
04	IR			
05	Data Review			
06	Humidity			
07	IR			

Thermal Aging = EIA-364-17, Test Condition 4, 105 deg C;
Time Condition 'B' (250 hours)
Humidity =EIA-364-31, Test Condition 'B' (240 Hours)
and Method III (+25 ° C to +65 ° C @ 90%RH to 98% RH)
ambient pre-condition and delete steps 7a and 7b
IR = EIA-364-21
DWV = EIA-364-20

Tracking Code: TC067--0940	Part #: PMSS-110-16-SP-10.00-D-LUS
Part description: Power Mate Cable Assembly	

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 sometimes mated and all samples are 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 sometimes mated and all samples are 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:
    - Self heating (resistive)
    - 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:
    - Ambient
    - 65^o C
    - 75^o C
    - 95^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 GAP

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

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 (FOR CONTACTS TESTED OUTSIDE THE HOUSING):

1) Reference document: EIA-364-04, *Normal Force Test Procedure for Electrical Connectors*.
2) The contacts shall be tested in the loose state, *not* inserted in connector housing.
3) The contacts shall be prepared to allow access to the spring member at the same attitude and deflection level as would occur in actual use.
4) In the event that portions of the contact prevent insertion of the test probe and/or deflection of the spring member under evaluation, said material shall be removed leaving the appropriate contact surfaces exposed.
5) In the case of multi-tine contacts, each tine shall be tested independently on separate samples as required.
6) The connector housing shall be simulated, if required, in order to provide an accurate representation of the actual contact system performance.
7) A holding fixture shall be fashioned to allow the contact to be properly deflected.
8) 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 µm (0.0002").
9) The probe shall be attached to a Dillon P/N 49761-0105, 5 N (1.1 Lb) load cell providing an accuracy of ± 0.2%.
10) The nominal deflection rate shall be 5 mm (0.2")/minute.
11) Unless otherwise noted a minimum of five contacts shall be tested.
12) The force/deflection characteristic to load and unload each contact shall be repeated five times.
13) The system shall utilize the TC^2 software in order to acquire and record the test data.
14) The permanent set of each contact shall be measured within the TC^2 software.
15) 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.

INSULATION RESISTANCE (IR):

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

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

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

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

1) PROCEDURE:
    - Reference document: EIA-364-20, *Withstanding Voltage Test Procedure for Electrical Connectors*.
    - Test Conditions:

- Between Adjacent Contacts
- Rate of Application 500 V/Sec
- Test Voltage (VAC) until breakdown occurs

2) MEASUREMENTS/CALCULATIONS
   - The breakdown voltage shall be measured and recorded.
   - The dielectric withstanding voltage shall be recorded as 75% of the minimum breakdown voltage.
   - The working voltage shall be recorded as one-third (1/3) of the dielectric withstanding voltage (one-fourth of the breakdown voltage).

Tracking Code: TC067--0940	Part #: PMSS-110-16-SP-10.00-D-LUS
Part description: Power Mate Cable Assembly	

RESULTS

Temperature Rise, CCC at a 20% de-rating

- **CCC for a 30°C Temperature Rise----------5.5 A per contact with 6 adjacent contacts powered**

Contact Gap

- **Initial**
  - **Min----------.0216”**
  - **Max ----------.0228”**
- **After 50 Cycles**
  - **Min----------.023”**
  - **Max ----------.0249”**
- **Thermal**
  - **Min----------.0279”**
  - **Max ----------.0298”**
- **Humidity**
  - **Min----------.0272”**
  - **Max ----------.0304”**

Mating – Unmating Forces

- **Initial**
  - **Mating**
    - **Min ----------10.5 Lbs.**
    - **Max----------15.9 Lbs.**
  - **Unmating**
    - **Min ----------12.1 Lbs.**
    - **Max----------13.8 Lbs.**
- **After 50 Cycles**
  - **Mating**
    - **Min ---------- 9.2 Lbs.**
    - **Max----------11.4 Lbs.**
  - **Unmating**
    - **Min ---------- 8.1 Lbs.**
    - **Max---------- 9.2 Lbs.**
- **Thermal**
  - **Mating**
    - **Min ---------- 6.0 Lbs.**
    - **Max---------- 8.6 Lbs.**
  - **Unmating**
    - **Min ---------- 5.3 Lbs.**
    - **Max---------- 6.9 Lbs.**
- **Humidity**
  - **Mating**
    - **Min ---------- 4.7 Lbs.**
    - **Max---------- 8.2 Lbs.**
  - **Unmating**
    - **Min ---------- 4.0 Lbs.**
    - **Max---------- 5.9 Lbs.**

Normal Force at .013” deflection

- **Initial**
  - **Min---------- 195.2 grams Set -------.0003”**
  - **Max ---------- 224.2 grams Set -------.0008”**

- **Thermal**
  - **Min---------- 189.1 grams**
  - **Max ---------- 202.9 grams**

Insulation Resistance minimums, IR

- **Initial**
  - **Mated----------100,000 Meg Ω ---------- Pass**
  - **Unmated ----------100,000 Meg Ω**
- **Thermal**
  - **Mated----------100,000 Meg Ω**
  - **Unmated ----------100,000 Meg Ω**
- **Humidity**
  - **Mated---------- 50,000 Meg Ω**
  - **Unmated ---------- 25,000 Meg Ω**

Dielectric Withstanding Voltage minimums, DWV

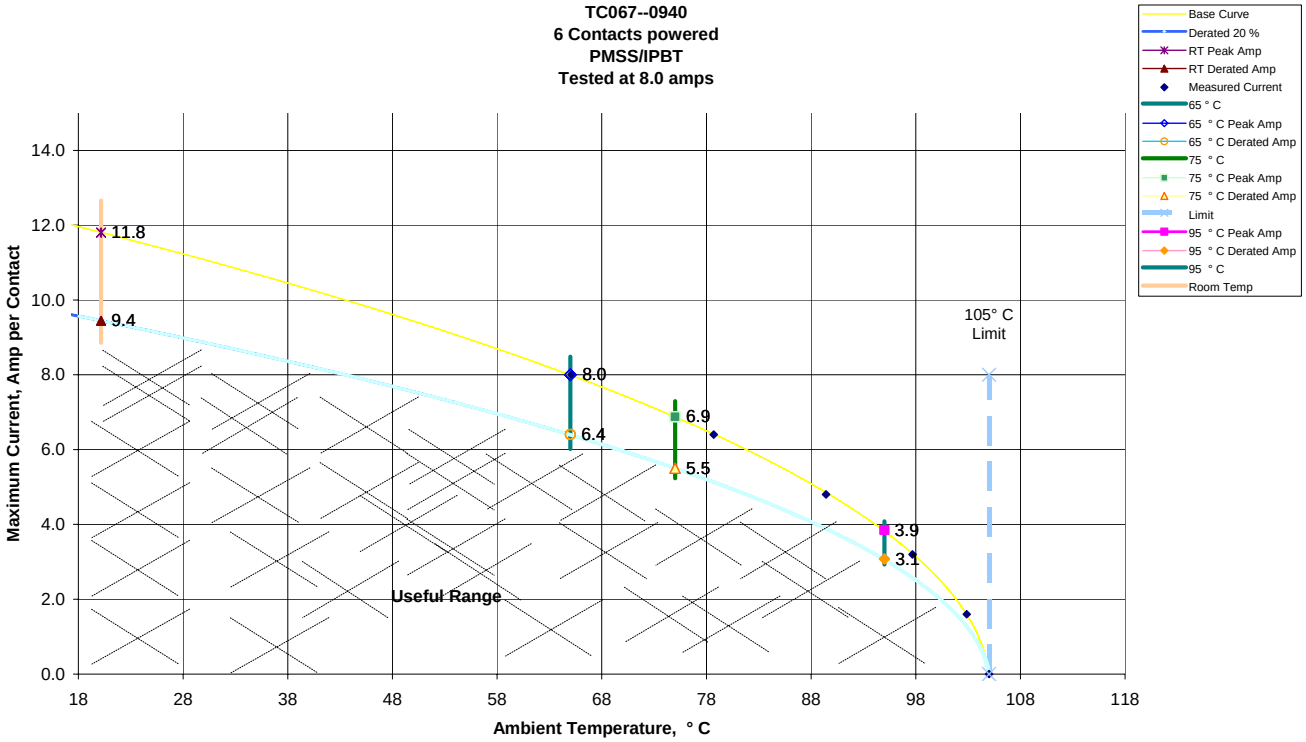
- **Initial**
  - **Breakdown**
    - **Mated ----------4,000 VAC**
    - **Unmated----------4,000 VAC**
  - **DWV**
    - **Mated ----------3,000 VAC**
    - **Unmated----------3,000 VAC**
  - **Working voltage**
    - **Mated ----------1,000 VAC**
    - **Unmated----------1,000 VAC**
- **Thermal**
  - **Breakdown**
    - **Mated ----------2,900 VAC**
    - **Unmated----------3,200 VAC**
  - **DWV**
    - **Mated ----------2,175 VAC**
    - **Unmated----------2,400 VAC**
  - **Working voltage**
    - **Mated ----------725 VAC**
    - **Unmated----------800 VAC**
- **Humidity**
  - **Breakdown**
    - **Mated ----------2,700 VAC**
    - **Unmated----------2,900 VAC**
  - **DWV**
    - **Mated ----------2,025 VAC**
    - **Unmated----------2,175 VAC**
  - **Working voltage**
    - **Mated ----------675 VAC**
    - **Unmated----------725 VAC**

Tracking Code: TC067--0940	Part #: PMSS-110-16-SP-10.00-D-LUS
Part description: Power Mate Cable Assembly	

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:
    . Linear configuration with SIX adjacent conductors/contacts powered



Tracking Code: TC067--0940	Part #: PMSS-110-16-SP-10.00-D-LUS
Part description: Power Mate Cable Assembly	

DATA SUMMARIES Continued

CONTACT GAPS:

Initial	
Measurements in inches	
Minimum	**0.0216**
Maximum	**0.0228**
Average	**0.0222**
St. Dev.	**0.0002**
Count	**100**

After 50 Cycles	
Measurements in inches	
Minimum	**0.0230**
Maximum	**0.0249**
Average	**0.0238**
St. Dev.	**0.0003**
Count	**100**

After Thermals	
Measurements in inches	
Minimum	**0.0279**
Maximum	**0.0298**
Average	**0.0286**
St. Dev.	**0.0004**
Count	**100**

After Humidity	
Measurements in inches	
Minimum	**0.0272**
Maximum	**0.0304**
Average	**0.0292**
St. Dev.	**0.0004**
Count	**100**

MATING/UNMATING:

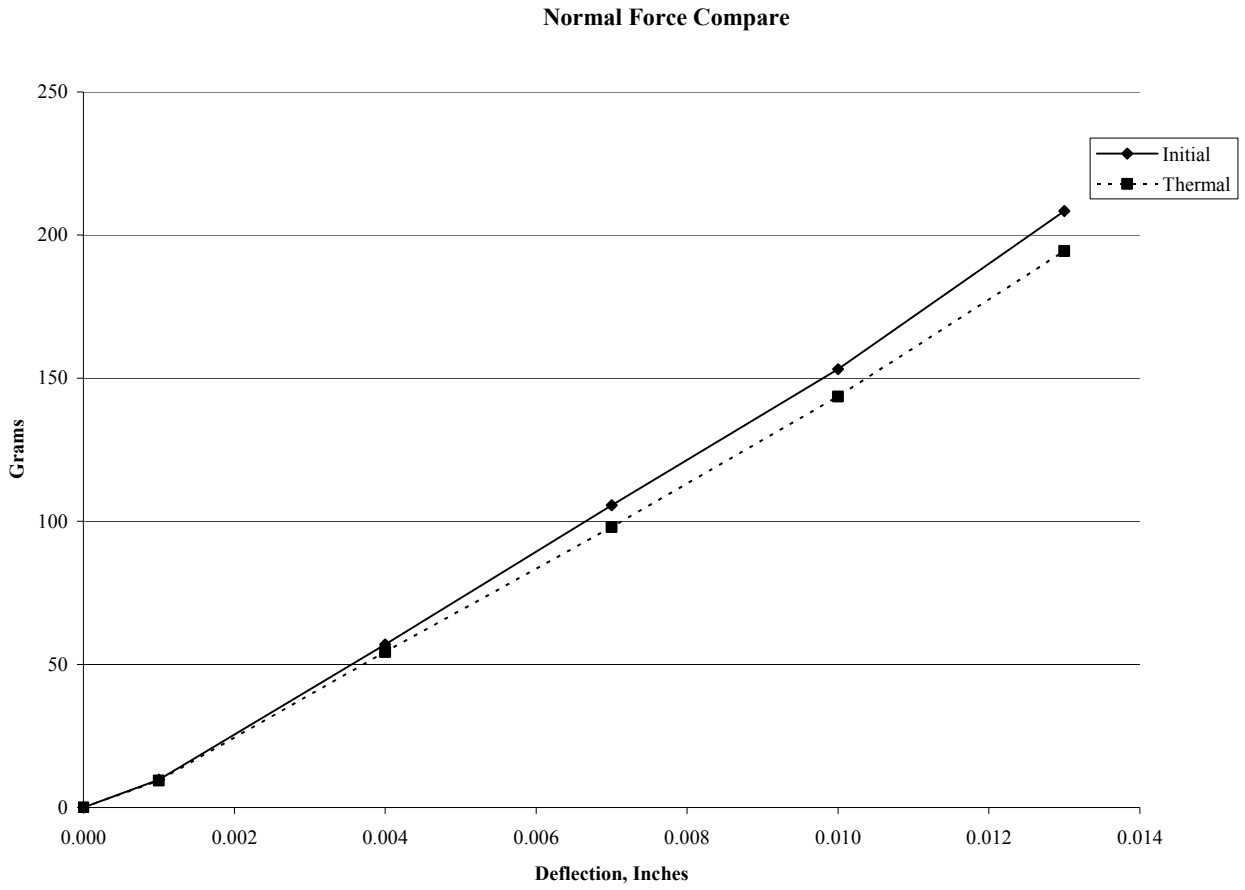
	Initial				After 50 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
Minimum	167.9	10.49	193.1	12.07	146.7	9.17	129.3	8.08
Maximum	*254.2*	*15.9*	*221.3*	*13.8*	*183.1*	*11.4*	*147.9*	*9.2*
Average	***213.7***	***13.4***	***207.2***	***13.0***	***157.6***	***9.8***	***138.0***	***8.6***
	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	96.6	6.0	84.0	5.3	75.7	4.7	64.6	4.0
Maximum	*136.8*	*8.6*	*109.8*	*6.9*	*130.9*	*8.2*	*94.6*	*5.9*
Average	***113.4***	***7.1***	***96.6***	***6.0***	***94.3***	***5.9***	***84.4***	***5.3***

Tracking Code: TC067--0940	Part #: PMSS-110-16-SP-10.00-D-LUS
Part description: Power Mate Cable Assembly	

DATA SUMMARIES Continued

NORMAL FORCE (FOR CONTACTS TESTED OUTSIDE THE HOUSING):

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					
	0.0010	0.0040	0.0070	0.0100	0.0130	SET
Averages	9.76	56.99	105.59	153.11	208.38	0.0006
Min	9.10	54.10	100.60	145.70	195.20	0.0003
Max	10.60	61.00	113.60	163.20	224.20	0.0008
St. Dev	0.74	2.62	4.64	6.96	9.88	0.0002
Count	8	8	8	8	8	8

Thermals	Deflections in inches Forces in Grams					
	0.0010	0.0040	0.0070	0.0100	0.0130	SET
Averages	9.40	54.33	97.98	143.58	194.39	0.0004
Min	9.10	52.60	94.50	139.60	189.10	0.0004
Max	9.90	57.20	103.70	151.00	202.90	0.0005
St. Dev	0.41	1.98	3.42	4.67	5.75	0.0001
Count	8	8	8	8	8	8

DATA SUMMARIES Continued

INSULATION RESISTANCE (IR):

	Initial, Meg Ohms		Thermal, Meg Ohms		Humidity, Meg Ohms	
	Mated	Unmated	Mated	Unmated	Mated	Unmated
	Insulation Resistance	Insulation Resistance	Insulation Resistance	Insulation Resistance	Insulation Resistance	Insulation Resistance
Average	100000	100000	100000	83333	83333	85000
Min	100000	100000	100000	50000	50000	25000
Max	100000	100000	100000	100000	100000	100000

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

	Humidity, VAC Mated			Humidity, VAC Unmated		
	Breakdown Voltage	DWV	Working Voltage	Breakdown Voltage	DWV	Working Voltage
Average	2850	2138	713	2900	2175	725
Min	2700	2025	675	2900	2175	725
Max	3000	2250	750	2900	2175	725

Test Voltage ***Until Breakdown Occurs***

	Thermal, VAC Mated			Thermal, VAC Unmated		
	Breakdown Voltage	DWV	Working Voltage	Breakdown Voltage	DWV	Working Voltage
Average	3000	2250	750	3200	2400	800
Min	2900	2175	725	3200	2400	800
Max	3100	2325	775	3200	2400	800

Test Voltage ***Until Breakdown Occurs***

	Humidity, VAC Mated			Humidity, VAC Unmated		
	Breakdown Voltage	DWV	Working Voltage	Breakdown Voltage	DWV	Working Voltage
Average	2850	2138	713	2900	2175	725
Min	2700	2025	675	2900	2175	725
Max	3000	2250	750	2900	2175	725

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DATA

CONTACT GAP:

Initial										
Measurements in inches										
Sample#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.0223	0.0223	0.0221	0.0227	0.0222	0.0224	0.0221	0.0219	0.0222	0.0223
2	0.0226	0.0223	0.0221	0.0222	0.0221	0.0226	0.0219	0.0223	0.0224	0.0222
3	0.0224	0.0224	0.0221	0.0225	0.0220	0.0223	0.0221	0.0222	0.0219	0.0220
4	0.0223	0.0221	0.0223	0.0219	0.0220	0.0224	0.0219	0.0225	0.0225	0.0222
5	0.0223	0.0222	0.0219	0.0222	0.0222	0.0223	0.0221	0.0224	0.0226	0.0222
6	0.0224	0.0222	0.0222	0.0219	0.0228	0.0222	0.0222	0.0221	0.0225	0.0222
7	0.0225	0.0222	0.0221	0.0223	0.0222	0.0225	0.0219	0.0223	0.0220	0.0224
8	0.0225	0.0221	0.0222	0.0220	0.0220	0.0225	0.0222	0.0223	0.0222	0.0222
9	0.0223	0.0222	0.0221	0.0221	0.0223	0.0223	0.0222	0.0222	0.0221	0.0223
10	0.0225	0.0219	0.0222	0.0221	0.0223	0.0225	0.0221	0.0218	0.0222	0.0216
After 50 Cycles										
Measurements in inches										
Sample#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.0248	0.0243	0.0232	0.0245	0.0248	0.0240	0.0243	0.0233	0.0239	0.0240
2	0.0241	0.0240	0.0236	0.0240	0.0234	0.0238	0.0238	0.0236	0.0239	0.0235
3	0.0243	0.0246	0.0236	0.0238	0.0238	0.0243	0.0241	0.0234	0.0239	0.0235
4	0.0240	0.0232	0.0235	0.0235	0.0244	0.0242	0.0236	0.0240	0.0238	0.0236
5	0.0238	0.0239	0.0235	0.0237	0.0239	0.0235	0.0239	0.0242	0.0236	0.0234
6	0.0236	0.0232	0.0238	0.0238	0.0244	0.0234	0.0236	0.0238	0.0239	0.0238
7	0.0238	0.0235	0.0233	0.0233	0.0237	0.0240	0.0235	0.0239	0.0236	0.0240
8	0.0245	0.0237	0.0232	0.0230	0.0238	0.0242	0.0235	0.0237	0.0239	0.0241
9	0.0240	0.0237	0.0238	0.0232	0.0242	0.0243	0.0238	0.0235	0.0239	0.0240
10	0.0249	0.0237	0.0240	0.0237	0.0246	0.0244	0.0238	0.0235	0.0244	0.0233
After Thermals										
Measurements in inches										
Sample#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.0293	0.0291	0.0287	0.0294	0.0293	0.0286	0.0287	0.0282	0.0288	0.0288
2	0.0288	0.0290	0.0283	0.0293	0.0290	0.0288	0.0290	0.0283	0.0283	0.0283
3	0.0284	0.0285	0.0290	0.0285	0.0281	0.0284	0.0287	0.0284	0.0285	0.0285
4	0.0285	0.0285	0.0287	0.0287	0.0284	0.0284	0.0282	0.0285	0.0292	0.0282
5	0.0286	0.0285	0.0285	0.0289	0.0288	0.0287	0.0287	0.0285	0.0283	0.0283
6	0.0282	0.0291	0.0286	0.0283	0.0281	0.0283	0.0284	0.0283	0.0293	0.0284
7	0.0284	0.0280	0.0287	0.0282	0.0281	0.0286	0.0283	0.0283	0.0282	0.0284
8	0.0289	0.0289	0.0287	0.0280	0.0283	0.0288	0.0284	0.0285	0.0283	0.0294
9	0.0286	0.0291	0.0288	0.0287	0.0281	0.0285	0.0284	0.0284	0.0284	0.0286
10	0.0298	0.0284	0.0292	0.0293	0.0290	0.0290	0.0288	0.0286	0.0285	0.0279
After Humidity										
Measurements in inches										
Sample#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.0297	0.0286	0.0298	0.0300	0.0302	0.0300	0.0301	0.0292	0.0288	0.0292
2	0.0293	0.0287	0.0296	0.0303	0.0294	0.0296	0.0288	0.0295	0.0290	0.0286
3	0.0287	0.0292	0.0298	0.0294	0.0297	0.0301	0.0293	0.0292	0.0293	0.0285
4	0.0288	0.0280	0.0299	0.0292	0.0294	0.0294	0.0293	0.0295	0.0294	0.0286
5	0.0290	0.0275	0.0288	0.0303	0.0287	0.0292	0.0291	0.0292	0.0290	0.0287
6	0.0288	0.0274	0.0297	0.0292	0.0292	0.0296	0.0291	0.0290	0.0289	0.0285
7	0.0290	0.0272	0.0295	0.0292	0.0294	0.0292	0.0299	0.0290	0.0302	0.0289
8	0.0294	0.0284	0.0292	0.0296	0.0304	0.0292	0.0290	0.0295	0.0293	0.0285
9	0.0290	0.0278	0.0293	0.0298	0.0302	0.0293	0.0291	0.0297	0.0299	0.0284
10	0.0292	0.0285	0.0302	0.0300	0.0298	0.0302	0.0291	0.0288	0.0293	0.0288

Tracking Code: TC067--0940	Part #: PMSS-110-16-SP-10.00-D-LUS
Part description: Power Mate Cable Assembly	

DATA Continued

MATING/UNMATING:

	Initial				After 50 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
Sample#	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
1	232.2	14.51	215.8	13.49	152.0	9.50	134.8	8.42
2	195.0	12.19	213.0	13.31	147.2	9.20	147.9	9.24
3	209.8	13.11	205.6	12.85	153.7	9.61	140.3	8.77
4	205.7	12.86	206.8	12.93	157.8	9.87	131.8	8.24
5	167.9	10.49	197.7	12.36	146.7	9.17	136.8	8.55
6	254.2	15.89	221.3	13.83	174.2	10.89	142.5	8.90
7	215.6	13.47	210.4	13.15	151.9	9.50	136.1	8.50
8	234.6	14.66	214.5	13.41	183.1	11.45	146.0	9.13
9	213.9	13.37	193.1	12.07	152.2	9.51	129.3	8.08
10	207.9	12.99	193.9	12.12	156.8	9.80	134.2	8.39

	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	110.4	6.90	105.1	6.57	104.2	6.52	94.6	5.92
2	108.6	6.79	89.0	5.56	93.3	5.83	90.4	5.65
3	112.2	7.01	93.8	5.86	94.4	5.90	81.8	5.11
4	96.6	6.04	87.0	5.44	91.3	5.71	86.9	5.43
5	136.8	8.55	109.8	6.86	90.7	5.67	87.2	5.45
6	109.9	6.87	97.3	6.08	91.4	5.72	90.2	5.64
7	98.7	6.17	84.0	5.25	87.9	5.49	81.6	5.10
8	134.4	8.40	104.3	6.52	130.9	8.18	93.7	5.86
9	106.6	6.66	98.7	6.17	83.1	5.20	73.3	4.58
10	119.5	7.47	97.3	6.08	75.7	4.73	64.6	4.04

Tracking Code: TC067--0940	Part #: PMSS-110-16-SP-10.00-D-LUS
Part description: Power Mate Cable Assembly	

DATA Continued

NORMAL FORCE (FOR CONTACTS TESTED OUTSIDE THE HOUSING):

Initial	Deflections in inches Forces in Grams					
Sample #	**0.0010**	**0.0040**	**0.0070**	**0.0100**	**0.0130**	***SET***
1	9.10	59.50	106.70	155.60	207.40	0.00070
2	9.10	54.10	100.60	145.70	200.60	0.00070
3	9.10	54.90	106.00	157.10	216.60	0.00050
4	9.90	54.90	100.60	145.70	199.80	0.00030
5	9.10	55.60	106.00	151.80	207.40	0.00080
6	10.60	56.40	101.40	145.70	195.20	0.00050
7	10.60	59.50	109.80	160.10	215.80	0.00070
8	10.60	61.00	113.60	163.20	224.20	0.00060
Thermals	**Deflections in inches Forces in Grams**					
Sample #	**0.0010**	**0.0040**	**0.0070**	**0.0100**	**0.0130**	***SET***
1	9.10	53.40	94.50	140.30	189.10	0.00040
2	9.10	52.60	96.10	139.60	190.70	0.00040
3	9.90	52.60	97.60	139.60	189.90	0.00040
4	9.10	56.40	99.10	146.40	198.30	0.00040
5	9.90	57.20	103.70	151.00	202.10	0.00040
6	9.10	53.40	95.30	141.10	190.70	0.00050
7	9.90	56.40	102.20	149.50	202.90	0.00050
8	9.10	52.60	95.30	141.10	191.40	0.00050

INSULATION RESISTANCE (IR):

	Initial, Meg Ohms		Thermal, Meg Ohms		Humidity, Meg Ohms	
	Mated	Unmated	Mated	Unmated	Mated	Unmated
Sample #	**Insulation Resistance**	**Insulation Resistance**	**Insulation Resistance**	**Insulation Resistance**	**Insulation Resistance**	**Insulation Resistance**
1	100000	100000	100000	100000	50000	100000
2	100000	100000	100000	100000	100000	100000
3	100000	100000	100000	50000	100000	25000

DATA Continued

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

	Humidity, VAC Mated			Humidity, VAC Unmated		
Sample #	Breakdown Voltage	DWV	Working Voltage	Breakdown Voltage	DWV	Working Voltage
1	3000	2250	750			
2	2700	2025	675	2900	2175	725

	Thermal, VAC Mated			Thermal, VAC Unmated		
Sample #	Breakdown Voltage	DWV	Working Voltage	Breakdown Voltage	DWV	Working Voltage
1	2900	2175	725			
2	3100	2325	775	3200	2400	800

	Humidity, VAC Mated			Humidity, VAC Unmated		
Sample #	Breakdown Voltage	DWV	Working Voltage	Breakdown Voltage	DWV	Working Voltage
1	3000	2250	750			
2	2700	2025	675	2900	2175	725

Tracking Code: TC067--0940	Part #: PMSS-110-16-SP-10.00-D-LUS
Part description: Power Mate Cable Assembly	

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: MO-02
Description: Multimeter /Data Acquisition System
Manufacturer: Keithley
Model: 2700
Serial #: 0780546
Accuracy: See Manual
… Last Cal: 05/12/06, Next Cal: 05/12/07

Equipment #: MO-04
Description: Multimeter /Data Acquisition System
Manufacturer: Keithley
Model: 2700
Serial #: 0798688
Accuracy: See Manual
… Last Cal: 01/31/06, Next Cal: 01/31/07

Equipment #: PS-01
Description: System Power Supply
Manufacturer: Hewlett Packard
Model: HP 6033A
Serial #: (HP) 3329A-07330
Accuracy: See Manual
… Last Cal: 05/12/06, Next Cal: 05/12/07

Equipment #: TC090601-103/105
Description: IC Thermocouple-103/105
Manufacturer: Samtec
Model:
Serial #: TC090601-103/105
Accuracy: +/- 1 degree C
… Last Cal: , Next Cal:

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: 04/12/06, Next Cal: 04/12/07

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: 5/12/06, Next Cal: 5/12/07

Tracking Code: TC067--0940	Part #: PMSS-110-16-SP-10.00-D-LUS
Part description: Power Mate Cable Assembly	

Equipment #: LC-250N (icell)
Description: 250 Newton load cell for Dillon Quantrol test stand
Manufacturer: Dillon Quantrol
Model: icell
Serial #: 04-0020-08
Accuracy: .10 % of Capacity .10 % of Capacity
… Last Cal: 5/10/2006, Next Cal: 5/10/2007

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: 05/12/06, Next Cal: 05/12/07

Equipment #: THC-01
Description: Temperature/Humidity Chamber
Manufacturer: Thermotron
Model: SM-8-7800
Serial #: 30676
Accuracy: See Manual
… Last Cal: 7/15/2005, Next Cal: 8/15/2006

Equipment #: TCT-04
Description: Dillon Quantrol TC21 25-1000 mm/min series test stand
Manufacturer: Dillon Quantrol
Model: TC2 I series test stand
Serial #: 04-1041-04
Accuracy: Speed Accuracy: +/- 5% of indicated speed; Speed Accuracy: +/- 5% of indicated speed;
… Last Cal: 05/16/2006, Next Cal: 05/16/2007

Equipment #: LC-5N (icell)-2
Description: 5 Newton load cell for Dillon Quantrol test stand
Manufacturer: Dillon Quantrol
Model: icell
Serial #: 0780546
Accuracy: .10 % of capacity
… Last Cal: 5/10/2006, Next Cal: 5/10/2007

Equipment #: HPM-01
Description: Hipot Megommeter
Manufacturer: Hipotronics
Model: H306B-A
Serial #: M9905004
Accuracy: 2 % Full Scale Accuracy
… Last Cal: 5/12/06, Next Cal: 05/12/07