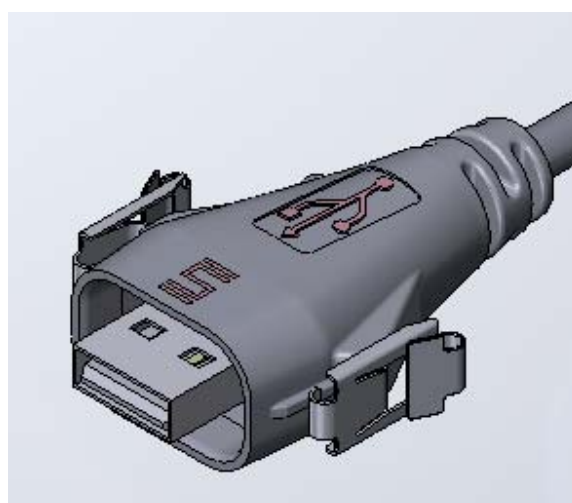
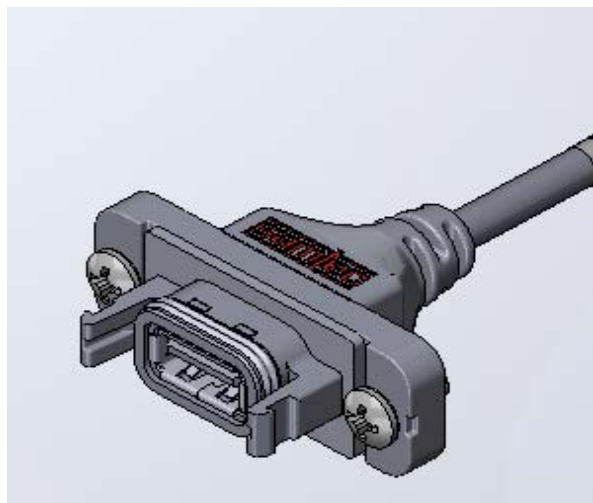
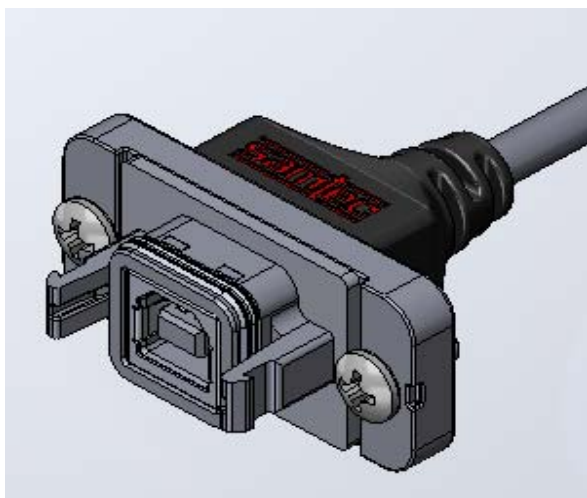




Project Number: Design Qualification Test Report		Tracking Code:135428_Report_Rev_1	
Requested by: Kevin Meredith		Date: 4/18/2011	Product Rev: 0
Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-B		Lot #: NA	Tech: Nick Greco Eng: Eric Mings Mark Shireman
Part description: RPCU/ RCU			Qty to test: 15
Test Start: 03/31/2011		Test Completed: 03/25/2011	



Design Qualification Test Report RPCU/RCU

RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC
RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A
RCU-G-02.00-BMS-BC /RPCU-G-00.25-BMS-BC/ DCA-RPBU-01-01-B

Tracking Code: 135428_Report_Rev_1	Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA- RPBU-01-01-A RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA- RPBU-01-01-B
Part description: RPCU/RCU	

CERTIFICATION

All instruments and measuring equipment were calibrated to National Institute for Standards and Technology (NIST) traceable standards according to ISO 10012-1 and ANSI/NCSL 2540-1, as applicable.

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SCOPE

To perform the following tests: Design verification test. See test plan.

APPLICABLE DOCUMENTS

Standards: EIA Publication 364

TEST SAMPLES AND PREPARATION

- 1) All materials were manufactured in accordance with the applicable product specification.
- 2) All test samples were identified and encoded to maintain traceability throughout the test sequences.
- 3) Either an automated cleaning procedure or an ultrasonic cleaning procedure may be used.
- 4) The automated procedure is used with aqueous compatible soldering materials.
- 5) Any additional preparation will be noted in the individual test sequences.

Tracking Code: 093038_Report_Rev_1

Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC /
 DCA-RPBU-01-01-A
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-
 RPBU-01-01-B

Part description: HLE/TSM

FLOWCHARTS

#135428

RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC and dust cap**Mating/Unmating**

TEST STEP	GROUP A1 10 Parts RCU cable (largest position submitted)	GROUP A2 10 Parts RCU dust cap (largest position submitted)
01	Forces - Mating / Unmating	Forces - Mating / Unmating
02	25 Cycles	25 Cycles
03	Forces - Mating / Unmating	Forces - Mating / Unmating
04	25 Cycles (50 Total)	25 Cycles (50 Total)
05	Forces - Mating / Unmating	Forces - Mating / Unmating
06	25 Cycles (75 Total)	25 Cycles (75 Total)
07	Forces - Mating / Unmating	Forces - Mating / Unmating
08	25 Cycles (100 Total)	25 Cycles (100 Total)
09	Forces - Mating / Unmating	Forces - Mating / Unmating

#132072

RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A**Mating/Unmating**

TEST STEP	GROUP A1 10 Parts (largest position submitted)
01	Forces - Mating / Unmating
02	25 Cycles
03	Forces - Mating / Unmating
04	25 Cycles (50 Total)
05	Forces - Mating / Unmating
06	25 Cycles (75 Total)
07	Forces - Mating / Unmating
08	25 Cycles (100 Total)
09	Forces - Mating / Unmating

Tracking Code: 093038_Report_Rev_1

Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC /
 DCA-RPBU-01-01-A
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-
 RPBU-01-01-B

Part description: HLE/TSM

FLOWCHARTS Continued

#132027

RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A**IP67 Dust & Water**

TEST STEP	GROUP A1 6 Mated Connectors	GROUP A2 6 Mated Connectors	GROUP B1 6 Connectors	GROUP B2 6 Connectors
			(Cable dust cover)	(Cable dust cover)
01	Dust Test	Submersion Water Test	Dust Test	Submersion Water Test
02	Check for Dust	Check for Water	Check for Dust	Check for Water
TEST STEP	GROUP C1 6 Connectors	GROUP D1 6 Mated Connectors	GROUP D2 6 Mated Connectors	
	(Un-mated RPCU)	(After 100 Cycles)	(After 100 Cycles)	
01	Dust Test	Dust Test	Submersion Water Test	
02	Check for Dust	Check for Dust	Check for Water	

Dust/Water Testing = Per CEI/IEC 60529 Code IP67

#126562

RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-B**IP67 Dust & Water**

TEST STEP	GROUP A1 6 Mated Connectors	GROUP A2 6 Mated Connectors	GROUP B1 6 Connectors	GROUP B2 6 Connectors
			(Cable dust cover)	(Cable dust cover)
01	Dust Test	Submersion Water Test	Dust Test	Submersion Water Test
02	Check for Dust	Check for Water	Check for Dust	Check for Water
TEST STEP	GROUP C1 6 Connectors	GROUP D1 6 Mated Connectors	GROUP D2 6 Mated Connectors	
	(Un-mated RPCU)	(After 100 Cycles)	(After 100 Cycles)	
01	Dust Test	Dust Test	Submersion Water Test	
02	Check for Dust	Check for Dust	Check for Water	

Dust/Water Testing = Per CEI/IEC 60529 Code IP67

Tracking Code: 093038_Report_Rev_1	Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA- RPBU-01-01-B
Part description: HLE/TSM	

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

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.

WATER TESTING:

- 1) Reference document: CEI/IEC 60529 Code IP67
- 2) SCRES torque specification for SPN-17-01 is 12 IN-LB
- 3) SCPE torque specification for SCN-17-01 is 12 IN-LB

DUST TESTING:

- 1) Reference document: CEI/IEC 60529 Code IP67
- 2) SCRES torque specification for SPN-17-01 is 12 IN-LB
- 3) SCPE torque specification for SCN-17-01 is 12 IN-LB

Tracking Code: 093038_Report_Rev_1	Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA- RPBU-01-01-B
Part description: HLE/TSM	

RESULTS

#135428

RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC and dust cap

Mating – Unmating Forces

RCU Cable

- **Initial**
 - **Mating**
 - **Min** ----- 4.71 Lbs
 - **Max** ----- 8.76 Lbs
 - **Unmating**
 - **Min** ----- 1.53 Lbs
 - **Max** ----- 3.45 Lbs
- **After 25 Cycles**
 - **Mating**
 - **Min** ----- 4.25 Lbs
 - **Max** ----- 8.59 Lbs
 - **Unmating**
 - **Min** ----- 2.06 Lbs
 - **Max** ----- 3.84 Lbs
- **After 50 Cycles**
 - **Mating**
 - **Min** ----- 4.39 Lbs
 - **Max** ----- 8.84 Lbs
 - **Unmating**
 - **Min** ----- 2.14 Lbs
 - **Max** ----- 3.70 Lbs
- **After 75 Cycles**
 - **Mating**
 - **Min** ----- 4.41 Lbs
 - **Max** ----- 8.97 Lbs
 - **Unmating**
 - **Min** ----- 2.13 Lbs
 - **Max** ----- 3.92 Lbs
- **After 100 Cycles**
 - **Mating**
 - **Min** ----- 4.52Lbs
 - **Max** ----- 9.49 Lbs
 - **Unmating**
 - **Min** ----- 2.24 Lbs
 - **Max** ----- 4.00 Lbs

RCU dust cap

- **Initial**
 - **Mating**
 - **Min** ----- 8.51 Lbs
 - **Max** ----- 12.24 Lbs
 - **Unmating**
 - **Min** ----- 1.60 Lbs
 - **Max** ----- 3.39 Lbs
- **After 25 Cycles**
 - **Mating**
 - **Min** ----- 8.67 Lbs
 - **Max** ----- 12.84 Lbs

Tracking Code: 093038_Report_Rev_1	Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA- RPBU-01-01-B
Part description: HLE/TSM	

RESULTS Continued

- o Unmating
 - Min ----- 1.89 Lbs
 - Max----- 3.76 Lbs
- After 50 Cycles
 - o Mating
 - Min ----- 8.98 Lbs
 - Max----- 13.00 Lbs
 - o Unmating
 - Min ----- 2.04 Lbs
 - Max----- 3.83 Lbs
- After 75 Cycles
 - o Mating
 - Min ----- 9.30 Lbs
 - Max----- 13.34 Lbs
 - o Unmating
 - Min ----- 2.08 Lbs
 - Max----- 4.15 Lbs
- After 100 Cycles
 - o Mating
 - Min ----- 9.56 Lbs
 - Max----- 13.60 Lbs
 - o Unmating
 - Min ----- 2.08 Lbs
 - Max----- 4.22 Lb

#132027
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A
 Mating-Unmating force

- Initial
 - o Mating
 - Min ----- 5.37 Lbs
 - Max----- 9.88 Lbs
 - o Unmating
 - Min ----- 3.09 Lbs
 - Max----- 5.64 Lbs
- After 25 Cycles
 - o Mating
 - Min ----- 4.82 Lbs
 - Max----- 8.38 Lbs
 - o Unmating
 - Min ----- 2.41 Lbs
 - Max----- 4.89 Lbs
- After 50 Cycles
 - o Mating
 - Min ----- 5.03 Lbs
 - Max----- 8.54 Lbs
 - o Unmating
 - Min ----- 2.38 Lbs
 - Max----- 5.41 Lbs

Tracking Code: 093038_Report_Rev_1	Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA- RPBU-01-01-B
Part description: HLE/TSM	

RESULTS Continued

- After 75 Cycles
 - Mating
 - Min ----- 5.16 Lbs
 - Max ----- 9.04 Lbs
 - Unmating
 - Min ----- 2.49 Lbs
 - Max ----- 5.76 Lbs
 -
- After 100 Cycles
 - Mating
 - Min ----- 5.43 Lbs
 - Max ----- 9.52 Lbs
 - Unmating
 - Min ----- 2.46 Lbs
 - Max ----- 5.94 Lb

#132027

RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A

Group A1

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Dust	No Dust Present	No Dust Present

Group A2

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Water	No Water Present	No Water Present

Group B1

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Dust	No Dust Present	No Dust Present

Group B2

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Water	No Water Present	No Water Present

Group C1

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Dust	No Dust Present	No Dust Present

Group D1

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Dust	No Dust Present	No Dust Present

Group D2

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Water	No Water Present	No Water Present

Tracking Code: 093038_Report_Rev_1	Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA- RPBU-01-01-B
Part description: HLE/TSM	

RESULTS Continued

#126562

RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-B

Group A1

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Dust	No Dust Present	No Dust Present

Group A2

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Water	No Water Present	No Water Present

Group B1

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Dust	No Dust Present	No Dust Present

Group B2

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Water	No Water Present	No Water Present

Group C1

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Dust	No Dust Present	No Dust Present

Group D1

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Dust	No Dust Present	No Dust Present

Group D2

	<u>Initial (Before Exposure)</u>	<u>After Exposure</u>
Water	No Water Present	No Water Present

Tracking Code: 093038_Report_Rev_1

Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC /
 DCA-RPBU-01-01-A
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-
 RPBU-01-01-B

Part description: HLE/TSM

DATA SUMMARIES

#135428

RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC and dust cap**Mating&Unmating force****RCU cable**

	Initial				25 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)
Minimum	20.95	4.71	6.81	1.53	18.90	4.25	9.16	2.06
Maximum	38.96	8.76	15.35	3.45	38.21	8.59	15.48	3.48
Average	30.89	6.94	11.25	2.53	27.78	6.25	12.58	2.83
St Dev	6.30	1.42	2.41	0.54	6.46	1.45	2.30	0.52
Count	8	8	8	8	8	8	8	8
	50 Cycles				75 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)
Minimum	19.53	4.39	9.52	2.14	19.62	4.41	9.47	2.13
Maximum	39.32	8.84	16.46	3.70	39.90	8.97	17.44	3.92
Average	28.56	6.42	12.99	2.92	29.70	6.68	13.46	3.03
St Dev	6.82	1.53	2.65	0.60	7.18	1.61	2.83	0.64
Count	8	8	8	8	8	8	8	8
	100 Cycles							
	Mating		Unmating					
	Newton	Force (Lbs)	Newton	Force (Lbs)				
Minimum	20.10	4.52	9.96	2.24				
Maximum	42.21	9.49	17.79	4.00				
Average	30.89	6.95	13.96	3.14				
St Dev	7.55	1.70	2.81	0.63				
Count	8	8	8	8				

Tracking Code: 093038_Report_Rev_1

Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC /
 DCA-RPBU-01-01-A
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-
 RPBU-01-01-B

Part description: HLE/TSM

DATA SUMMARIES Continued**RCU dust cap**

	Initial				25 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	36.52	8.21	7.12	1.60	38.56	8.67	8.41	1.89
Maximum	54.44	12.24	15.08	3.39	57.11	12.84	16.68	3.75
Average	43.76	9.84	11.15	2.51	44.80	10.07	12.69	2.85
St Dev	6.57	1.48	2.46	0.55	6.51	1.46	2.76	0.62
Count	10	10	10	10	10	10	10	10
	50 Cycles				75 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	39.94	8.98	9.07	2.04	41.37	9.30	9.25	2.08
Maximum	57.82	13.00	17.04	3.83	59.34	13.34	18.46	4.15
Average	46.22	10.39	13.45	3.02	47.45	10.67	13.86	3.12
St Dev	6.45	1.45	2.77	0.62	6.38	1.43	2.88	0.65
Count	10	10	10	10	10	10	10	10
	100 Cycles							
	Mating		Unmating					
	Newtons	Force (Lbs)	Newtons	Force (Lbs)				
Minimum	42.52	9.56	9.25	2.08				
Maximum	60.49	13.60	18.77	4.22				
Average	48.49	10.90	14.34	3.23				
St Dev	6.08	1.37	2.95	0.66				
Count	10	10	10	10				

Tracking Code: 093038_Report_Rev_1

Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC /
 DCA-RPBU-01-01-A
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-
 RPBU-01-01-B

Part description: HLE/TSM

DATA SUMMARIES Continued

#132027

RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A**Mating&Unmating force**

	Initial				After 25 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)
Minimum	23.89	5.37	13.74	3.09	21.44	4.82	10.72	2.41
Maximum	43.95	9.88	25.09	5.64	37.27	8.38	21.75	4.89
Average	37.24	8.37	20.23	4.55	31.69	7.12	17.18	3.86
St Dev	6.44	1.45	3.81	0.86	5.12	1.15	3.82	0.86
Count	10	10	10	10	10	10	10	10
	After 50 Cycles				After 75 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)
Minimum	22.37	5.03	10.59	2.38	22.95	5.16	11.08	2.49
Maximum	37.99	8.54	24.06	5.41	40.21	9.04	25.62	5.76
Average	33.05	7.43	17.46	3.93	34.76	7.82	18.22	4.10
St Dev	5.33	1.20	4.23	0.95	5.87	1.32	4.49	1.01
Count	10	10	10	10	10	10	10	10
	After 100 Cycles							
	Mating		Unmating					
	Newton	Force (Lbs)	Newton	Force (Lbs)				
Minimum	24.15	5.43	10.94	2.46				
Maximum	42.34	9.52	26.42	5.94				
Average	36.39	8.18	19.09	4.29				
St Dev	6.26	1.41	5.00	1.12				
Count	10	10	10	10				

Tracking Code: 093038_Report_Rev_1

Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC /
 DCA-RPBU-01-01-A
 RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-
 RPBU-01-01-B

Part description: HLE/TSM

DATA

#135428

RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC and dust cap**Mating&Unmating force****RCU cable**

<u>Sample#</u>	Initial		25 Cycles		50 Cycles		75 Cycles		100 Cycles	
	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>
2	5.80	2.63	5.27	3.45	5.51	3.66	5.87	3.92	6.17	4.00
3	8.76	2.59	7.92	3.03	8.30	3.18	8.89	3.29	9.49	3.43
4	4.71	2.55	4.25	2.81	4.39	2.69	4.41	2.80	4.52	2.84
5	8.59	3.45	8.59	3.48	8.84	3.70	8.97	3.70	9.18	3.77
6	7.63	2.69	6.86	2.81	7.12	2.90	7.37	3.02	7.46	3.06
7	6.92	2.14	6.07	2.17	6.06	2.14	6.27	2.22	6.63	2.37
8	7.27	1.53	5.42	2.06	5.36	2.15	5.55	2.13	5.69	2.24
10	5.87	2.66	5.59	2.81	5.79	2.95	6.08	3.13	6.42	3.40

RCU dust cap

<u>Sample#</u>	Initial		25 Cycles		50 Cycles		75 Cycles		100 Cycles	
	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>
1	9.20	2.01	9.38	2.11	9.86	2.19	10.34	2.33	10.61	2.41
2	11.82	2.89	12.41	3.56	12.94	3.83	13.34	4.15	13.60	4.22
3	10.55	3.11	10.12	3.42	10.38	3.47	10.71	3.60	11.09	3.75
4	10.98	2.19	10.57	2.64	10.66	2.94	10.69	2.95	10.86	3.19
5	8.85	2.42	8.67	2.89	8.98	3.09	9.30	3.21	9.56	3.31
6	8.30	1.60	8.93	1.89	9.28	2.04	9.57	2.08	9.78	2.08
7	8.21	2.56	8.91	2.91	9.29	3.22	9.58	3.32	10.03	3.48
8	8.52	2.07	9.33	2.33	9.88	2.49	10.16	2.58	10.57	2.70
9	9.71	2.82	9.57	3.02	9.65	3.15	9.85	3.18	9.90	3.28
10	12.24	3.39	12.84	3.75	13.00	3.81	13.13	3.76	13.02	3.83

#132027

RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A**Mating&Unmating force**

<u>Sample#</u>	Initial		After 25 Cycles		After 50 Cycles		After 75 Cycles		After 100 Cycles	
	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>
1	5.37	3.09	4.82	2.41	5.03	2.38	5.16	2.49	5.43	2.46
2	6.92	3.58	7.03	3.08	7.76	3.11	8.25	3.16	8.75	3.19
3	9.35	3.75	7.26	3.14	7.56	3.11	8.12	3.39	8.86	3.71
4	8.89	5.12	7.19	4.54	7.63	4.74	8.21	5.12	8.79	5.57
5	9.88	5.45	7.99	4.66	8.50	4.50	8.99	4.54	9.39	4.94
6	7.40	4.30	5.50	3.26	5.51	3.20	5.65	3.25	5.80	3.28
7	9.62	4.46	8.38	3.70	8.54	3.93	9.04	4.36	9.52	4.70
8	9.47	5.08	8.34	4.89	8.27	5.41	8.36	5.76	8.33	5.94
9	7.91	5.64	7.26	4.72	7.64	4.74	8.08	4.75	8.46	4.98
10	8.92	5.02	7.47	4.23	7.86	4.14	8.29	4.15	8.48	4.14

Tracking Code: 093038_Report_Rev_1	Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA- RPBU-01-01-B
Part description: HLE/TSM	

DATA Continued

#132027

RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A

IP67 Testing (Water & Dust)

Group A1

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Group A2

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Group B1

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Group B2

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Tracking Code: 093038_Report_Rev_1	Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA- RPBU-01-01-B
Part description: HLE/TSM	

DATA Continued

Group C1

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Group D1

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Group D2

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Tracking Code: 093038_Report_Rev_1	Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA- RPBU-01-01-B
Part description: HLE/TSM	

DATA Continued

#126562

RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-B

IP67 Testing (Water & Dust)

Group A1

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Group A2

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Group B1

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Group B2

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Tracking Code: 093038_Report_Rev_1	Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA- RPBU-01-01-B
Part description: HLE/TSM	

DATA Continued

Group C1

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Group D1

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Group D2

<u>Sample #</u>	<u>Visual Inspection</u>
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass
6	Pass

Tracking Code: 093038_Report_Rev_1	Part #: RPCU-G-00.25-BMS-BC/ RCU-G-02.00-BMS-BC RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA-RPBU-01-01-A RPCU-G-00.25-AMS-BC/ RCU-G-02.00-AMS-BC / DCA- RPBU-01-01-B
Part description: HLE/TSM	

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: WATER-01
Description: IP-67 1.0 Meter Water Column Chamber
Manufacturer: Samtec Machine
Model: N/A
Serial #: N/A
Accuracy: No Calibration Required

Equipment #: WATER-02
Description: IP-68 Water Depth Chamber
Manufacturer: Samtec Machine
Model: N/A
Serial #: N/A
Accuracy: No Calibration Required

Equipment #: DUST-01
Description: IP-X6 Dust Tester
Manufacturer: Samtec Machine
Model: N/A
Serial #: N/A
Accuracy: No Calibration Required

Equipment #: TCT-01
Description: Normal force analyzer
Manufacturer: Mecmesin Multitester
Model: Mecmesin Multitester 2.5-i
Serial #: 04-1041-04
Accuracy: Last Cal: 2010-5-21, Next Cal: 2011-5-20