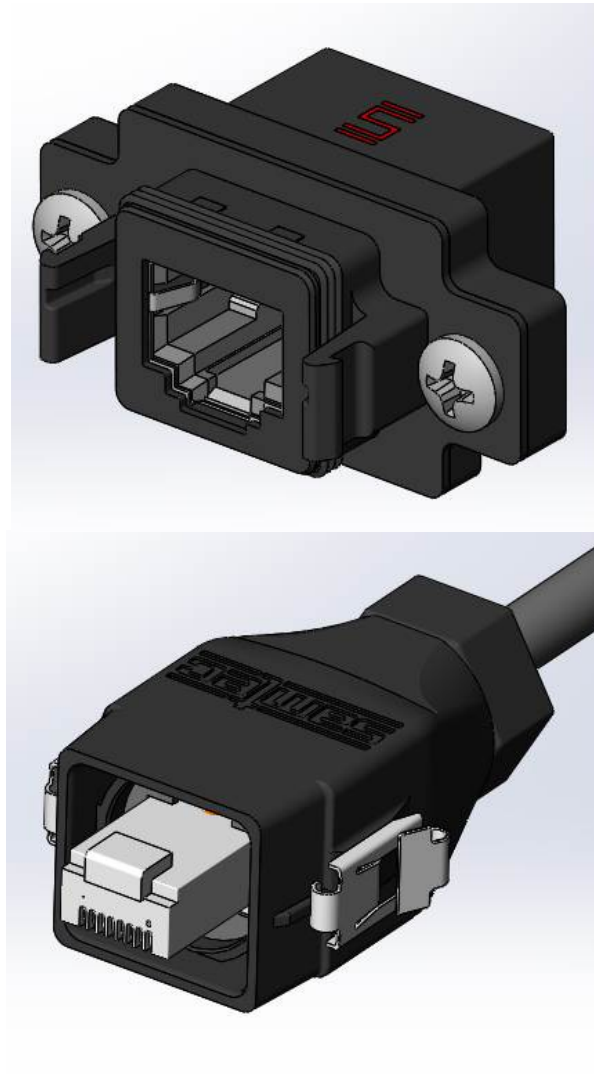




Project Number: Design Qualification Test Report	Tracking Code: 653052_Report_Rev_1
Requested by: Aaron Jones	Date: 8/28/2015
Part #: RCEF-G-01/RCEF-G-02/RPBE-01-01-E	
Part description: RCEF/RPBE	Tech: Kason He
Test Start: 8/19/2015	Test Completed: 8/21/2015



DESIGN QUALIFICATION TEST REPORT
RCEF/RPBE
RCEF-G-01/RCEF-G-02/RPBE-01-01-E

Tracking Code: 653052_ Report _Rev_1	Part #: RCEF-G-01/RCEF-G-02/RPBE-01-01-E
Part description: RCEF/RPBE	

REVISION HISTORY

DATA	REV.NUM.	DESCRIPTION	ENG
8/28/2015	1	Initial Issue	KH

Tracking Code: 653052_ Report _Rev_1	Part #: RCEF-G-01/RCEF-G-02/RPBE-01-01-E
Part description: RCEF/RPBE	

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 Qualification test. Please see test plan.

APPLICABLE DOCUMENTS

Standards: EIA Publication 364

TEST SAMPLES AND PREPARATION

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

FLOWCHARTS**Dust/Water****IPx7 Water Submersion**Group 1

RCEF-G-02

RPBE-01-01-E

6 Assemblies

Step	Description
1.	Water Submersion - IPX7 (2) Depth = 1 meters
2.	Visual Inspection

Group 12

RCEF-G-01

RPBE-01-01-E

6 Assemblies

Step	Description
1.	Water Submersion - IPX7 (2) Depth = 1 meters
2.	Visual Inspection

IPx8 Deep Water SubmersionGroup 2

RCEF-G-02

RPBE-01-01-E

3 Assemblies

Step	Description
1.	Water Submersion - IPX8 (3) Depth = 2 meters Duration = 30 min
2.	Visual Inspection

Group 3

RCEF-G-02

RPBE-01-01-E

3 Assemblies

Step	Description
1.	Water Submersion - IPX8 (3) Depth = 3 meters Duration = 30 min
2.	Visual Inspection

Group 4

RCEF-G-02

RPBE-01-01-E

3 Assemblies

Step	Description
1.	Water Submersion - IPX8 (3) Depth = 4 meters Duration = 30 min
2.	Visual Inspection

Group 5

RCEF-G-02

RPBE-01-01-E

3 Assemblies

Step	Description
1.	Water Submersion - IPX8 (3) Depth = 5 meters Duration = 30 min
2.	Visual Inspection

Group 6

RCEF-G-02

RPBE-01-01-E

3 Assemblies

Step	Description
1.	Water Submersion - IPX8 (3) Depth = 6 meters Duration = 30 min
2.	Visual Inspection

Group 7

RCEF-G-02

RPBE-01-01-E

3 Assemblies

Step	Description
1.	Water Submersion - IPX8 (3) Depth = 7 meters Duration = 30 min
2.	Visual Inspection

Group 8

RCEF-G-02

RPBE-01-01-E

3 Assemblies

Step	Description
1.	Water Submersion - IPX8 (3) Depth = 8 meters Duration = 30 min
2.	Visual Inspection

Group 9

RCEF-G-02

RPBE-01-01-E

3 Assemblies

Step	Description
1.	Water Submersion - IPX8 (3) Depth = 9 meters Duration = 30 min
2.	Visual Inspection

FLOWCHARTS Continued

Group 10
RCEF-G-02
RPBE-01-01-E
3 Assemblies

- | Step | Description |
|------|--|
| 1. | Water Submersion - IPX8 ⁽³⁾
Depth = 10 meters
Duration = 30 min |
| 2. | Visual Inspection |

Group 13
RCEF-G-01
RPBE-01-01-E
3 Assemblies

- | Step | Description |
|------|---|
| 1. | Water Submersion - IPX8 ⁽³⁾
Depth = 2 meters
Duration = 30 min |
| 2. | Visual Inspection |

Group 14
RCEF-G-01
RPBE-01-01-E
3 Assemblies

- | Step | Description |
|------|---|
| 1. | Water Submersion - IPX8 ⁽³⁾
Depth = 3 meters
Duration = 30 min |
| 2. | Visual Inspection |

Group 15
RCEF-G-01
RPBE-01-01-E
3 Assemblies

- | Step | Description |
|------|---|
| 1. | Water Submersion - IPX8 ⁽³⁾
Depth = 4 meters
Duration = 30 min |
| 2. | Visual Inspection |

Group 16
RCEF-G-01
RPBE-01-01-E
3 Assemblies

- | Step | Description |
|------|---|
| 1. | Water Submersion - IPX8 ⁽³⁾
Depth = 5 meters
Duration = 30 min |
| 2. | Visual Inspection |

Group 17
RCEF-G-01
RPBE-01-01-E
3 Assemblies

- | Step | Description |
|------|---|
| 1. | Water Submersion - IPX8 ⁽³⁾
Depth = 6 meters
Duration = 30 min |
| 2. | Visual Inspection |

Group 18
RCEF-G-01
RPBE-01-01-E
3 Assemblies

- | Step | Description |
|------|---|
| 1. | Water Submersion - IPX8 ⁽³⁾
Depth = 7 meters
Duration = 30 min |
| 2. | Visual Inspection |

Group 19
RCEF-G-01
RPBE-01-01-E
3 Assemblies

- | Step | Description |
|------|---|
| 1. | Water Submersion - IPX8 ⁽³⁾
Depth = 8 meters
Duration = 30 min |
| 2. | Visual Inspection |

Group 20
RCEF-G-01
RPBE-01-01-E
3 Assemblies

- | Step | Description |
|------|---|
| 1. | Water Submersion - IPX8 ⁽³⁾
Depth = 9 meters
Duration = 30 min |
| 2. | Visual Inspection |

Group 21
RCEF-G-01
RPBE-01-01-E
3 Assemblies

- | Step | Description |
|------|--|
| 1. | Water Submersion - IPX8 ⁽³⁾
Depth = 10 meters
Duration = 30 min |
| 2. | Visual Inspection |

IP6X Dust

Group 11
RCEF-G-02
RPBE-01-01-E
6 Assemblies

- | Step | Description |
|------|----------------------------|
| 1. | Dust - IP6X ⁽¹⁾ |
| 2. | Visual Inspection |

Group 22
RCEF-G-01
RPBE-01-01-E
6 Assemblies

- | Step | Description |
|------|----------------------------|
| 1. | Dust - IP6X ⁽¹⁾ |
| 2. | Visual Inspection |

(1) Dust - IP6X = CEI/IEC 60529

(2) Water Submersion - IPX7 = CEI/IEC 60529

(3) Water Submersion - IPX8 = CEI/IEC 60529

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Part description: RCEF/RPBE	

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

WATER TESTING:

- 1) Reference document: CEI/IEC 60529 Code IPX7 and IPX8
- 2) Required torque on MS-632-375-P-P-S for RPBE-01-01-E is 45IN-OZ \pm 10

DUST TESTING:

- 1) Reference document: CEI/IEC 60529 Code IP6X
- 2) Required torque on MS-632-375-P-P-S for RPBE-01-01-E is 45IN-OZ \pm 10

RESULTS**IPX7 Testing (Water)****RCEF-G-01/RPBE-01-01-E****Water****Initial (Before Exposure)**
No Water Present**After Exposure**
No Water Present**RCEF-G-02/RPBE-01-01-E****Water****Initial (Before Exposure)**
No Water Present**After Exposure**
No Water Present**IPX8 Testing (Water)****RCEF-G-01/RPBE-01-01-E (10 m)****Water****Initial (Before Exposure)**
No Water Present**After Exposure**
No Water Present**RCEF-G-02/RPBE-01-01-E (10 m)****Water****Initial (Before Exposure)**
No Water Present**After Exposure**
No Water Present**IP6X Testing (Dust)****RCEF-G-01/RPBE-01-01-E****Dust****Initial (Before Exposure)**
No Dust Present**After Exposure**
No Dust Present**RCEF-G-02/RPBE-01-01-E****Dust****Initial (Before Exposure)**
No Dust Present**After Exposure**
No Dust Present

DATA SUMMARIES**IPX7 Testing (Water)****RCEF-G-01/RPBE-01-01-E**

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

RCEF-G-02/RPBE-01-01-E

<u>Sample #</u>	Visual Inspection
7	Pass
8	Pass
9	Pass
10	Pass
11	Pass
12	Pass

IPX8 Testing (Water)**RCEF-G-01/RPBE-01-01-E (10 m)**

<u>Sample #</u>	Visual Inspection at 10 meters
13	Pass
14	Pass
15	Pass

RCEF-G-02/RPBE-01-01-E (10 m)

<u>Sample #</u>	Visual Inspection at 10 meters
16	Pass
17	Pass
18	Pass

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Part description: RCEF/RPBE	

DATA SUMMARIES

IP6X Testing (Dust)

RCEF-G-01/RPBE-01-01-E

<u>Sample #</u>	<u>Visual Inspection</u>
19	Pass
20	Pass
21	Pass
22	Pass
23	Pass
24	Pass

RCEF-G-02/RPBE-01-01-E

<u>Sample #</u>	<u>Visual Inspection</u>
25	Pass
26	Pass
27	Pass
28	Pass
29	Pass
30	Pass

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Part description: RCEF/RPBE	

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: HZ-IPX7-01
Description: IP-67 1.0 Meter Water Column Chamber
Manufacturer: Samtec Machine
Model: N/A
Serial #: N/A
Accuracy: No Calibration Required

Equipment #: HZ-IPX8-01
Description: IP-68 10 Meter Water Column Chamber
Manufacturer: Samtec Machine
Model: N/A
Serial #: N/A
Accuracy: No Calibration Required

Equipment #: HZ-IP6X-01
Description: IP-6X Dust Tester
Manufacturer: Samtec Machine
Model: N/A
Serial #: N/A
Accuracy: No Calibration Required