

文件名称 System Name:	产品品名 Description:	文件编号 Document No.:			
Product specification	BWIPX-1-001E	R-RD016 版本: A1			
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1. 概述 **Scope:**

This product described in this paper is a SMT Type Micro Coaxial RF Receptacle, whose part name in our comply is USS RF REC. It is special for micro strip-to -Coaxial adapter in RF circuit, such as Mobile Phone, Wireless Net, Mini PCI, Bluetooth, PDA, GPS, Electric Measurement Instruments and so on.

2. 参考文件 **Referenced Documents:**

2.1. **PRODUCT DIMENSION**

Product shall be intermateable with industry standard product of opposite gender. This connector shall have

the dimensions as shown in Drawing .

2.2. **PCB/PANEL LAYOUT**

The recommended PCB layout are shown in Drawing .

2.3. **BILL OF MATERIAL**

The bill of material and product number of Connectors are described in Drawing .

2.4. **MECHANICAL & ELECTRICAL CHARACTERISTIC**

The connector shall have the mechanical and electrical performance as described in **Table I**.

2.5. **PACKAGING**

Parts shall be packaged according to requirements specified in purchase order for safe delivery.

Connector container and the packing specification are shown in Drawing .

2.6. **HARMFUL MATERIAL CONTROL**

Harmful material controls please follow the **Doc. No. QW-QA-10**.

3. 规格要求 **FEATURE & DIMENSIONS**

3.1. **REQUIREMENT**

Product is designed to meet electrical, mechanical, and environmental performance requirements specified in **Table I**.

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3.2. TEST CONDITION

Unless otherwise specified, all tests shall be performed at ambient environmental conditions:

3.2.1 Temperature: **15°C~35°C**

3.2.2 Humidity: **50±2% R.**

3.2.3 Atmospheric Pressure: **650 mm to 800 mm.**

3.3. SAMPLE SELECTION

Test samples shall be selected at random from current production. No test samples shall be reused.

Each group shall be containing **10** test samples.

3.4 TEST SEQUENCE

Products qualification test sequence as shown in **Table II.**

4. 质量保证条款 **QUALITY ASSURANCE PROVISIONS**

CM is responsible for the quality of the part as it is delivered to customer. The failing lots will be return or other supplier action.

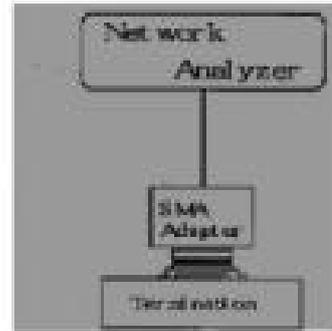
5. 产品图片 **PRODUCT PICTURE**



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6. 技术参数 Technical Parameters

6.	1	Rated Voltage	60VAC (R.M.S)
6.	2	Frequency Range	<u>0~6GHz</u>
6.	3	Character Impedance	50Ω
6.	4	Operate Temperature	<u>-40°C ~90°C</u>
6.	5	Operate Humidity	90% MAX

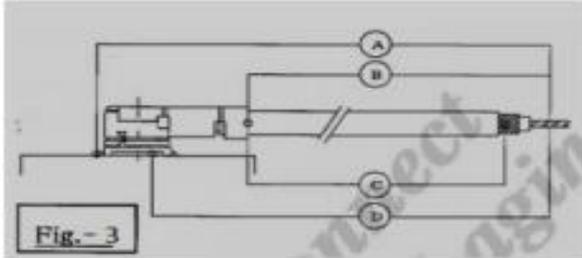
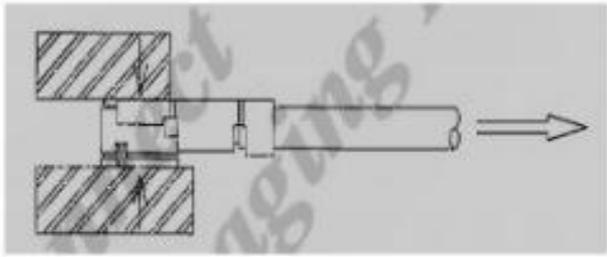


7. 电气性能 Electric Performance

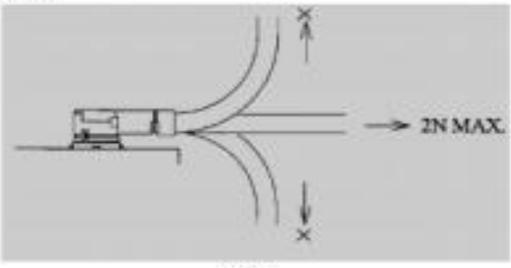
- 7
- .
- 1 Dielectric Resistance 500MΩ
- 7
- .
- 2 Dielectric Withstand Voltage 200VAC 1Min
- 7
- .
- 3 Contact Resistance

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Table I: Performance Requirements

Items	Test Conditions	Specifications
1. Contact Resistance	<p>Solder the receptacle connector to the test board and mate the plug connector together, then measure the contact resistance as shown in Fig3 by the four terminal methods. Apply the low level conditions in accordance with MIL-STD-202G, Method 307.</p> <p>Open circuit voltage : 20 mV MAX Circuit current : 10 mA MAX</p>  <p>Fig.- 3</p>	<p>[Signal contact] Initial : 20mΩ MAX After testing : ΔR20 mΩ max</p> <p>[Ground contact] Initial : 20mΩ MAX After testing : ΔR20 mΩ MAX</p> <p>Signal connector =A-B Ground contact =D-C</p>
2. Insulation Resistance	Mate the receptacle and plug connector together, and then apply DC 100V between the inner contact and the ground contact in accordance with MIL-STD-202G, Method 302.	Initial :500MΩ MIN After testing :100 MΩ MIN
3. Dielectric Withstanding Voltage	Mate the receptacle and plug connector together, and then apply AC 200V rms between the inner contact and the ground contact for a minute in accordance with MIL-STD-202G, Method 301.	No creeping discharge, flashover, no insulator breakdown shall occur.
4. VSWR	Measure the VSWR as shown in FIG2 by the network analyzer. Frequency: 100M-6GHz	1.3MAX. at 0.1~3GHz 1.4MAX. at 3~6GHz
5. Un-mating force	Solder the receptacle connector to the test board and mate the plug connector, then measure the un-mating force at speed 25 ± 3mm/minutes along by the push-pull machine.	[Total un-mating force] Initial :4N MIN After 30 :2N MIN
6. Crimp strength	Pull the cable as shown in Fig4 at speed 25 ± 3mm/minutes by tensile strength machine.	7N MIN
	 <p>Fig 4</p>	

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7. Durability	Mate and un-mate the receptacle connector(soldered to the test board) and plug connector 30 cycles at speed 25 ± 3 mm/minutes along the mating by the push-pull machine.	[Appearance] No abnormality [Contact Resistance] Shall meet Table I.1
8. Contact resistance with force on the cable	Apply force on the cable as shown in Fig5 During the testing, run 100mA DC to check electrical discontinuity.  Fig5	[Appearance] No abnormality [Electrical discontinuity] No electrical discontinuity grater than $1 \mu s$ shall occur. [Contact Resistance] Shall meet Table I.1
9. Vibration	Apply the following vibration to the mating connector. During the testing, run 100mA DC to check electrical discontinuity. Frequency: 10Hz → 100 Hz → 10Hz/approx 20 minutes. Half amplitude, Peak value of acceleration : 1.5mm or $59m/s^2$ (6G) Directions, cycle: 3 mutually perpendicular direction,3 cycles about each direction.	[Appearance] No abnormality [Contact Resistance] Shall meet Table I.1 [Electrical discontinuity] No electrical discontinuity grater than $1 \mu s$ shall occur.
10. Shock	Apply the following vibration to the mating connector. During the testing, run 100mA DC to check electrical discontinuity. Peak value of acceleration: $735 m/s^2$ (75G) Duration : 11msec Wave Form : half sinusoidal Direction, cycle : 6 mutually perpendicular direction, 3cycle about each direction.	[Appearance] No abnormality [Contact Resistance] Shall meet Table I.1 [Electrical discontinuity] No electrical discontinuity grater than $1 \mu s$ shall occur.
11. Humidity (Steady State)	Apply the following environment to the mating connector in accordance with MIL-STD-202G,Method 103, Condition B. Temperature : $313 \pm 2K$ ($40 \pm 2^\circ C$) Humidity : 90 ~ 95%RH Duration : 96 hours	[Appearance] No abnormality [Contact Resistance] Shall meet Table I.1 [Insulation Resistance] Shall meet Table I.2 [Dielectric Withstanding Voltage] Shall meet Table I.3.
12. Thermal Shock	Apply the following environment to the mating connector in accordance with MIL-STD-202G,Method 107G, Condition A. Temperature : $218K$ ($-55^\circ C$) → $358K$ ($85^\circ C$): 30min Transition time : 5min. MAX No. of cycles : 5 cycles	[Appearance] No abnormality [Contact Resistance] Shall meet Table I.1 [Insulation Resistance] Shall meet Table I.2 [Dielectric Withstanding Voltage] Shall meet Table I.3.

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13. High Temperature Life	Apply the following environment to the mating connector Temperature : 363±2K (90±2℃) Duration : 96 hours	[Appearance] No abnormality [Contact Resistance] Shall meet Table I.1 [Insulation Resistance] Shall meet Table I.2 [Dielectric Withstanding Voltage]
14. H ₂ S Gas	Apply the following environment to the mating connector Temperature : 313±2K (40±2℃) Relative Humidity : 80±5%RH Duration : 96 hours	[Appearance] No abnormality [Contact Resistance] Shall meet Table I.1 [Insulation Resistance] Shall meet Table I.2 [Dielectric Withstanding Voltage]
15. Salt Water Spray	Apply the following environment to the mating connector in accordance with MIL-STD-202G, Method 101E, Condition B. Temperature : 308±2K (35±2℃) Relative Humidity : 95~98%RH Salt water density : 5±1%(by weight) Duration : 96 hours	[Appearance] No abnormality [Contact Resistance] Shall meet Table I.1
16. Solder ability	Dip the solder line of the contacts in the solder bath at 518±5K(245±5℃) for 5±0.5seconds after immersing the line in the flux of RMA type for 5 to 10 seconds.	More than 95%of the dipped surface shall be wet and less than 5%of the pinhole than shall not gather at a point.
17. Soldering Heat Resistance	(1) Reflow part : 533+0/-5K(260+0/-5℃) Peak 498K MIN .(225℃MIN) 70sec.MIN (2) Pre-heat part: 433~443K(160~170℃) 80~100sec * Refer to reflow temperature profile.(Fig6) * The number of reflow is within 2 times.	No abnormality adversely affecting the performance shall not occur.
	<p>Fig.- 6</p>	

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Table II : Test Sequence and Sample Quantity

Test: Measurement or Examination	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1.Contact Resistance				1,3	1,3	1,3	1,3	1,5	1,5	1,3	1,3	1,3		
2.Insulation Resistance								2,6	2,6					
3.Dielectric Withstanding Voltage								3,7	3,7					
4.VSWR	1													
5.Un-mating force		1												
6.Crimp strength			1											
7.Durability				2										
8.Contact resistance with force on the cable					2									
9.Vibration						2								
10.Shock							2							
11.Humidity (Steady State)								4						
12. Thermal Shock									4					
13. High Temperature Life										2				
14.H ₂ S Gas											2			
15. Salt Water Spray												2		
16. Solder ability													1	
17.Soldering Heat Resistance														1
Sample QTY.	10	10	10	10	10	10	10	10	10	10	10	10	10	10