

Ⓔ	840000917	1	Heat shrink tube	PLASTIC
Ⓕ	820089502	1	SMA-KY081	COPPER AND PLASTIC
Ⓖ	821720203	1	CABLE(ø0.81,Colour:Gray)	COPPER/Tin PLATED OVER INNER
Ⓒ	820160202	1	CONTACT	COPPER ALLOY/Au PLATED OVER Ni
Ⓓ	830160101	1	HOUSING	High Temp.Plastic UL94V-0/BLACK
Ⓗ	820160301	1	SHELL	COPPER ALLOY/Au PLATED OVER Ni
ITEM	PART NO.	Q'TY	DESCRIPTION	MATERIAL/FINISH

1. Application (应用):

This style products are designed for Mobile phones, Wireless LAN, Mini-PCI, Bluetooth, PDA, GPS, electronic measuring instruments, etc
 该系列产品设计用于移动电话, 无线LAN, Mini-PCI, 蓝牙, PDA, GPS, 电子测量仪器等等.

2.Scope(范围):

This specification covers the requirements for product performance, test methods and quality assurance provisions of USS RF Cable III Connectors.
 本规范内容包括第三代射频同轴电缆连接器的产品性能、测试方法及品质保证方面的要求。

3. Technology Parameters (技术参数)

3.1 Voltage Rating (额定电压)	60VAC (R.M.S)
3.2 Frequency Range (频率范围)	DC~6G Hz
3.3 Nominal Characteristic Impedance (特征阻抗)	50±5 ohm
3.4 Operating Temperature Range (工作温度范围)	-40℃~+85℃
3.5 Operating Humidity (工作湿度)	95% R.H.MAX

4. Ratings (额定性能要求)

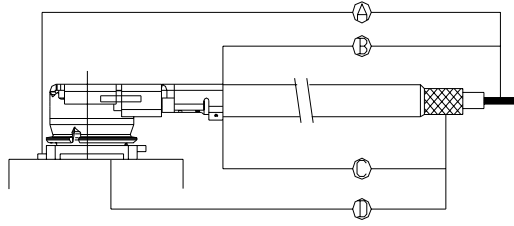
4.1 Initial Insulation Resistance (绝缘电阻)	500 M Ohm
4.2 Contact Resistance (接触电阻)	
4.2.1 Inner Contact (内导体)	20 m ohm Max.
4.2.2 Outer Contact (外导体)	20 m ohm Max.
4.3 Withstand Voltage (耐电压)	200V AC 1 Min.
4.4 V .S .W. R* (电压驻波比)	

Specification (规格)	DC~3GHz	3~6GHz	Cable length (电缆长度)
DIA=0.81mm Coaxial Cable Assembly (带直径 0.81mm 电缆的同轴线缆组件)	1.5 max	1.6 max	25~1000 mm

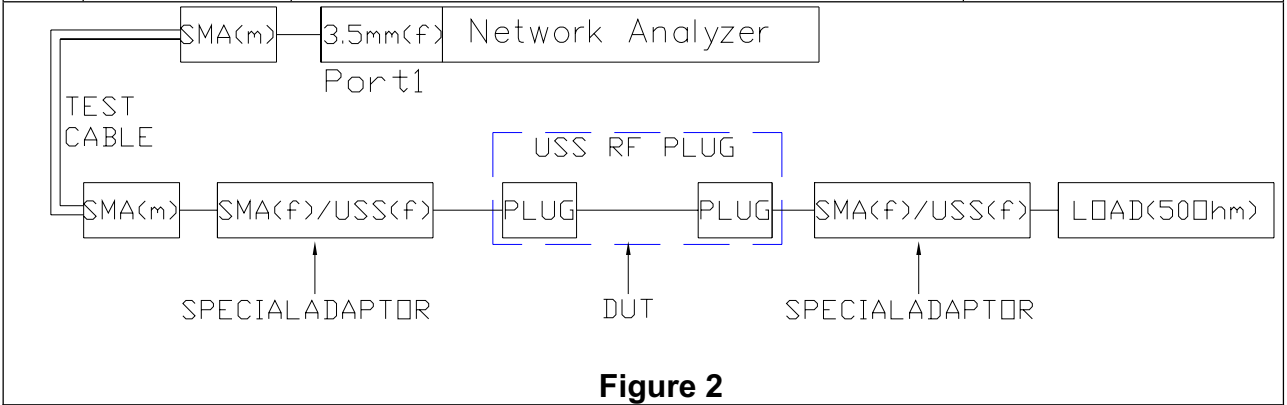
4.5 Cable (电缆)

ITEM/项目		Unit	Details/详细说明
Inner Conductor (内导体)	Material/材料	-	Silver Plated copper (镀银铜线)
	Composition/构成	No/mm	AWG36 or 7 X 0.05
	Nominal O.D./标准外径	mm	0.15
Dielectric Core (绝缘层)	Material/材料	-	Extruded FEP
	Nominal O.D./标准外径	mm	0.40
	Color(颜色)	-	Natural (本色)
Outer Conductor (屏蔽层)	Material/材料	-	Tin-coated Copper Wire(锡包线)
	Composition/构成	-	AWG44 X 5ends X 8 carriers
	Nominal O.D./标准外径	mm	0.65
Outer Jacket (外皮)	Material/材料	-	Extruded FEP
	Outer diameter/外径	mm	0.81±0.05
	Color(颜色)	-	Black/White/Gray(黑/白/灰色)

5. Electrical Performance(电性性能)

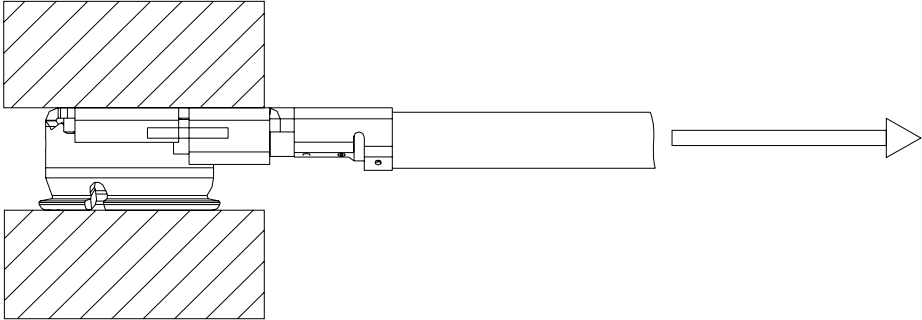
No	Items (项目)	Test Condition (测试条件) (EIA 364-23)	Specifications (规格)
5.1	Contact Resistance (接触电阻)	<p>Solder the receptacle connector to the test board and mate the plug connector together, then measure the contact resistance as shown in figure 1 by the four terminal method.</p> <p>将母座焊接在测试板上,并且将公头插入在焊好的母座上,采用四种端接方式(如下图 1)依次测量电阻值。</p> <p>Open circuit voltage/放电电压: 20mV MAX Circuit current/电流: 10mA MAX</p>	<p>Inner contact(中心导体): Initial: 20mΩ MAX After: 25mΩ MAX</p> <p>Ground contact(外导体): Initial: 20mΩ MAX After: 25mΩ MAX</p>
 <p style="text-align: right;">Inner Contact/中心导体 A - B Ground Contact/外导体 D - C</p> <p style="text-align: center;">Figure 1</p>			
5.2	Insulation Resistance (绝缘电阻)	<p>Mate the plug and receptacle connector together, and then, apply DC 200 V Voltage between the inner contact and the ground contact in accordance with EIA 364-21</p> <p>按照 EIA364-21,将公母头配合在一起,然后在内导体和拉地端之间施加 200V DC 的电压,然后,进行相关的测试。</p>	<p>Initial(初始值): 500 MΩ MIN After (测试后): 100 MΩ MIN</p>
5.3	Dielectric withstanding voltage (耐电压)	<p>Mate the plug and receptacle connector together, and then apply AC 200 V between the inner contact and the ground contact in accordance with EIA 364-20</p> <p>按照 EIA364-20 标准,将公母头配合在一起,然后在内导体和接地外导体之间施加 200V AC 的电压,并进行相关测试。</p>	<p>No flashover, No sparkover, No excess leakage, No breakdown 无瞬断、熔闪、漏电、 击穿。</p>

No	Item (项目)	Test Condition (测试条件)	Specifications (规格)
5.4	V.S.W.R (电压驻波比)	<p>Measure the V.S.W.R as shown in figure 2 by the network analyzer Frequency: 0~6GHz 通过网络分析仪测试 V.S.W.R, 频率范围为 DC~6GHz.如图 2 所示。</p> <p>Note: 1. Cable type connectors were measured with SMA conversion adapters attached to both ends of the harness product of a suitable 100mm cable. 注意 1: 测试电缆连接器组件时, 将 SMA 转接器连接在 100mm 长的电缆连接器组件两端。</p>	DC~3GHz: 1.5MAX 3~6GHz: 1.6MAX



6. Mechanical Performance(机械性能)

No	Items (项目)	Test Condition (测试条件)	Specifications (规格)
6.1	Un-mating Force (拔出力)	<p>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-push machine 将母座焊接在测试板上, 并且将公头插入在焊好的母座上, 然后用 插拔力测试仪以每分钟 25 ± 3 毫米的速度测试拔出力。</p>	1.Initial(初值): 4N MIN 2.After 30 Cycle (30 次插拔后): 2N MIN

No	Items (项目)	Test Condition (测试条件)	Specifications (规格)	
6.2	Crimp strength (压接强度)	<p>Pull the cable as shown in Figure 3 at speed of 25 ± 3 mm/minute through tensile strength machine.</p> <p>如图 3 所示，通过抗张强度测试仪以每分钟 25 ± 3 毫米的速度将电缆拉出。</p>  <p style="text-align: center;">Figure 3</p>	7N MIN	
6.3	Durability (机械寿命)	<p>Mate and un-mate the receptacle connector(soldered to the test board) and plug connector 30 cycles at the speed of 25 ± 3 mm/minutes along the mating direction by the push-push machine</p> <p>将母座焊接在测试板上，然后，通过插拔力测试仪沿配合方向以每分钟 25 ± 3 毫米的速度插拔公母头 30 个循环，然后测试参数。</p>	<p>Appearance: No abnormality</p> <p>Contact Resistance: Shall meet 5.5.1</p> <p>外观：无损伤</p> <p>接触电阻：满足节 5.5.1 要求</p>	
6.4	Cable retention force (线缆保持力)	<p>After the connectors are mating, do not apply a load to the cable in excess of the values indicated in the diagram below.</p> <p>将公母头配合后。在电缆上施加的载荷不能超过下图 4 中的载荷值。</p>	<p>No electrical discontinuity grater than $1 \mu s$ shall occur</p> <p>电不连续性不能超过 $1 \mu s$</p>	

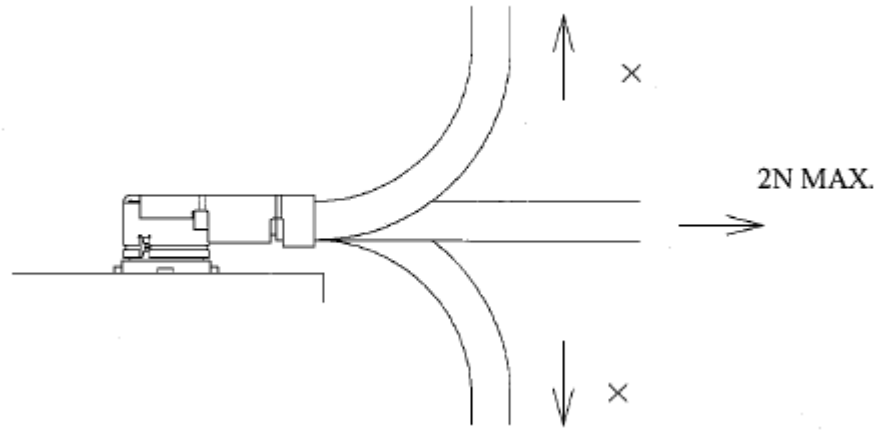


Figure 4

6.5

Vibration
(振动)

Apply the following vibration to the mating connector.
 During the testing,run 100mA DC to check electrical discontinuity.
 Frequency:10Hz→ 100Hz→ 10Hz/approx 20minutes.
 Half amplitude,Peak value of acceleration: 1.5mm or 59m/s² (6G)
 Directions,cycle:3 mutually perpendicular direction,
 3 cycles about each direction

将公母头配合在一起，并施加如下振动条件测试。
 在测试期间,施加 100mA DC 电压,并检验电不连续性。
 频率: 10Hz→ 100Hz→ 10Hz/约 20minutes.
 半振幅、加速度: 1.5mm、59 m/s² (6G)
 方向和循环次数:
 每个互相垂直方向上进行 3 次测量。

Appearance: No abnormality
 Contact Resistance: Shall meet 5.5.1
 No discontinuities of 1 μ s or longer duration
 外观: 无损伤
 接触电阻: 满足节 5.5.1 的要求,
 电不连续性不超过 1 μ s。

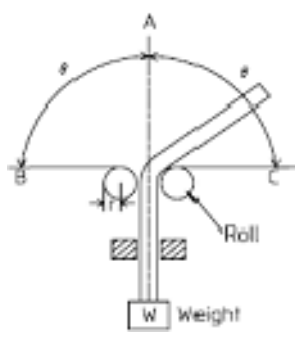
			<p>EIA 364-27 Condition A</p> <p>The object of this test procedure is to detail a standard method to assess the ability of a connector to withstand specified severity of mechanical shock.</p> <p>此测试程序的目的是要作一详细标准以评估连接器能承受特定严格机械冲击的能力。</p> <p>Peak value of acceleration:735m/s² (75G)</p> <p>Duration :11ms</p> <p>Wave form : half sinusoidal</p> <p>Directions,cycle : 6 mutually perpendicular direction, 3cycles about each direction</p> <p>振幅峰值, :735m/s² (75G)</p> <p>持续时间: 11 毫秒</p> <p>波型: 半正弦波</p> <p>方向和循环次数: 每 6 个相互垂直方向上各进次 3 次。</p>	<p>Appearance: No abnormality</p> <p>Contact Resistance: Shall meet 5.5.1</p> <p>No discontinuities of 1 μ s or longer duration</p> <p>外观: 无损伤</p> <p>接触电阻: 满足节 5.5.1 要求</p> <p>电不连续性不超过 1 μ s</p>
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7. Environmental Performance(环境性能)

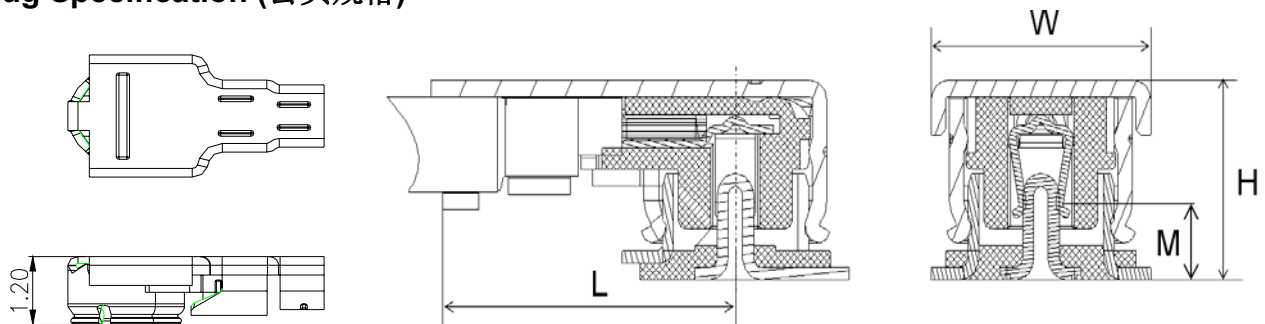
No	Items (项目)	Test Condition (测试条件)	Specifications (规格)
7.1	Humidity (湿度试验)	<p>Apply the following environment to the mating connector in accordance with EIA 364-31 Method III Test Condition B</p> <p>Temperature : 25~65°C</p> <p>Humidity : 90~95%R.H</p> <p>Duration: 96 hours</p> <p>根据 EIA364-31 试验条件 B 中的第III方法,对已配合的连接器施加下列条件测试.</p> <p>温度: 25~65°C</p> <p>湿度: 90~95%R.H</p> <p>持续时间: 96 小时</p>	<p>Appearance: No abnormality</p> <p>Contact Resistance: Shall meet 5.5.1</p> <p>Insulation Resistance: Shall meet 5.5.2</p> <p>Dielectric withstanding voltage Shall meet 5.5.3</p> <p>外观: 无损伤</p> <p>接触电阻: 满足 5.5.1</p> <p>绝缘电阻: 满足 5.5.2</p> <p>耐电压: 满足 5.5.3</p>
7.2	Thermal Shock (冷热冲击)	<p>Apply the following environment to the mating connector in accordance with EIA 364-32 Test Condition I</p> <p>Temperature : -55~85°C</p> <p>Transition time: : 5min. MAX</p>	<p>Appearance: No abnormality</p> <p>Contact Resistance: Shall meet 5.5.1</p> <p>Insulation Resistance:</p>

		<p>Cycles: 5 Cycles</p> <p>根据 EIA364-32 试验条件 B 中的第III方法,对已配合的连接器施加下列条件测试. 温度: -55~85°C 转换时间: 5 min Max. 循环次数: 5 次数</p>	<p>Shall meet 5.5.2 Dielectric withstanding voltage</p> <p>Shall meet 5.5.3</p> <p>外观: 无损伤 接触电阻: 满足节 5.5.1 中的要求 绝缘电阻: 满足节 5.5.2 中的要求 耐电压: 满足节 5.5.3 中的要求</p>	
7.3	<p>High Temperature Life (高温测试)</p>	<p>Apply the following environment to the mating connector</p> <p>Temperature : 90±2°C Duration : 96 hours</p> <p>按下列条件对已配合的连接器进行测试. 温度: 90+/-2°C 持续时间: 96 小时.</p>	<p>Appearance: No abnormality</p> <p>Contact Resistance: Shall meet 5.5.1</p> <p>Insulation Resistance: Shall meet 5.5.2</p> <p>外观: 无损伤 接触电阻阻: 满足节 5.5.1 中的要求 绝缘电阻: 满足节 5.5.2 中的要求</p>	
7.4	<p>Salt Spray (盐雾测试)</p>	<p>EIA 364-26 Test Condition A</p> <p>Apply the following environment to the mating connector</p> <p>Temperature : 35±2°C Relative Humidity : 90~98%R.H Salt water density: 5±1% Duration : 48 hours</p> <p>根据 EIA364-26 试验条件 A 中的要求,,对已配合的连接器施加下列条件测试. 温度: 35±2°C 相对湿度: 90~98%R.H 盐水浓度: 5±1% 持续时间: 48 hours</p>	<p>Appearance: No abnormality</p> <p>Contact Resistance: Shall meet 5.5.1</p> <p>外观: 无损伤 接触电阻: 满足节 5.5.1 中的要求</p>	

8.Others(其他)

No	Items (项目)	Test Condition (测试条件)	Specifications (规格)
8.1	90° Bending Test. (90° 弯曲 试验)	<p>Make the cable assembly with 500g load lifted by your hand through a bend testing tool,then,leave it staying for one minute. finally, repeat the above-mentioned steps for 10cycles ,then conduct a open&short test. Pls see the following figure 5 for details.</p> <p>通过弯曲测试治具将电缆连接器组件吊重 500g 砝码，使其停留 1 分钟，并按上述步骤循环进行 10 次， 然后进行导通验证。</p>  <p style="text-align: center;">FIGURE 5</p>	<p>Appearance: No abnormality</p> <p>Open&Short Requirment: Short</p> <p>外观：无损伤 导通要求： 电子缆组件导通。</p>

9. Plug Specification (公头规格)



Mating Dimension (mm)				
Item	L	H	W	M
DIA=0.81mm Coaxial Cable Assembly	2.95±0.2	1.5±0.1	2.1±0.2	0.7±0.20

10. Usage Precaution (使用禁忌或注意事项)

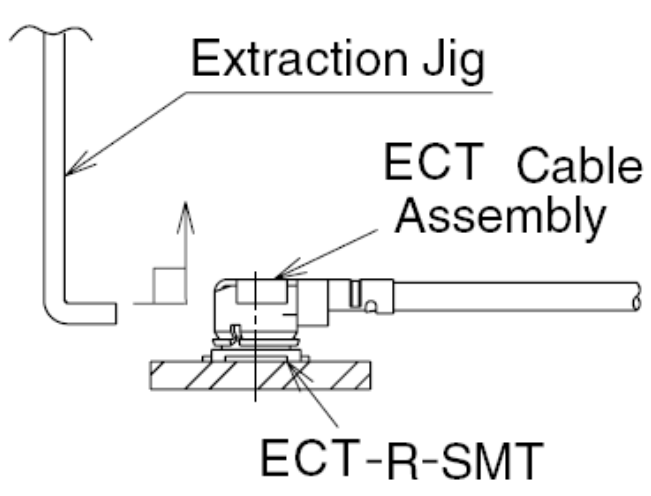
No	Items (项目)	Test Condition (测试条件)	Specifications (规格)
10.1	(1) Connection/ disconnection of connectors 连接器的连接 和断开	<p>1).To disconnect connectors, insert the end portion of ECT Extraction jig under the connector flanges and pull off vertically, in the direction of the connector mating axis</p> <p>1) 将 ECT 自制的去配工具的末端部分插入到连接器法兰端面下, 并沿垂直于连接器匹配的轴向方向施加拉力, 将公母头连接器分开。</p> <p>2).To mate the connectors, the mating axis of both connectors must be aligned and the connectors can be mated. The "click" will confirm fully mated connection. Do not attempt to insert on an extreme angle.</p> <p>2) 公母头连接器进行配合前, 务必确保两者对齐, 当听到“卡嗒声”声后, 表示两者已完全配合在一起。不要以极偏的角度插配连接器。</p>	
		 <p>The diagram shows a cross-section of an ECT-R-SMT connector assembly. An 'Extraction Jig' is shown as a vertical L-shaped tool with its tip under the connector's flange. An 'ECT Cable Assembly' is shown as a horizontal cable connected to the other side of the connector. The entire assembly is mounted on a base labeled 'ECT-R-SMT'. An upward-pointing arrow indicates the direction of force applied by the extraction jig to disconnect the cable.</p>	
10.2	Precautions (禁忌)	<p>Do NOT forcefully twist or deform wires.</p> <p>不要扭曲电缆或者使电缆变形</p>	
10.3	Stockpile condition (存储条件)	<p>Use this product within 6 months after receipt</p> <p>有效期: 请在产品接收后的 6 个月内使用</p>	

Figure 6

11. Test Sequence and Sample Quantity(测试顺序及样品数量)

Test Item (测试项目)	Group (测试分组)										
	A	B	C	D	E	F	G	H	I	J	K
Examination of product (外观检测)	1,6	1,7	1,	1,5	1,5	1,5	1,9	1,9	1,5	1,5	1,5
Contact Resistance (接触电阻)	2			2,4	2,4	2,4	2,6	2,6	2,4	2,4	2,4
Insulation Resistance (绝缘电阻)	3						3,7	3,7			
Dielectric Withstanding Voltage (耐电压)	4						4,8	4,8			
V.S.W.R (电压驻波比)	5	2,6									
Un-mating Force (拔出力)		3,5									
Crimp strength (压接强度)			2,								
Durability (机械寿命)		4									
Cable retention force (线缆保持力)				3,							
Vibration (振动)					3,						
Shock (冲击)						3,					
Humidity (湿度试验)							5,				
Thermal Shock (冷热冲击)								5			
High Temperature Life (高温测试)									3,		
Salt Spray (盐雾测试)										3	
90° Bending Testing (90° 弯曲试验)											3
Sample QTY(PCS) 样品数量	5	5	5	5	5	5	5	5	5	5	5

The number of group is test sequence 测试分组中的序号为试验顺序。