

物料承认书

麦田物料料号 基本信息			
正式料号	10-082-21003-00	临时料号	/
麦田品名	天线底座		
麦田规格描述	CON 2.6*2.6mm 铜 镀镍镀金		
原厂型号代码	CW-LJQ-0016		
品牌/制造商	共为	供应商代码	FS0113
制/修订日期	2023-07-04	当前版本	00

供应商确认栏			
编制	审核	批准	盖公司公章
可莹	田伟	汤浩	

	采购	器件	研发	SQE
审核				
批准				
日期				

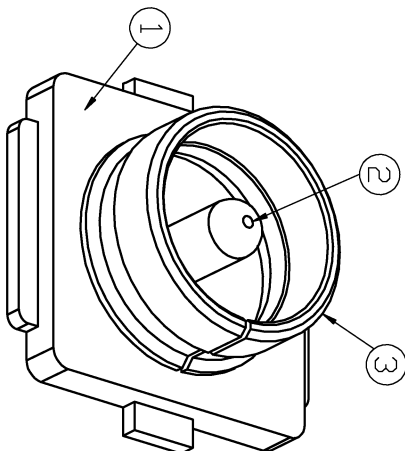
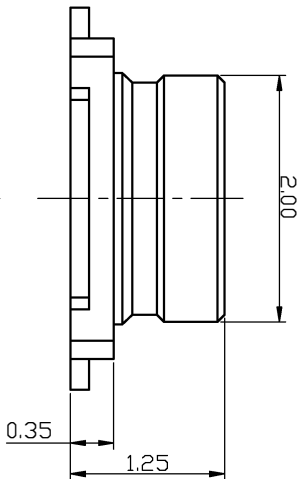
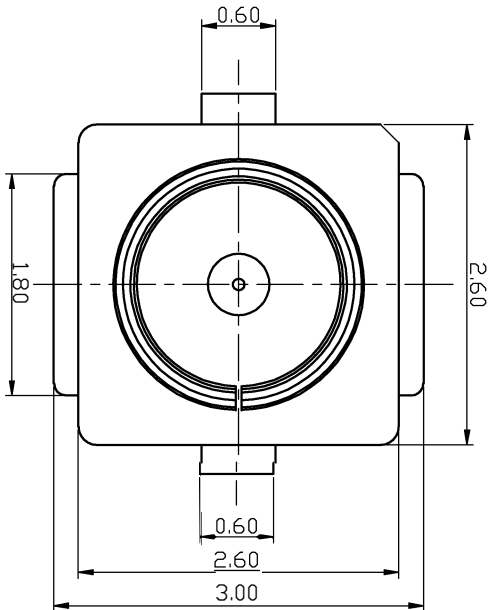
变更记录：

日期	版本	描述	制修人	备注
2023-07-04	00	承认书首次发行	可莹	

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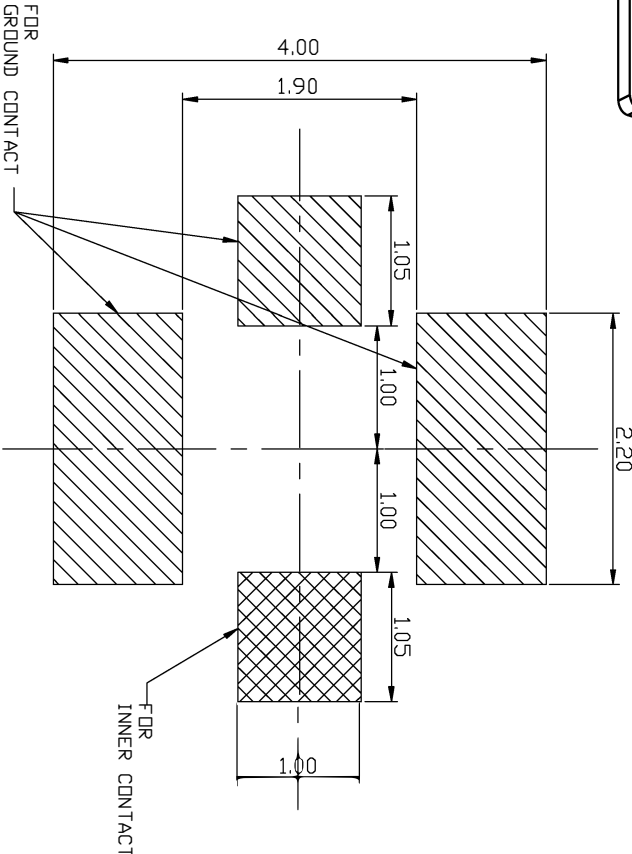
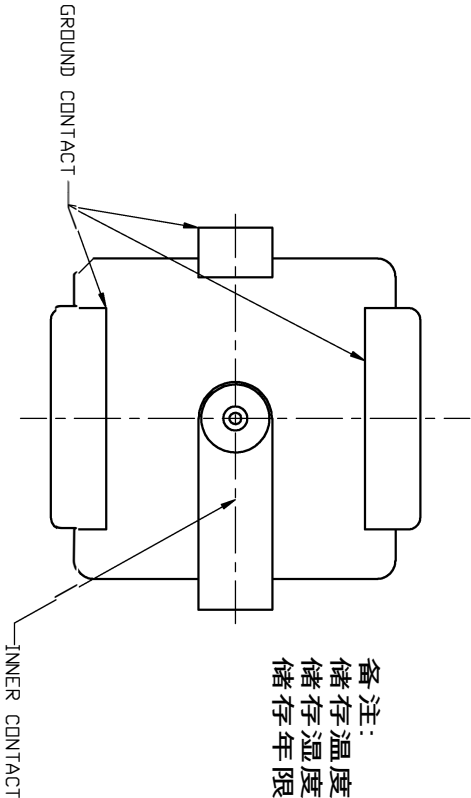
(Catalog)

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- NOTE:
- ELECTRICAL CHARACTERISTICS:
 - CURRENT RATING: 0.5A MAX.
 - IMPEDANCE: 50OHM NOMINAL.
 - MECHANICAL CHARACTERISTICS:
 - OPERATING TEMP. 40°~90°
 - VIEWR UP TD 3GHZ; 1.3MAX. 3GHZ TD 6GHZ; 1.4MAX. 2.3 DURABILITY; 30CYCLES

备注:
储存温度:-25°C至60°C
储存湿度:85%以下未凝结
储存年限:一年



3	GROUND CONTACT	1	COPPER ALLOY	Au PLATING OVER NI OVER ALL	1~ 1.5u
2	INNER CONTACT	1	COPPER ALLOY	Au PLATING OVER NI OVER ALL	1~ 1.5u
1	HOUSING	1	LCP UL94V-0		
ITEM	DESCRIPTION	QTY	MATERIAL	FINISH	REMARK

苏州共为电子科技有限公司

DWG NO.:

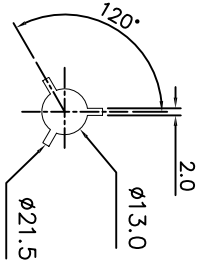
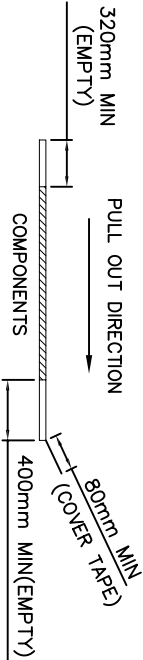
19.002A0-0001R0

X± 0.25	X± 5'	APPD: Max	CUSTOMER DRAWING	PAR (Title):	CW-LJQ-0016
.XX± 0.25	.XX± 3'	CHKD: Max		UNITS	SCALE
.XXX±	.XXX± 1'	DR: Andy		mm	1:1
					1/1
					X1

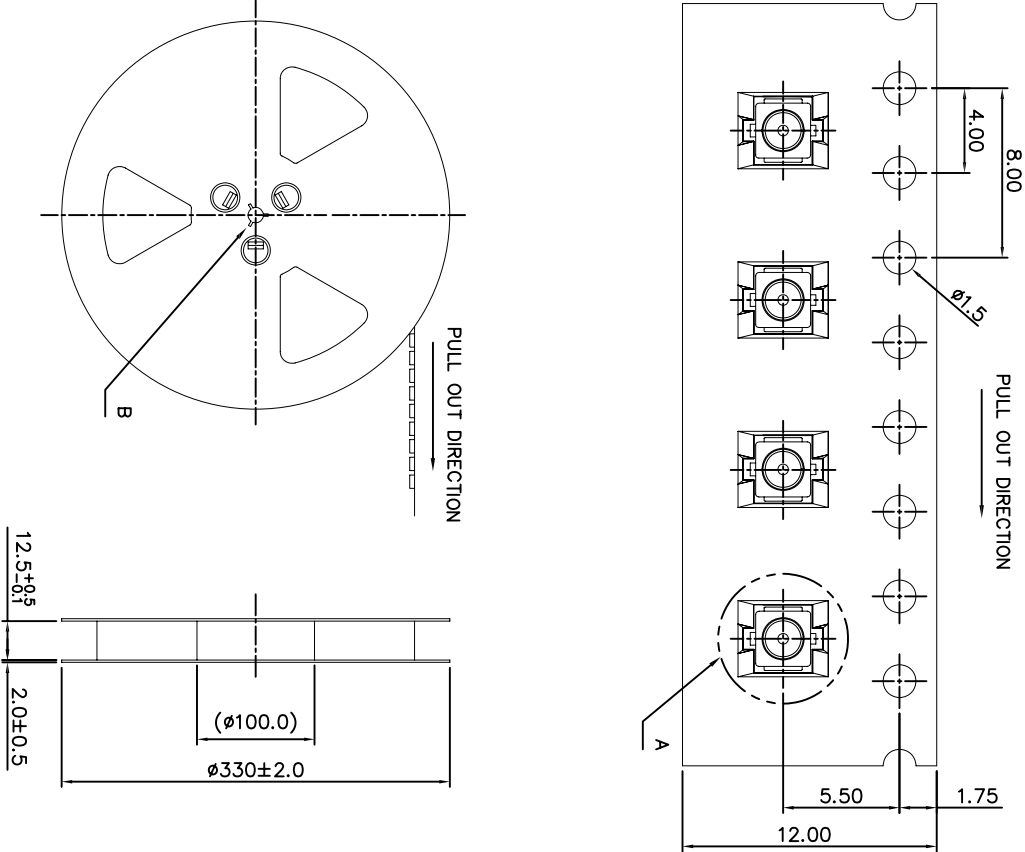
REV	ECN NO	DESCRIPTION	DATE	APPD
A		*****	2016.12.09	

NOTES:

1. MATERIAL :
1.1 EMBOSSED CARRIER: PS
1.2 COVER TAPE: PET
1.3 SHIPPING CARTON: CORRUGATED FIBER
2. DIMENSION :
2.1 REEL: W=12.5
2.2 SHIPPING CARTON: L=350, W=350, H=220
3. QUANTITY :
3.1 PRIMARY PACKING: 5,000PCS/REEL
3.2 SECONDARY PACKING: 10REELS/CARTON(50,000P
4. WEIGHT :
4.2 NET WEIGHT: 0.07KG/REEL, 0.77KG/CARTON.
4.1 GROSS WEIGHT: 0.54KG/REEL, 6.4KG/CARTON.
5. PEELING RESISTANCE: 10gf~130gf.
6. LEAD TAPE LENGTH:



DETAIL "B"



PULL OUT DIRECTION

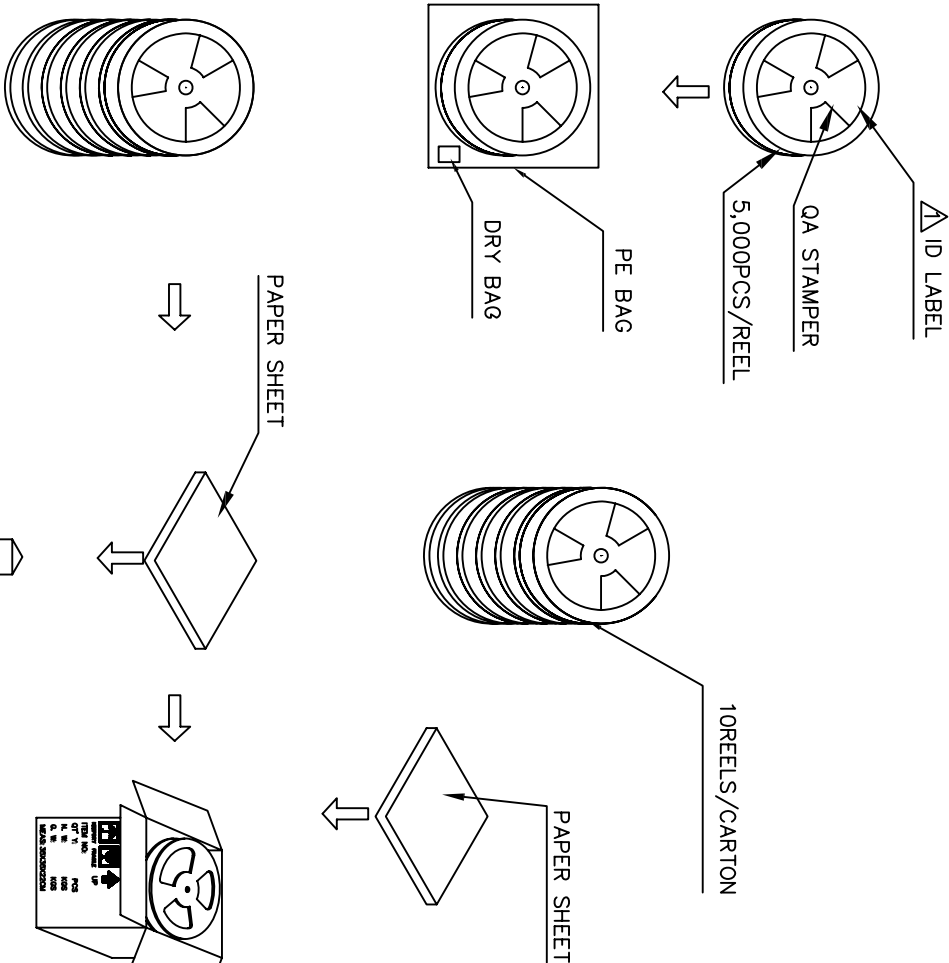
PULL OUT DIRECTION

EXTEND USE		TITLE		苏州共为电子科技			
RF1 BOARD CONN		RF1 BOARD CONN	包装规范				
GENERAL TOLERANCE		MATERIAL	APPD	DWG NO			
DIMENTION	ANGLES	QTY	CHD	P/N:			
0. ±0.50	0. ±3.0°		Jerry				
.0 ±0.20	.0 ±2.0°						
.00 ±0.10	.00 ±1.0°	FINISHED	DRN	SHEET 1/2		SCALE 1:1	REV A
.000 ±0.05			Andy				

REV		ECN NO	DESCRIPTION	DATE	APPD
			SEE SHEET 1/2		

NOTES:

1. MATERIAL :
 - 1.1 EMBOSSED CARRIER: PS
 - 1.2 COVER TAPE: PET
 - 1.3 SHIPPING CARTON: CORRUGATED FIBER
2. DIMENSION :
 - 2.1 REEL: W=12.5
 - 2.2 SHIPPING CARTON: L=350, W=350, H=220
3. QUANTITY :
 - 3.1 PRIMARY PACKING: 5,000PCS/REEL
 - 3.2 SECONDARY PACKING: 10REELS/CARTON(50,000PCS)
4. WEIGHT :
 - 4.2 NET WEIGHT: 0.077KG/REEL, 0.77KG/CARTON.
- 4.1 GROSS WEIGHT: 0.54KG/REEL, 6.4KG/CARTON.
5. PEELING RESISTANCE: 109gf~1309gf.
6. LEAD TAPE LENGTH:



EXTEND USE		TITLE		DWG NO		
RF1 BOARD CONN		RF1 BOARD CONN		苏州共为电子科技		
GENERAL TOLERANCE ⑩		MATERIAL		DWG NO		
DIMENTION		ANGLES		P/N:		
0. ±0.50		0. ±3.0°		SHEET 2/2		
.0 ±0.20		.0 ±2.0°		SCALE 1:1		
.00 ±0.10		.00 ±1.0°		REV A		
.000 ±0.05						

PRODUCT SPECIFICATION

1. SCOPE(范围)

This specification covers the requirements for product performance and test methods of RF03 connector.

2. Parts NO, (产品型号)

Plug : RF一代线端

Receptacle: RF一代板端

3. Product Shape, Dimensions and Material, (外观形状, 尺寸和材质)

Refer to the drawing.

4. Applicable cable, (适用的线规)

(1) Description (构成)

Inner conductor: AWG30(7/0.102), silver plating annealed copper wire or silver plating tin-copper alloy

中心导体: AWG30(7/0.102) 镀银软铜线或镀银锡铜合金

Dielectric core: Fluoro-plastics, diameter 0.88mm, nominal thickness 0.287mm

绝缘中心: 塑脂, 外径 0.88mm, 公称厚度 0.287mm

Out conductor: 16/5/0.05, nominal diameter 1.13mm, tin plating annealed copper wire;

外部导体: 16/5/0.05, 标准外径 1.13mm, 软铜线镀银或者镀锡;

Jacket: Fluoro-plastics, diameter 1.37(+0.04/-0.02)mm, nominal thickness 0.12mm

封皮: 塑脂, 外径 1.37(+0.04/-0.02)mm, 公称厚度 0.12mm

(2) Requirements (要求)

Characteristic impedance: 50(+2, -2)ohm by TDR method

特性阻抗: $50 \pm 2 \Omega$ (TDR)

Norminal capacitance(Reference value): 95 pF/m

额定电容量(参考值): 95 pF/m

Conductor resistance of inner conductor at 293K(20°C) : 330 ohm/km MAX.

293K(20°C)中心导体阻抗: 330 ohm/km MAX

Insulation resistance: 1000 mega-ohm.km Min.

绝缘阻抗: 1000M Ω .km以上

Dielectric withstand voltage: no breakdown at AC1000V for 1 minutes

耐电压: AC1000V.1分钟间隔, 绝缘体无熔断现象;

5. Ratings, (额定值)

Rated voltage/电压-----AC60Vr.m.s

Nominal characteristic impedance/特性阻抗-----50 ohm

Frequency/频率范围-----DC~6GHz

VSWR/驻波比-----Plug: 1.3 Max. (DC~3HGz), 1.5 Max. (3~6 HGz)

Receptacle: 1.3Max. (DC~3HGz), 1.4 Max. (3~6 HGz)

Service Temperature/使用温度范围-----(-40°C~90°C)

PRODUCT SPECIFICATION

6. Test and Performance, (测试和性能)

Test Condition/测试条件

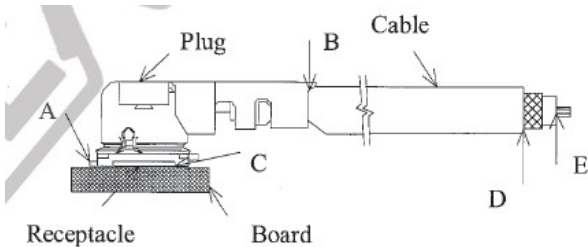
Unless otherwise specified, all tests and measurements shall be performed under the following condition in accordance with MIL-STD-202G

Temperature/温度-----288k~308k (15℃~35℃)

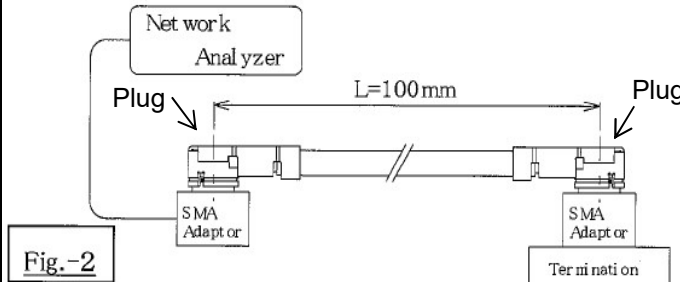
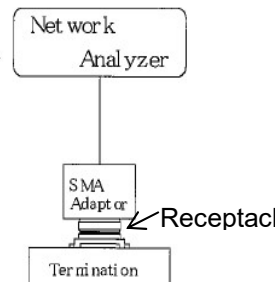
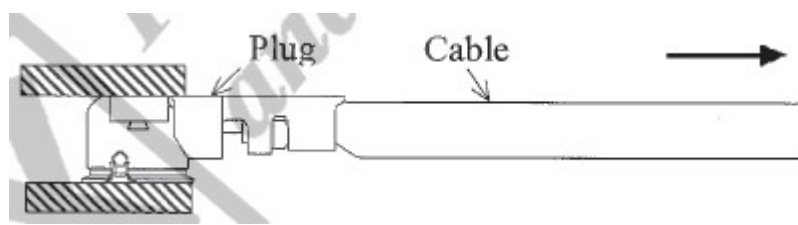
Pressure/气压-----866hPa~1066hPa (650mmHg~800mmHg)

Relative Humidity/相对湿度-----45-75 R. H.

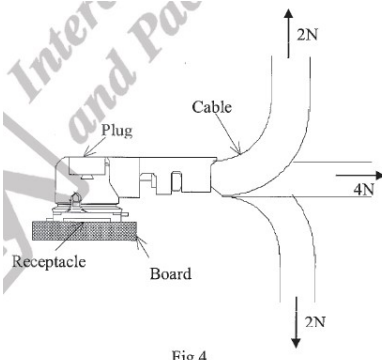
6.1 Electrical Performance/电气特性

Items 项目	Test conditions 测试条件	Specification(规格)
1. Contact resistance 接触阻抗	Solder the receptacle connector to the test board and mate the plug connector together, than measure the contact resistance as shown in Fig.1 by the four terminal method. Apply the low level condition in accordance with MIL-STD-202G, Method 307. Open circuit voltage/开放电压: 20mV MAX. Circuit current/试验电流: 10mA MAX. Connector resistance of inner contact <resistance of A-E> - <resistance of B-E> Connector resistance of ground contact <resistance of C-D> - <resistance of B-D> 将母端焊接到测试板, 将公端装到母端上, 然后根据 Fig.2 的四端测试方法, 根据标准 MIL-STD-202G, 方法 307, 加载低功率测试条件;	[Inner contact] Initial :20mΩ Max. After testing:25mΩ Max. [Ground contact] Initial :10mΩ Max. After testing:15mΩ Max. [中心端子]: 初态 20mΩ Max. 测试后: 25mΩ Max. [接地端子] 初态 :10mΩ Max. 测试后:15mΩ Max.
 Fig.1		
2. Insulation Resistance 绝缘阻抗	Mate the plug and receptacle connector together, and then apply DC 100V between the inner contact and the ground contact in accordance with MIL-STD-202G, Method 302. 将公端和母端配在一起, 在中心端子和接地端子之间, 加上 DC 100V 电流, 根据 MIL-STD-202G, 方法 302.	Initial : 500mΩ Min. After testing: 100MΩ Min. 初态: 500MΩ Min. 末态: 100MΩ Min.
3. Dielectric Withstanding Voltage /耐电压	Mate the receptacle and plug conector together, then apply AC 200V rms between the inner contact and the ground contact for a minute in accordance with MIL-STD-202G, Method 301. 将公端和母端配在一起, 在中心端子和接地端子之间, 加上 AC	No creeping 的 discharge, flashover, no insulator breakdown shall occur; 没有沿面放电, 空中放电,

PRODUCT SPECIFICATION

	200V rms 电流, 根据 MIL-STD-202G, 方法 301.	绝缘击穿发生;
4. VSWR/驻波比	Measure the VSWR as shown in Fig.-2 by the network analyzer. Frequency: 100M~6GHz 用网络分析仪, 如图 Fig.-2, 在频段 100M~6GHz, 测驻波比   Plug Receptacle	<u>Plug connector</u> 1.3Max. at 0.1~3GHz 1.5Max. at 3~6GHz <u>Receptacle connector</u> 1.3Max. at 0.1~3GHz 1.4Max. at 3~6GHz
6.2 Mechanical Performance/机械特性		
Items 项目	Test conditions 测试条件	Specification(规格)
1. Unmating Force 拔出力	Solder the receptacle connector to the test board and mate the plug connector, then measure the un-mating force at speed 25 ± 3 mm/minutes along by the push-pull machine. 将母端连接器焊到测试板上, 然后将线端连接器装上, 用拉力机测试拔出力, 拔出速度 25 ± 3 mm/分钟	[Total unmating force:] Initial : 5N MIN. After 30: 3N MIN. [综合拔出力] 初态: 5N MIN. 30 次插拔后: 3N MIN.
2. Crimp strength 引张强度	Pull the cable as shown in Fig.-3 at speed 25 ± 3 mm/minutes by tensile strength machine. 如图 Fig.-3 所示, 用推拉力机, 以速度 25 ± 3 mm/分钟来拉;  Fig.3	25N MIN. 25N 最小。
3. Durability 耐久性	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. 将母端连接器焊到板子上, 用公端连接器, 用推拉力机, 以速度 25 ± 3 mm/分钟速度, 插拔 30 次;	[Appearance] No abnormality [Contact Resistance] Shall meet 6.1.1 [外观]: 无异常现象; [接触阻抗]: 符合 6.1.1;

PRODUCT SPECIFICATION

Items 项目	Test conditions 测试条件	Specification(规格)
4. Contact resistance with force on the cable 负重下接触阻抗	Apply force on the cable as shown in Fig. -4. During the testing, run 100mA DC to check electrical discontinuity. 如图 Fig. -4 所示, 在线上施加一定的力, 测试中, 用 100mA DC 电流, 确认通电连续性;	[Appearance] No abnormality [Electrical discontinuity] No electrical discontinuity grater than 1 us shall occur/ [Contact Resistance] Shall meet 6.1.1 [外观]: 无异常现象; [通电连续性] 瞬断不超过 1u 秒 [接触阻抗]: 符合 6.1.1;
	 Fig.4	
5. Vibration / 耐振动性	Apply the following vibration to the mating connector. During the testing, run 100Ma DC to check electrical discontinuity. Frequency: 10HZ->100Hz->10Hz/approx 20munites. Half amplitude, Peak value of acceleration: 1.5mm or 59m/s² (6G) Direction, cycle: 3 mutually perpendicular direction, 5 cycles about each direction. 将下面的振动加载到配合好的连接器上; 测试过程中, 用 100Ma DC 电流测试通电连续性; 频率变化: 10HZ->100Hz->10Hz/ 20 分钟左右; 半振幅, 峰值加速度: 1.5mm or 59m/s² (6G) 方向, 周期: 3 个相互垂直方向, 每个方向 5 个周期	[Appearance] No abnormality [Contact Resistance] Shall meet 6.1.1 [Electrical discontinuity] No electrical discontinuity grater than 1us shall occur. [外观]: 无异常现象; [接触阻抗]: 符合 6.1.1 [通电连续性]: 瞬断现象不超过 1u 秒
6. Shock / 耐冲击	Apply the following vibration to the mating connector. During the testing, run 100Ma DC to check electrical discontinuity. Peak value of acceleration : 735m/s² (75G) Duration : 11msec Wave Form : half sinusoidal Directions, cycle: 6mutually perpendicular direction, 3 cycles about each direction. 将下面的振动加载到配合好的连接器上. 测试过程中, 用 100Ma DC 来测试通电 连续性; 峰值加速度: 735m/s² (75G) 周期: 11msec 波形: 半正弦波 方向, 循环: 6 相互垂直方向, 每个方向往复 3 次;	Appearance] No abnormality [Contact Resistance] Shall meet 6.1.1 [Electrical discontinuity] No electrical discontinuity grater than 1us shall occur. [外观]: 无异常现象; [接触阻抗]: 符合 6.1.1 通电连续性: 瞬断<=1us

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6.3 Environmental Performance/耐环境性能

Items 项目	Test conditions 测试条件	Specification(规格)
1. Thermal Shock 热冲击	Apply the following environment to the mating connector in accordance with MIL-STD-202G, Method 107G, Condition A Temperature: 218K(-55℃): 30min. → 358K(85℃): 30min. Transition time: 5min, MAX. No. of cycles: 5 cycles 将下面的环境条件加到配合好的连接器上，根据标准 MIL-STD-202G，方法 107G，条件 A。 温度：218K(-55℃): 30 分钟，358K(85℃): 30 分钟； 转换时间：至少 5 分钟； 循环次数：5 次	[Appearance] No abnormality [Contact resistance] Shall meet 6.1.1. [Insulation Resistance] Shall meet 6.1.2. [外观]: 无异常现象; [接触阻抗]: 符合 6.1.1 [绝缘阻抗]: 符合 6.1.2
2. Humidity (Steady State) 温度 (恒温恒湿)	Apply the following environment to the mating connector in accordance with MIL-STD-202G, Method 103, Condition B. Temperature : 313±2k(40±2℃) Humidity : 90~95%RH Duration : 96 hours 将下面的环境条件加到配合好的连接器上，根据标准 MIL-STD-202G，方法 103，条件 B。 温度 : 313±2k(40±2℃) 湿度 : 90~95%RH 持续时间 : 96 hours	[Appearance] No abnormality [Contact Resistance] Shall meet 6.1.1. [Insulation Resistance] Shall meet 6.1.2 [外观]: 无异常现象; [接触阻抗]: 符合 6.1.1 [绝缘阻抗]: 符合 6.1.2

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Items 项目	Test conditions 测试条件	Specification(规格)
3 Salt Water Spray 盐雾测试	Apply the following environment to the mating connector. MIL-STD-202G, Method 101E, Condition B. Temperature : $308 \pm 2K$ ($35 \pm 2^{\circ}C$) Relative Humidity: $95 \pm 98\%RH$ Salt water density: 5 ± 1 (by weight) Duration : 48 hours 将下面的环境条件加到配合好的连接器上，根据标准 MIL-STD-202G，方法 101E，Method 101E, 条件 B. 温度： $308 \pm 2K$ ($35 \pm 2^{\circ}C$) 相对湿度： $95 \pm 98\%RH$ 盐水浓度： 5 ± 1 重量比 持续时间： 48 小时	[Appearance] No abnormality [Contact Resistance] Shall meet 6.1.1 [外观]：无异常现象； [接触阻抗]：符合 6.1.1
4. High Temperature Life 高温寿命	Apply the following environment to the mating connector. Temperature : $363 \pm 2K$ ($90 \pm 2^{\circ}C$) Duration : 96 hours 将下面的环境条件加到配合好的连接器上， 温度： $363 \pm 2K$ ($90 \pm 2^{\circ}C$) 持续时间： 96 小时	[Appearance] No abnormality [Contact Resistance] Shall meet 6.1.1 [Insulation Resistance] Shall meet 6.1.2. [外观]：无异常现象； [接触阻抗]：符合 6.1.1 [绝缘阻抗]：符合 6.1.2

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6.4 Others/其他

Items 项目	Test conditions 测试条件	Specification(规格)
1. Solder ability 焊接性	Dip the solder tine of the contacts in the solder bath at $518 \pm 5K (245 \pm 5^{\circ}C)$ for 5 ± 0.5 seconds after immersing the tine in the flux of RMA type for 5 to 10 seconds 将焊接脚沾上助焊剂 5-10 秒后, 浸入温度 $518 \pm 5K (245 \pm 5^{\circ}C)$ 的锡槽中, 时间 5 ± 0.5 秒,	More than 95% of the dipped surface shall be wet and less than 5% of the pinhole that shall not gather at a point. 95%以上表面焊接上, 小于 5% 的针孔聚锡;

Items 项目	Test conditions 测试条件	Specification(规格)
2. Soldering Heaesistance 耐焊接热	(1) Reflow part : $(260+0/-5^{\circ}C)$ Peak $(225^{\circ}C$ Min.) 70sec. Min. (2) Pre-heat part $(160 \sim 170^{\circ}C)$ 80~100sec. * Refer to reflow temperature profile. (Fig. -5) * The number of reflow is within 2 times. (1) 回流焊部分: $(260+0/-5^{\circ}C)$ 峰值 $(225^{\circ}C$ Min.) 70 秒至少。 (2) 预热部分 $(160 \sim 170^{\circ}C)$ 80~100sec. * 根据下图温度曲线 * 回流次数不超过 2 次	No abnormality adversely affecting the performance shall occur. 没有影响功能的不正常现象发生;

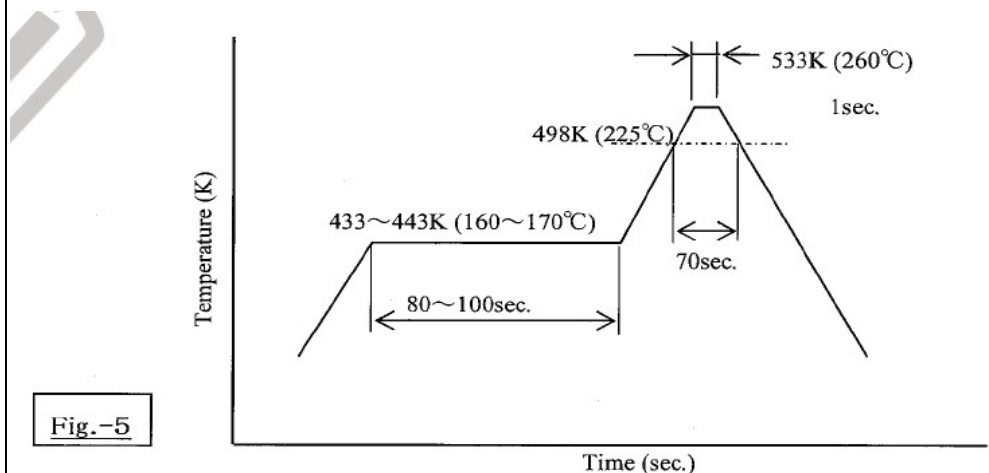


Fig.-5

PRODUCT SPECIFICATION

7: Test sequence and sample quantity/试验顺序及验证数量

Test Description	Test Group													
	A	B	C	D	E	F	G	H	I	L	M	N	O	P
1. Contact Resistance 接触阻抗				1, 3	1, 3	1, 3	1, 3	1, 4	1, 4	1, 4	1, 3	1, 3		
2. Insulation Resistance 绝缘阻抗								2, 5	2, 5	2, 5				
3. Dielectric Withstanding Voltage 耐电压	1													
4. VSWR 驻波比		1												
5. Unmating force 拔出力			1											
6. Crimp strength 引张强度				1										
7. Durability 耐久性					2									
8. Contact Resistance with force on the cable 负重下接触阻抗						2								
9. Vibration 耐振动性							2							
10. Shock 耐冲击性								2						
11. Thermal Shock 热冲击									3					
12. Humidity (Steady Stage) 恒温恒湿										3				
13. Salt Water Spray 盐雾试验											2			
14. High Temperature Lifet 高温寿命												2		
15. Solder ability 焊接性													1	
16. Solderingheat resistance 耐焊接热														1
Sample Quatity 试样数量	5	10	10	10	10	10	10	10	10	10	10	10	10	10

测试报告

Test Report

报告日期: Report Date	2016.12.21
报告编号: Report NO.	160430001

产品名称: Part Name	RF CONNECTOR		
料 号: Part NO.	CW-LJQ-0016		
批 号: Date Code	20161221D005		
申请单位: Applicant	工程部		
接收日期: Receive Date	2016.12.21		
检测日期: Test Date	2016.12.10---2016.12.15		
结果判定: Result Judgment	☒ 合格 Pass	☐ 不合格 Fail	☐ 仅供参考 Information Only

核准人 Approved By	审核人 Checked By	检测人 Tested By
陈敏华 2016-12-15	刘江 2016-12-15	计晨 2016-12-15

一、 申明 DECLARE

本报告仅对测试样品负责。本报告共 13 页（含封面），缺少任何一页，报告无效。

This report bears only responsibility for test samples. Report has 13 pages together (cover included); it is of no effect without any one page.

二、 测试原因 TEST REASON

- ☐ 新品验证 New product validate
- ☒ 量产品定期测试 Mass-produce product test
- ☐ 产品审核 Product auditing
- ☐ 客诉验证 Customer complain validate
- ☐ 工程设计变更 Engineering design change
- ☐ 其他 Other

三、 测试结果摘要 TEST RESULT SUMMARY

测试群组编号 Test Group NO.	测试内容 Test content	测试结果 Test Result	备注 Comments	页数 Page NO.
Group A	耐电压 Dielectric withstanding voltage	合格 Pass		5~6
Group B	拔去力 Unmating force	合格 Pass		6
Group C	耐久性 Durability	合格 Pass		6
Group D	对线缆施力 Give force to cable	合格 Pass		6~7
Group E	振动 Vibration	合格 Pass		7
Group F	物理冲击 Physical shock	合格 Pass		7~8
Group G	热冲击 Thermal shock	合格 Pass		8~9
Group H	耐湿性 Humidity	合格 Pass		9~10
Group I	盐水喷雾 Salt spray	合格 Pass		10
Group J	温度寿命 Temperature life	合格 Pass		10~11
Group K	引张强度 Crimp strength	合格 Pass		11
Group L	驻波比 VSWR	合格 Pass		11

四、 测试内容 TEST CONTENT

1. 适用范围 SCOPE

本测试报告使用于 RF 连接器，其包含品质要求、测试方法、测试顺序、测试设备、测试结果。

The qualification test report covers the quality requirements, test procedure, test sequence, test equipment, test results on the RF CONNECTOR

2. 参考文件 APPLICABLE DOCUMENT

以下文件作为规范在此指定范围的一部分。如果规范要求与产品图有冲突，以产品图优先。如果规范要求与参考文件有冲突，以规范要求优先。

参考文件：MIL-STD-202， EIA-364， 产品规范

The following documents form a part of this specification to the extent specified herein. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

Applicable Document: MIL-STD-202, EIA-364, Product Specification

3. 测试条件 TEST CONDITIONS

除非有其他规定，否则测试和检查将按以下条件执行。

Unless otherwise specified, tests and examinations are conducted under conditions within the following range:

温度(Temperature): 15~25℃

相对湿度(Relative Humidity): 20%~70%

4. 限定测试顺序 QUALIFICATION TEST SEQUENCE

测试项目 Test Description	测试顺序 Test Sequence											
	A	B	C	D	E	F	G	H	I	J	K	L
产品检查 Examination of product	1,3	1,3	1,5	1,5	1,5	1,5	1,9	1,9	1,5	1,7	1	1,3
低功率接触阻抗 Contact resistance (Low Level)			2,4	2,4	2,4	2,4	2,8	2,8	2,4	2,6		
绝缘阻抗 Insulation resistance							3,6	3,6		3,5		
耐电压 Dielectric withstanding voltage	2						4,7	4,7				
拔去力 Unmating force		2										
引张强度 Crimp strength											2	
耐久性 Durability			3									
对线缆施力 Give force to cable				3								
振动 Vibration					3							

物理冲击 Physical shock						3						
热冲击 Thermal shock							5					
耐湿性 Humidity								5				
盐水喷雾 Salt spray									3			
温度寿命 Temperature life										4		
驻波比 VSWR												2
每组样品数 Specimen size per test group	5	5	5	5	5	5	5	5	5	5	5	5

5. 测试方法 TEST METHOD

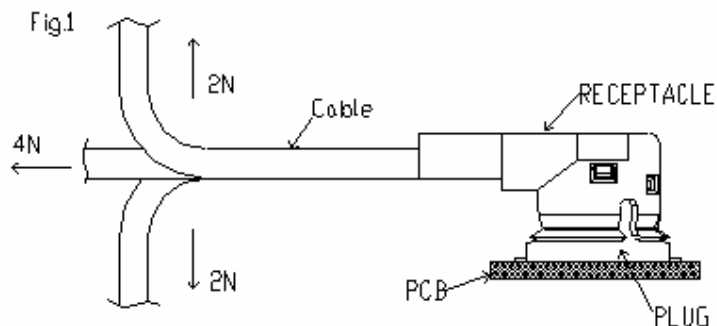
项目 Item	测试项目 Test Description	测试方法 Test Method	参考标准 Reference Standard
1	产品检查 Examination of product	依据品质检查计划外观检查 Visual according to applicable quality inspection plan.	产品规范 Product Specification
2	低功率接触阻抗 Low Level Contact Resistance	公母端连接器配合后使用最 20mV 开路电压,以最大 10mA 电流进行测试。 Apply the level condition of 20mV max. for the open circuit voltage and 10mA max. test current. then measure them that between each coupled terminal mated connector.	MIL-STD-202 Method 307
3	绝缘阻抗 Insulation Resistance	使用直流 100V, 保持 1 分钟, 测试端子与铜壳间。 100V DC is applied for one minute between Inner contact and Ground contact.	MIL-STD-202 Method 302
4	耐电压 Dielectric Withstanding Voltage	使用交流100V, 保持 1 分钟, 测试端子与铜壳间。 100V AC is applied for one minute between Inner contact and Ground contact.	MIL-STD-202 Method 301
5	驻波比 VSWR	以网络分析仪测量驻波比, 分析频率: 100MHz~6GHz Measure the VSWR as shown by the network analyzer Frequency:100MHz~6GHz	产品规范 Product Specification
6	振动 Vibration	公母端连接器配合固定在振动仪上, 15 分钟内振动频率为 10-100-10 Hz , 振幅 1.5mm, 三个相互垂直的方向进行振动, 各方向振动 5 次 (共 75 分钟), 测试过程中加载 5mA 直流电。 Mated connectors are fixed on the vibration tester's 3 mutually perpendicular planes. Vibration frequency traverse from	产品规范 Product Specification

		10Hz to 100Hz , then to 10Hz in 15 minute at 1.5mm amplitude. Test duration for each plane is 5 cycles (approx 75min). 5mA DC shall be carried to all contacts during the test with an electrical discontinuity monitor.	
7	物理冲击 Physical Shock	公母端连接器配合固定在冲击试验机上,以 75g 的加速度、半正弦冲击波的波形和 11 毫秒的冲击时间进行测试。冲击次数: 正反三个相互垂直方向各冲击 3 次, 共 18 次。测试过程中加载 100mA 直流电。 Mated connectors are fixed on the shock tester's 3 mutually perpendicular planes. Dropping 3 times each to normal and reversed 3 mutually perpendicular planes (total of 18 times). The test condition: acceleration 75g max., during of the plus: 11 ms .100mA DC shall be carried to all contacts during the test with an electrical discontinuity monitor.	MIL-STD-202G Method 213 Condition B
8	耐插拔 Durability	母端连接器焊接在板上以每分钟 25mm±3mm 的速度插拔 30 次。 Mating and Unmating the samples for 30 times at a speed of 25±3mm per minute.	产品规范 Product Specification
9	拔去力 Unmating force	以每分钟 25±3mm 的速度插拔公母连接器 Mating and unmating the connectors at a speed of 25±3mm per minute.	产品规范 Product Specification
10	对线缆施力 Give force to cable	施力于 Fig.1 方向,测试期间工作电流 100mA DC, 检查瞬间电流中断。 Apply force on the cable as shown in Fig.1, During the testing, run 100mA DC to check electrical discontinuity.	产品规范 Product Specification
11	引张强度 Crimp strength	以每分钟 25±3mm/分钟速度拉线材部分 Pull the cable as shown at a speed 25±3mm per minute	产品规范 Product Specification
12	热冲击 Thermal Shock	公母配合后,暴露在以下条件测试5个循环。一个循环条件如温度变化范围: -55°C~+85°C; 从 -55°C开始, 30分钟后换到 +85°C; 转换时间不超过30秒; 共5个循环。	产品规范 Product Specification

13	盐水喷雾 Salt Spray	公母连接器配合后, 在温度 $35^{\circ}\text{C}\pm 2^{\circ}\text{C}$ 和氯化钠溶液浓度为 $5\pm 1\%$ 的条件下测试 48 小时。 The mated connectors are exposed to the temperature of $35^{\circ}\text{C}\pm 2^{\circ}\text{C}$, $5\pm 1\%$ NaCl solution for 48 hours.	MIL-STD-202G Method 101 Condition B
14	耐湿性 Humidity	公母连接器配合后, 在温度为 $40\pm 2^{\circ}\text{C}$, 相对湿度为 $90\sim 95\%$ 的条件下测试 48 小时。 The mated connectors are exposed to the temperature of $40\pm 2^{\circ}\text{C}$, $90\sim 95\%$ relative humidity for 48 hours.	MIL-STD-202G Method 103 Condition B
15	温度寿命 Temperature Life	公母连接器配合后, 在温度为 $90^{\circ}\text{C}\pm 2^{\circ}\text{C}$ 的条件下测试 96 小时。 The mated connectors are exposed to the temperature of $90^{\circ}\text{C}\pm 2^{\circ}\text{C}$ for 96 hours,	产品规范 Product Specification

6. 测试结果 THE TEST RESULT

6.1 图示 FIGURE



对线缆施加力图示 Fig.1

6.2 测试结果概要 THE SUMMARY OF THE TEST RESULT

GROUP A :

测试项目 Test Description	要求 Requirement	结果 Result	评定 Rate
1. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product	合格 Pass
2. 耐电压 Dielectric withstanding voltage	不能有电火花产生，漏电流不能超过 2mA。 No creeping discharge or flash over shall occur, Current leakage: 2mA Max.	通过规格要求 Pass the specified requirement	合格 Pass
3. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product	合格 Pass

GROUP B& C:

测试项目 Test Description	要求 Requirement	结果 Result				评定 Rate
1. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass
2. 低功率接触阻抗 Contact resistance (Low Level)	中心导体: 初值最大 20 mΩ 外部导体: 初值最大 10 mΩ (单位: mΩ) Inner contact: 20mΩ Max. Initial Ground contact: 10mΩ Max. Initial (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	8.6	7.8	8.2	
		Ground contact	4.0	3.6	3.8	
3. 拔去力 Unmating force	综合拔去力: 初回拔去力 5N 以上, Total unmating force: Initial 5N Min. 中心导体: 初回拔去 0.15N 以上, Inner contact Unmating force : Initial 0.15N Min.	Item	Max.	Min.	Average	合格 Pass
		Total	14.5	11.22	12.86	
		Inner	0.40	0.26	0.33	
4. 耐插拔 Durability	30 次插拔后外观无异常。 After 30 cycles appearances have no abnormality.	外观无异常 Appearances have no abnormality.				合格 Pass
5. 拔去力 Unmating force	综合拔去力: 终回拔去力 3N 以上, Total unmating force: Final 3N Min. 中心导体: 终回拔去力 0.1N 以上, Inner contact Unmating force : Final 0.1N Min.	Item	Max.	Min.	Average	合格 Pass
		Total	10.10	9.4	9.75	
		Inner	0.36	0.24	0.30	
6. 低功率接触阻抗 Contact resistance (Low Level)	中心导体: 终值最大 25 mΩ 外部导体: 终值最大 15 mΩ (单位: mΩ) Inner contact: 25mΩ Max. Final Ground contact: 15mΩ Max. Final (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	12.10	8.0	10.05	
		Ground contact	4.8	3.5	4.15	
7. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass

GROUP D:

测试项目 Test Description	要求 Requirement	结果 Result				评定 Rate
1. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass
2. 低功率接触阻抗 Contact resistance (Low Level)	中心导体: 初值最大 20 mΩ 外部导体: 初值最大 10 mΩ (单位: mΩ) Inner contact: 20mΩ Max. Initial Ground contact: 10mΩ Max. Initial (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	10.0	7..8	8.9	
		Ground contact	4.4	3.4	3.9	
3. 对线缆施力 Give force to cable	外观无异常,瞬断小于 1 微秒 Appearances have no abnormality. Electrical discontinuity less than 1 u sec.	外观无异常,瞬断小于 1 微秒 Appearances have no abnormality. Electrical discontinuity less than 1 u sec.				合格 Pass
4. 低功率接触阻抗 Contact resistance (Low Level)	中心导体: 终值最大 25 mΩ 外部导体: 终值最大 15 mΩ (单位: mΩ) Inner contact: 25mΩ Max. Final Ground contact: 15mΩ Max. Final (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	10.4	8.5	9.45	
		Ground contact	4.7	3.6	4.15	
5. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass

GROUP E:

测试项目 Test Description	要求 Requirement	结果 Result				评定 Rate
1. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass
2. 低功率接触阻抗 Contact resistance (Low Level)	中心导体: 初值最大 20 mΩ 外部导体: 初值最大 10 mΩ (单位: mΩ) Inner contact :20mΩ Max. Initial Groundcontact:10mΩ Max. Initial (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	8.7	7.7	8..2	
		Ground contact	3.6	3.3	3.45	
3. 振动 Vibration	外观无异常,瞬断小于 1 微秒 Appearances have no abnormality. Electrical discontinuity less than 1 u sec.	外观无异常,瞬断小于 1 微秒 Appearances have no abnormality. Electrical discontinuity less than 1 u sec.				合格 Pass
4. 低功率接触阻抗 Contact resistance (Low Level)	中心导体: 终值最大 25 mΩ 外部导体: 终值最大 15 mΩ (单位: mΩ) Inner contact: 25mΩ Max. Final Ground contact: 15mΩ Max. Final (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	10.8	6.9	8.85	
		Ground contact	3.9	3.6	3.75	
5. 产品检查 Examination	符合产品要求 Meet the requirements of	符合产品要求 Meet the requirements of product				合格 Pass

of Product	product		
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GROUP F:

测试项目 Test Description	要求 Requirement	结果 Result				评定 Rate
1. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass
2. 低功率接触阻抗 Contact resistance (Low Level)	中心导体: 初值最大 20 mΩ 外部导体: 初值最大 10 mΩ (单位: mΩ) Inner contact: 20mΩ Max. Initial Ground contact: 10mΩMax. Initial (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	9.0	7.4	8.2	
		Ground contact	3.9	3.3	3.6	
3. 物理冲击 Physical shock	外观无异常,瞬断小于 1 微秒 Appearances have no abnormality. Electrical discontinuity less than 1 u sec.	外观无异常,瞬断小于 1 微秒 Appearances have no abnormality. Electrical discontinuity less than 1 u sec.				合格 Pass
4. 低功率接触阻抗 Contact resistance (Low Level)	中心导体: 终值最大 25 mΩ 外部导体: 终值最大 15 mΩ (单位: mΩ) Inner contact: 25mΩ Max. Final Ground contact: 15mΩ Max. Final (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	9.5	7.8	8.65	
		Ground contact	4.9	3.6	4.25	
5. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass

GROUP G:

测试项目 Test Description	要求 Requirement	结果 Result				评定 Rate
1. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass
2. 低功率接触阻抗 Contact resistance (Low Level)	中心导体: 初值最大 20 mΩ 外部导体: 初值最大 10 mΩ (单位: mΩ) Inner contact: 20mΩ Max. Initial Ground contact: 10mΩMax. Initial (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	8.4	7.3	7.85	
		Ground contact	3.7	3.3	3.5	
3. 绝缘阻抗 Insulation resistance	最小 500 MΩ 500MΩ Min. Initial	通过规格要求 Pass the specified requirement				合格 Pass
4. 耐电压 Dielectric withstanding voltage	不能有电火花产生, 漏电流不能超过 2mA。 No creeping discharge or flash over shall occur, Current leakage: 2mA Max.	通过规格要求 Pass the specified requirement				合格 Pass

5. 热冲击 Thermal shock	外观无异常 Appearances have no abnormality.	外观无异常 Appearances have no abnormality				合格 Pass
6. 绝缘阻抗 Insulation resistance	最小 100 MΩ 100MΩ Min. Final	通过规格要求 Pass the specified requirement				合格 Pass
7. 耐电压 Dielectric withstanding voltage	不能有电火花产生，漏电流不能超过 2mA。 No creeping discharge or flash over shall occur, Current leakage: 2mA Max.	通过规格要求 Pass the specified requirement				合格 Pass
8.低功率接触阻抗 Contact resistance (Low Level)	中心导体：终值最大 25 mΩ 外部导体：终值最大 15 mΩ (单位: mΩ) Inner contact: 25mΩ Max. Final Ground contact: 15mΩ Max Final (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	9.6	7.4	8.5	
		Ground contact	4.8	4.2	4.5	
9. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass

GROUP H:

测试项目 Test Description	要求 Requirement	结果 Result				评定 Rate
1. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass
2.低功率接触阻抗 Contact resistance (Low Level)	中心导体：初值最大 20 mΩ 外部导体：初值最大 10 mΩ (单位: mΩ) Inner contact: 20mΩ Max. Initial Ground contact: 10mΩ Max. Initial (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	9.1	8.7	8.9	
		Ground contact	3.7	2.8	3.25	
3. 绝缘阻抗 Insulation resistance	最小 500 MΩ 500MΩ Min. Initial	通过规格要求 Pass the specified requirement				合格 Pass
4. 耐电压 Dielectric withstanding voltage	不能有电火花产生，漏电流不能超过 2mA。 No creeping discharge or flash over shall occur, Current leakage: 2mA Max.	通过规格要求 Pass the specified requirement				合格 Pass
5. 耐湿性 Humidity	外观无异常 Appearances have no abnormality.	外观无异常 Appearances have no abnormality				合格 Pass
6. 绝缘阻抗 Insulation resistance	最小 100 MΩ 100MΩ Min. Final	通过规格要求 Pass the specified requirement				合格 Pass
7. 耐电压 Dielectric withstanding voltage	不能有电火花产生，漏电流不能超过 2mA。 No creeping discharge or flash over shall occur, Current	通过规格要求 Pass the specified requirement				合格 Pass

	leakage: 2mA Max.					
8.低功率接触阻抗 Contact resistance (Low Level)	中心导体: 终值最大 25 mΩ 外部导体: 终值最大 15 mΩ (单位: mΩ) Inner contact: 25mΩ Max. Final Ground contact: 15mΩ Max. Final (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	10.7	9.0	9.85	
		Ground contact	4.5	3.7	4.1	
9. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass

GROUP I:

测试项目 Test Description	要求 Requirement	结果 Result				评定 Rate
1. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass
2.低功率接触阻抗 Contact resistance (Low Level)	中心导体: 初值最大 20 mΩ 外部导体: 初值最大 10 mΩ (单位: mΩ) Inner contact: 20mΩ Max. Initial Ground contact: 10mΩMax. Initial (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	7.7	6.8	7.25	
		Ground contact	3.8	3.6	3.7	
3. 盐水喷雾 Salt spray	样品试验后无明显腐蚀, 且通过以下步骤测试要求。 No evident corrosion, and the specimens shall pass the requirements of following test items.	无腐蚀现象, 其他见以下测试 No corrosion occur, and see the following test items..				合格 Pass
4.低功率接触阻抗 Contact resistance (Low Level)	中心导体: 终值最大 25 mΩ 外部导体: 终值最大 15 mΩ (单位: mΩ) Inner contact: 25mΩ Max. Final Ground contact: 15mΩ Max. Final (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	10.2	8.1	9.15	
		Ground contact	4.2	3.8	4.0	
5. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass

GROUP J:

测试项目 Test Description	要求 Requirement	结果 Result				评定 Rate
1. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass
2. 绝缘阻抗 Insulation resistance	最小 500 MΩ 500MΩ Min. Initial	通过规格要求 Pass the specified requirement				合格 Pass
3.低功率接触阻抗 Contact	中心导体: 初值最大 20 mΩ 外部导体: 初值最大 10 mΩ	Item	Max.	Min.	Average	合格 Pass

	(Unit: mΩ)					
4. 温度寿命 Temperature life	外观无异常 Appearances have no abnormality.	外观无异常 Appearances have no abnormality				合格 Pass
5. 绝缘阻抗 Insulation resistance	最小 100 MΩ 100MΩ Min. Final	通过规格要求 Pass the specified requirement				合格 Pass
6.低功率接触阻抗 Contact resistance (Low Level)	中心导体: 终值最大 25 mΩ 外部导体: 终值最大 15 mΩ (单位: mΩ) Inner contact: 25mΩ Max. Final Ground contact: 15mΩ Max. Final (Unit: mΩ)	Item	Max.	Min.	Average	合格 Pass
		Inner contact	10.3	8.6	9.45	
		Ground contact	6.1	4.7	5.4	
7. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product				合格 Pass

GROUP K:

测试项目 Test Description	要求 Requirement	结果 Result			评定 Rate
1. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product			合格 Pass
2. 引张强度 Crimp strength	15N 以上 15N MIN	Max.	Min.	Average	合格 Pass
		28.5	26.1	27.3.	

GROUP L:

测试项目 Test Description	要求 Requirement	结果 Result			评定 Rate
1. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product			合格 Pass
2. 驻波比 VSWR	在 0.1GHz~3GHz 之间, 驻波比最大为 1.3; 在 3GHz~6GHz 之间, 驻波比最大为 1.5 1.3Max. at 0.1 GHz~3GHz ; 1.5Max. at 3 GHz~6GHz.	Sample NO.	0.1GHz~3GHz	3GHz~6GHz	合格 Pass
		1	1.16	1.32	
		2	1.14	1.27	
		3	1.16	1.28	
		4	1.15	1.26	
		5	1.14	1.29	
3. 产品检查 Examination of Product	符合产品要求 Meet the requirements of product	符合产品要求 Meet the requirements of product			合格 Pass

7. ANNEX----Pictures of the test equipments

		
Milliohm Meter (Contact resistance test)	Electrical Safety Analyzer (Insulation resistance test, Dielectric withstanding voltage test)	Salt Spray Tester (Salt spray test)
		
Insert/Withdrawal Force Tester (Mating/unmating force test, Durability test)	Programable Temperature & Humidity Tester (Humidity test)	Thermal Shock Tester (Thermal shock test)
		
Dry Oven (Temperature life test)		

7.材料成分及 ROHS 测试(Material composition and ROHS test)

序号 Item	物料名称 Material name	物料材质 Material	ROHS 测试结果 (ROHS test results)						测试报告编号 Number	测试日期 Date
			CD	PD	Hg	CR(VI)	PBBs	PBDEs		
1	底座	镀层	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
		胶芯	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
		铜	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		

根据测试报告如实填写铅、镉、汞、六价铬、PBBs 和 PBDEs 六项禁用物质的含量
According to the test report, fill in the content of six prohibited substances including lead, cadmium, mercury, hexavalent chromium, PBBs and PBDEs

包装材料中铅、镉、汞、六价铬总含量不超过 100ppm，镉的允许浓度为 5ppm
The total content of lead, cadmium, mercury and hexavalent chromium in packaging materials shall not exceed 100ppm, and the allowable concentration of cadmium is 5ppm

欧盟 ROHS 指令豁免条款 2011/65/EU、钢中合金元素中的铅含量达 0.35%、铝含量达 0.4%、铜合金中的铅含量达 4%
According to the exemption clause of RoHS directive 2011 / 65 / EU, the content of lead in alloy elements in steel is 0.35%, the content of aluminum is 0.4%, and the content of lead in copper alloy is 4%