

# 规格承认书

## SPECIFICATION FOR APPROVAL

日期: 2013 / 12 / 10  
Date

编号: RD1 31210002  
File No.

版本: 1.0  
Revision

客 户  
CUSTOMER:

客 户 料 号  
CUSTOMER NO:

品 名 **Bluetooth Antenna**  
PART NAME:

供 方 料 号  
SUPPLIER NO:

送样日期 Date: 2013.11.16

送样数量 Q'TY: PCS

客户确认 CUST OMER APPROVED BY		
APPROVAL	CHIEF	SUPERVISOR

供方确认 SUPPLIER SIGNATURE		
APPROVAL	CHECK	DESIGN
 Shane	ZhangLian	Qinjianyong

GX-RD-F04-A

# 承认书项目表

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8	N/A	N/A	N/A



RoHS  
Compatible

CUSTOMER  
PART NO

REV.

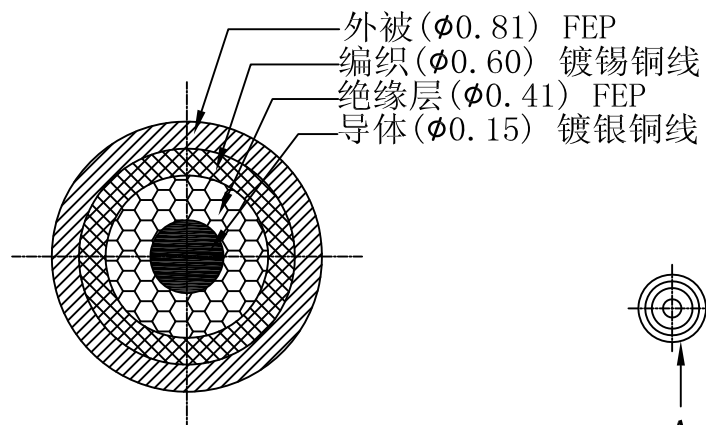
DESCRIPTION

DATE



首次发行

2013.12.10



A-SC4/1

A

32.75±0.4

1.25±0.2

0. D 0.81 Black

编织层 (镀锡)

PART NAME: Bluetooth Antenna L=32.75mm Tin

PART NO.:

DATE: 2013-12-10

APPROVED BY

CHECKED BY

DESIGNED BY



Tolerance  
X.X ±0.50  
X.XX±0.15  
X° ±3°

UNITS: mm

SCALE: 1/1

REVISION: A

覃剑勇

# 电 性 测 试 报 告

## Test Reports

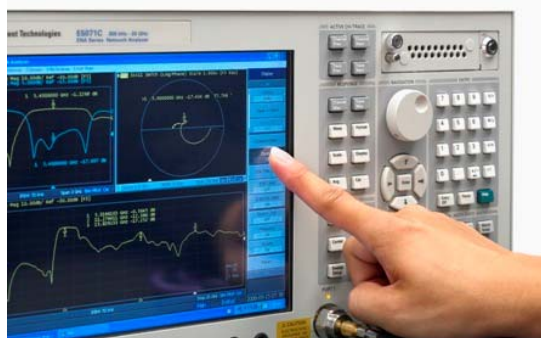
Electrical Properties	
Frequency	2.4GHz
Impedance	50 Ohm Nominal
V.S.W.R	1.92 : 1 Max
Return Loss	-10 dB Max
Radiation	Omni-directional
Gain (Peak)	2.5 dBi
Cable Loss	2.3 dB / m Max @ 2450 MHz
Polarization	Linear, Vertical
Admitted Power	1 W
Connector	
Physical Properties	
Antenna Material	FEP CU
Cable Type	O.D 0.81
Operating Temp.	-10 ~ +60 °C
Storage Temp.	-10 ~ +70 °C
Cable Color	Black



# S 参数测试

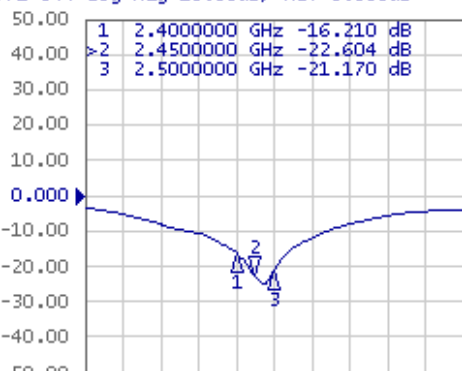
## S Parameter Test

*Agilent E5071C*

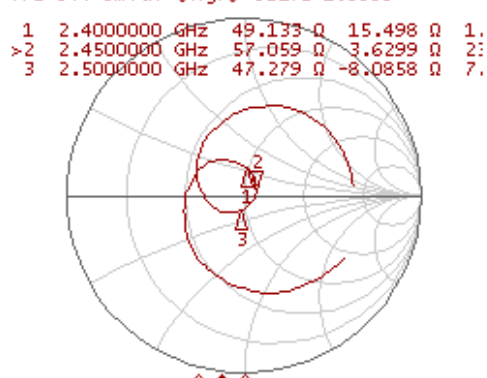


1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

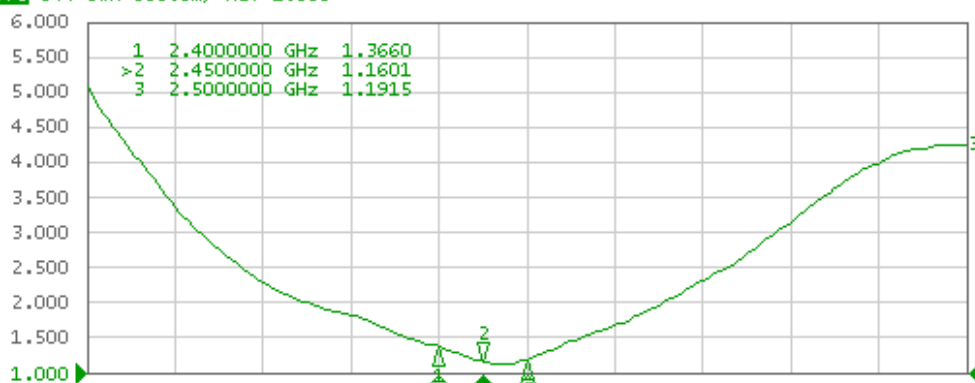
Tr1 S44 Log Mag 10.00dB/ Ref 0.000dB



Tr2 S44 Smith (R+jX) Scale 1.000U



Tr3 S44 SWR 500.0m/ Ref 1.000



1 Start 2 GHz

IFBW 70 kHz

Stop 3 GHz

Trigger

Hold

Single

Continuous

Hold  
All Channels

Continuous  
Disp Channels

Trigger Source  
Internal

Trigger Event  
On Sweep

Restart

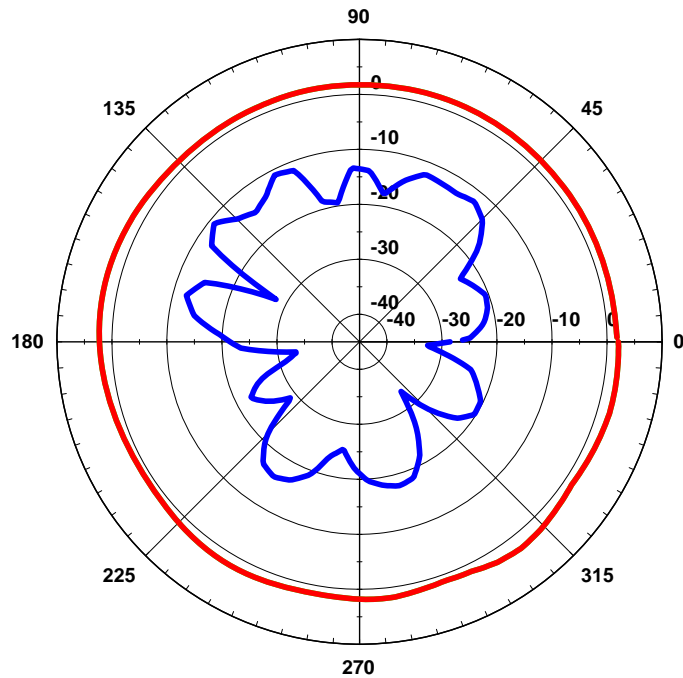
Trigger

Return

# 增益测试

## Gain Test

*Antenna  
Radiation  
Pattern  
VS  
Gain*



1. 适用范围:

Scope

本规格书制定了 RF0.81 50 Ω FEP 绝缘射频电缆的结构和电气特性.

This specification covers the construction and the electrical properties of RF0.81 50 Ω FEP Insulation Coaxial Cable

2. 结构/Construction:

单位/Unit:mm

项目/Item		详细资料/Details
导体/Conductor	材料/Material	镀银铜线/Silver plated Copper
	构成(根/mm)/Composition (No. /mm)	7/0.05±0.005
	标称直径/NOM. O. D	0.15±0.01
绝缘层 /Insulation	材料/Material	聚全氟乙丙烯/FEP
	标称外径/NOM. O. D	0.41±0.03
	颜色/Color	Natural
编织层/Braid Shield	材料/Material	镀锡铜线 Tinned copper
	构成/Composition	16/3/0.05±0.005
	标称直径/NOM. O. D	0.60±0.03
护套/Jacket	材料/Material	聚全氟乙丙烯/FEP
	标称外径/NOM. O. D	0.81±0.05
	颜色/Color	/

3. 电气特性(20℃时)/Electrical Properties(at 20℃)

项目/Item	单位/Unit	详细资料/Details	
电容/Capacitance	pF/m	98	
特性阻抗/Conductor Resistance	Ω	50±3.0	
耐压强度/Dielectric Strength	A. C V/1min	1500	
最大工作频率/Max. oper. frequency	MHz	6000	
抗拉强度/Tensile strength	kgf/mm <sup>2</sup>	1.76	
工作温度范围/Operating Temp.	℃	-55to200	
衰减/Attenuation	/	频率 /Frequency (MHz)	dB/1m
		1000	≤3.6
		2000	≤5.1
		3000	≤6.2
		4000	≤7.5
		5000	≤8.5
		6000	≤9.4
驻波比/Standing wave (0-6GHz)	/	≤1.4	

# Test Report

Report No. RLSZF001599260002

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**Applicant** SHENZHEN HILETON TECHNOLOGY CO;LTD

**Address** B BUILDING 3 FLOOR A, SHIWEI DA TIAN YANG INDUSTRIAL ZONE C,  
GONGMING OFFICE JIANGSHI COMMUNITY, GUANGMING NEW DISTRICT,  
SHENZHEN

**The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client**

Sample Name Coaxial Cable  
Part No. RF1.13/RF0.81RF1.37  
Sample Received Date Mar. 5, 2013  
Testing Period Mar. 5, 2013 to Mar. 9, 2013

**Test Requested** As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)) in the submitted sample and it was tested as mixture.

## Test Method

Test Item(s)	Test Method	Measured Equipment(s)	MDL
Lead(Pb)	IEC 62321:2008 Ed.1 Sec.9	ICP-OES	2 mg/kg
Cadmium(Cd)	IEC 62321:2008 Ed.1 Sec.9	ICP-OES	2 mg/kg
Mercury(Hg)	IEC 62321:2008 Ed.1 Sec.7	ICP-OES	2 mg/kg
Hexavalent Chromium(Cr(VI))	IEC 62321:2008 Ed.1 Annex B	UV-Vis	/

**Test Result(s)** Please refer to the following page(s).

Tested by

*Rick Li*

Reviewed by

*Vargan He*

Approved by

*Danny Liu*

Date

Mar. 9, 2013

Danny Liu

Technical Manager

No. 10784258

Centre Testing International (Shenzhen) Co., Ltd. Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China



# Test Report

Report No. RLSZF001599260002

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## Test Result(s)

Tested Item(s)	Result
Lead(Pb)	N.D.
Cadmium (Cd)	N.D.
Mercury(Hg)	N.D.
Hexavalent Chromium(Cr(VI))	Negative

**Tested Sample/Part Description** Mixed test, metal wire with silvery plating

**Note:** The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.  
-MDL = Method Detection Limit  
-N.D. = Not Detected (<MDL )  
-mg/kg = ppm = parts per million  
-Negative = Absence of Cr(VI) , the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm<sup>2</sup> sample surface area used.

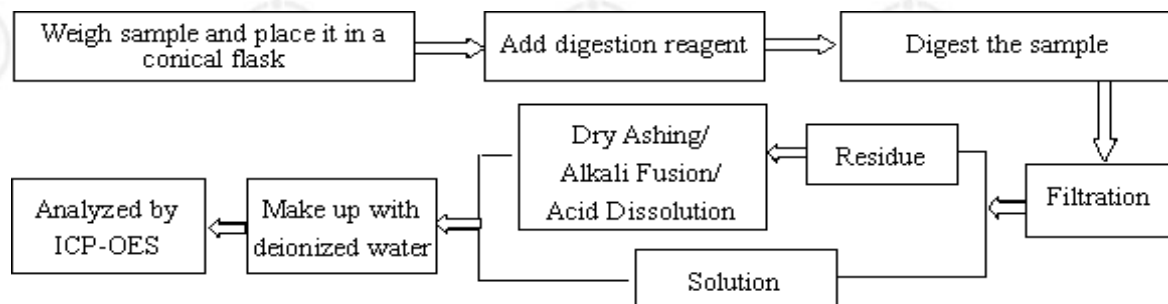
# Test Report

Report No. RLSZF001599260002

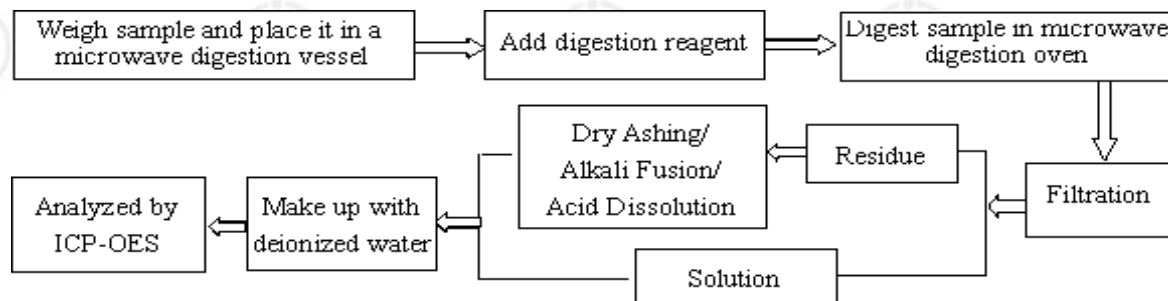
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## Test Process

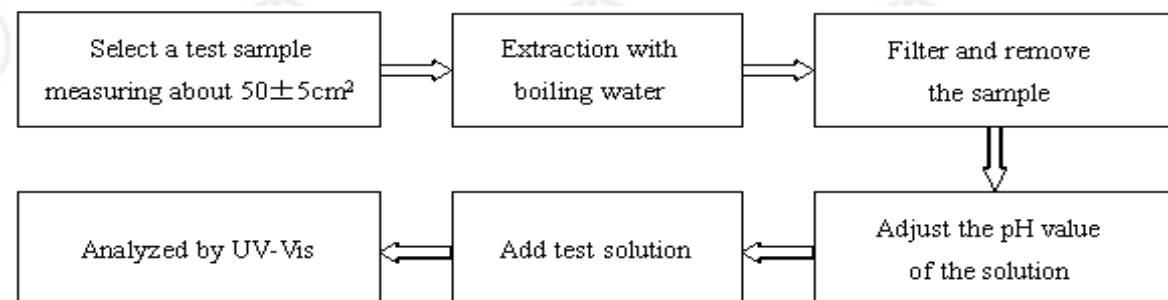
### 1. Lead(Pb), Cadmium(Cd)



### 2. Mercury(Hg)



### 3. Hexavalent Chromium(Cr(VI))



# Test Report

Report No. RLSZF001599260002

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## Photo(s) of the sample(s)



\*\*\* End of report \*\*\*

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.