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Rtant Communications Co., Ltd

Antenna SPECIFICATION

Customer: Ruili
Project: B017
Antenna Engineer: Li Hunan
Date: October 11, 2023
Version: V2.0
Project leader: Jiang Lei
15899911229



一. 项目调试简介 Introduction to Project Debugging

二. 实验室测试环境及设备 Environment and equip

三. 天线匹配电路 Antenna matching circuit

四. 暗室坐标标示 Dark room coordinate marking

五. 天线摆放位置 Antenna placement position

六. 无源数据 Passive data

七. 联系方式 contact information



Machine type	Introduction to Project Debugging			
Antenna type and frequency band information	Antenna Type	Frequency band information	antenna form	Matching changes
	BT PCB Antenna	2400-2500MHz		NO
	Antenna material	PCB		
	Antenna model	RT404-10007-A		
	manufacturer	Zhong Shan City Richsound Electronic Industrial Ltd		
Add.	No 16, East ShaGang Road, GangKou Town, ZhongShan City, GuangDong, 528447, China			



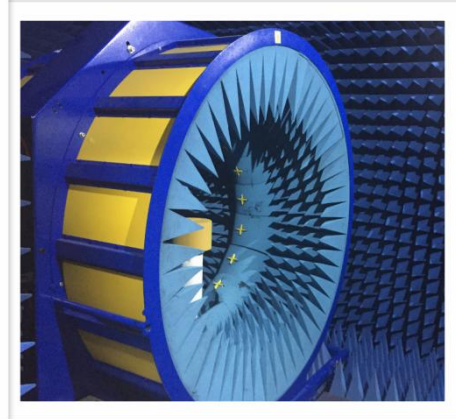
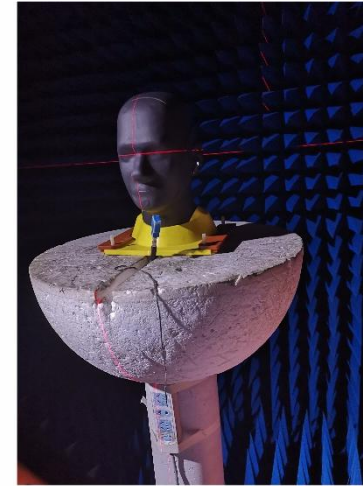
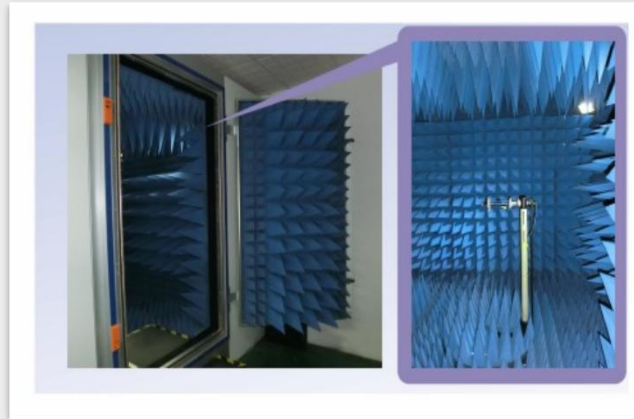
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Environment and equipment



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Items	Equipment
S11、 S12 、 VSWR 、 LOSS	network analyzer E5071B、 E8753D
Efficiency、 Gain、 3D Radiation Pattern	Satimo SG16 Darkroom, Taiwan's Top 10 7 * 4 * 3 Darkroom , E5071B, Second Generation Head
TRP、 TIS	Satimo SG16 Darkroom, Taiwan's Top 10 Darkrooms , CMW500 , Second Generation Head

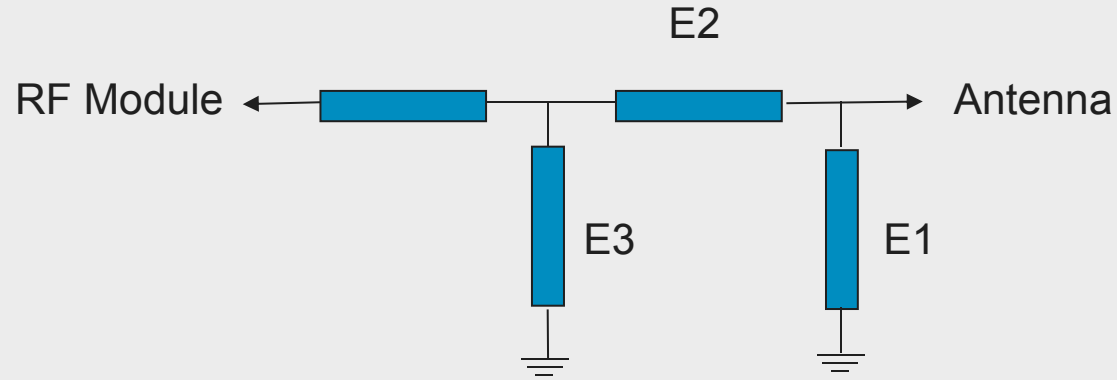
Note: The equipment used for debugging and testing in this project is marked in blue



3. Antenna matching circuit



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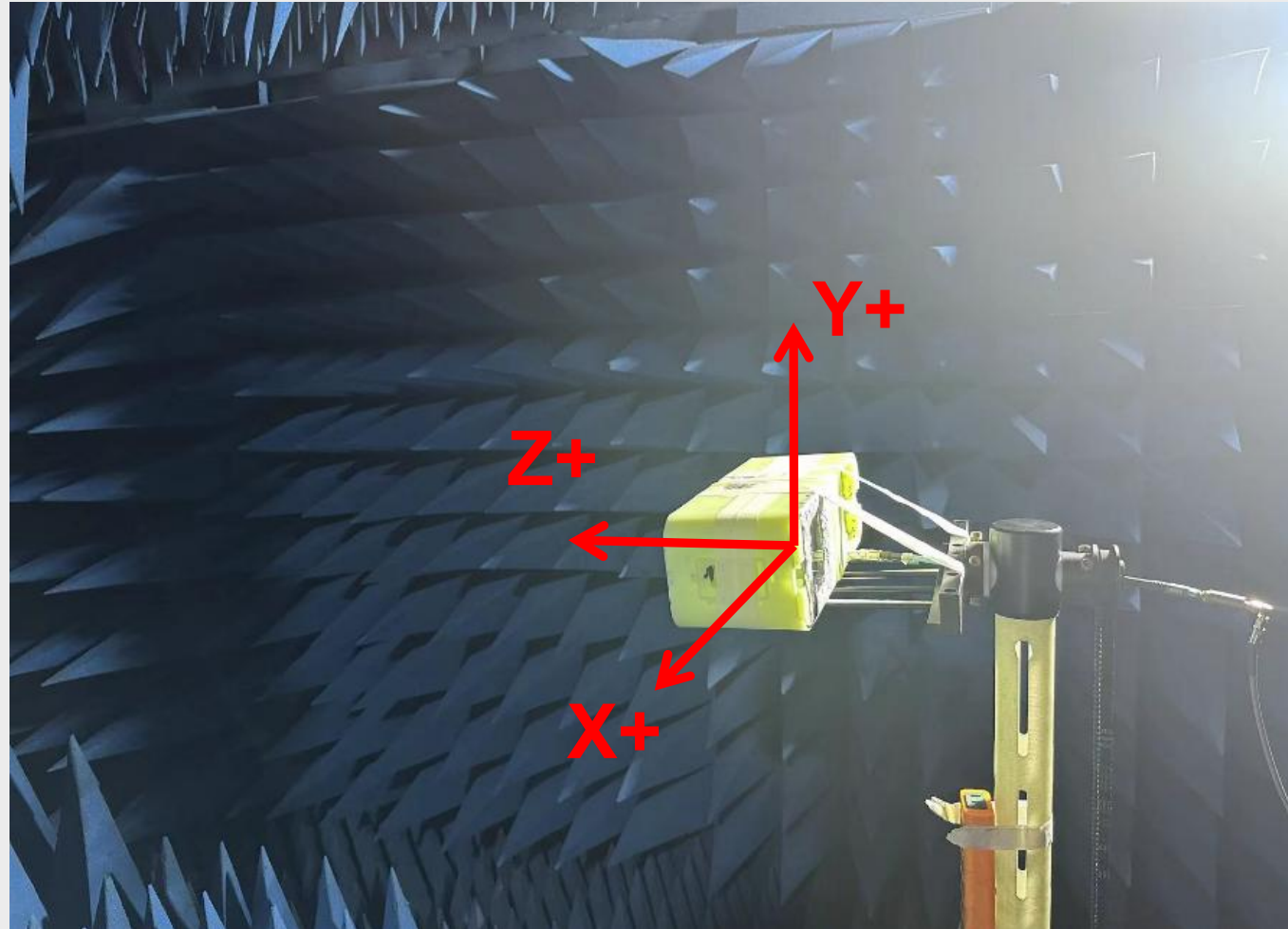
	Element	Value
	E1	No changes
	E2	No changes
	E3	No changes



4. Dark room coordinate marking



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5. Antenna placement position



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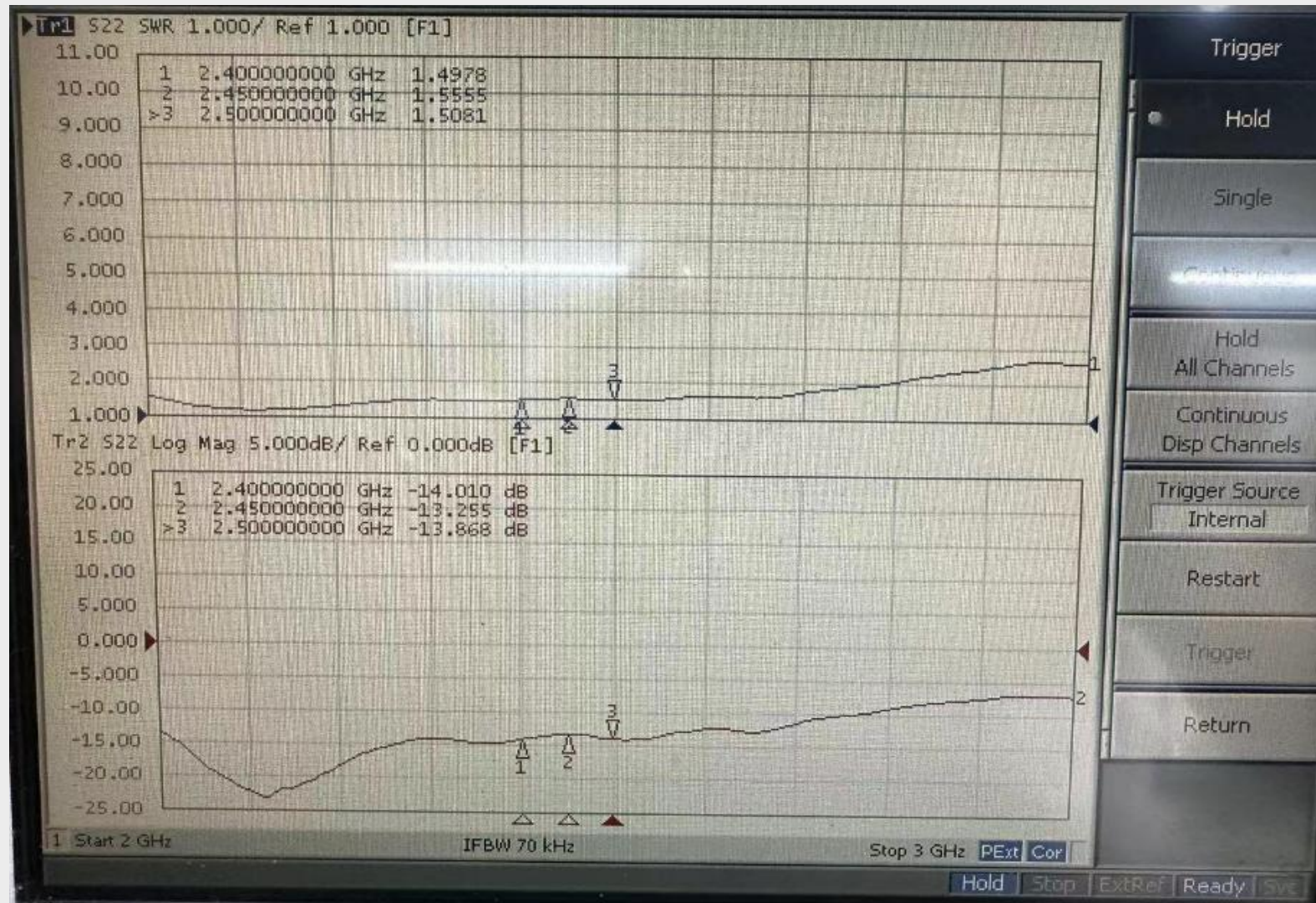
6. Passive data

R-LOSS.VSWR



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Passive
data





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Effi / Gain

Passive
data

Frequency	Efficiency (%)	Gain (dBi)
2.4GHz	45.68	2.07
2.41GHz	46.38	1.99
2.42GHz	46.96	1.84
2.43GHz	47.89	1.43
2.44GHz	48.36	1.31
2.45GHz	48.59	1.15
2.46GHz	48.43	1.12
2.47GHz	47.24	1.2
2.48GHz	47.48	1.2
2.49GHz	45.62	1.44
2.5GHz	45.93	1.26



Passive
data

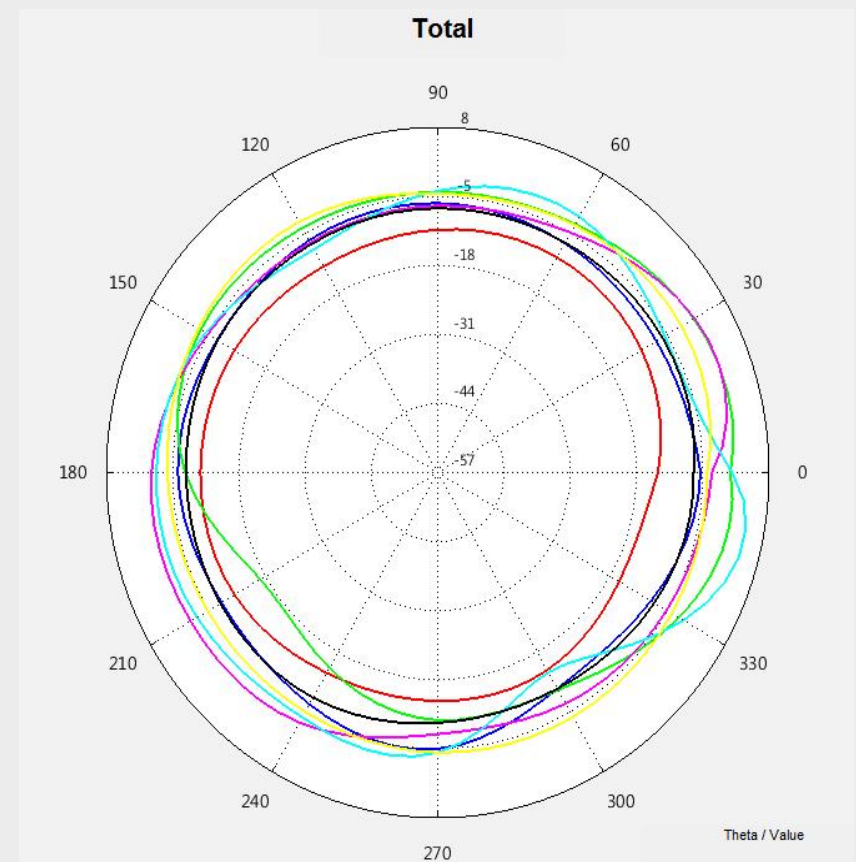
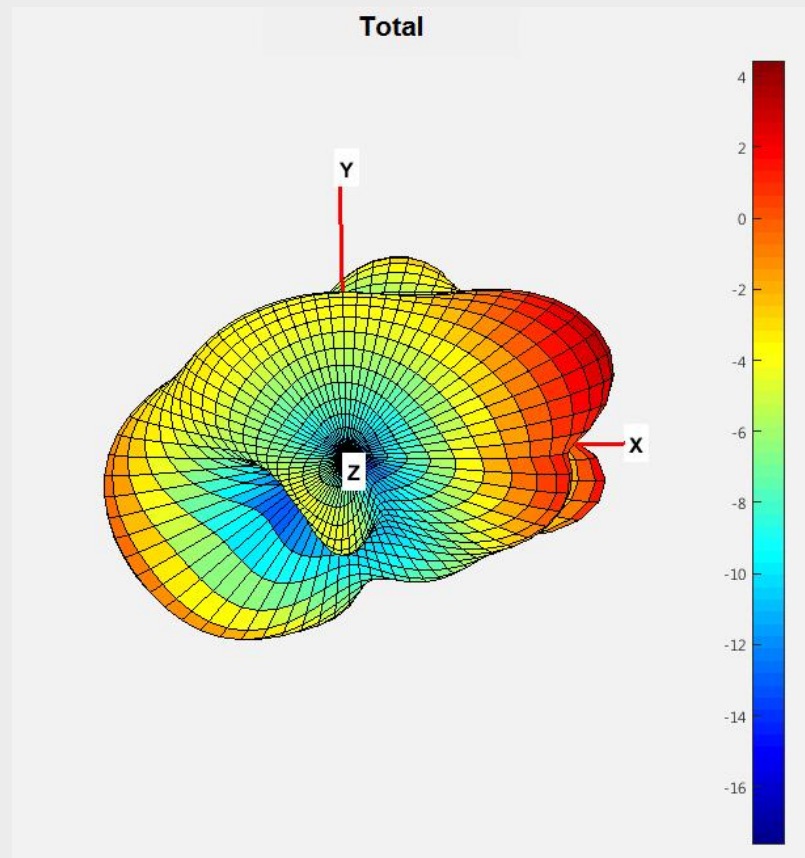


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Apple chart

2450MHz - 3D

2450MHz - 2D



Product picture

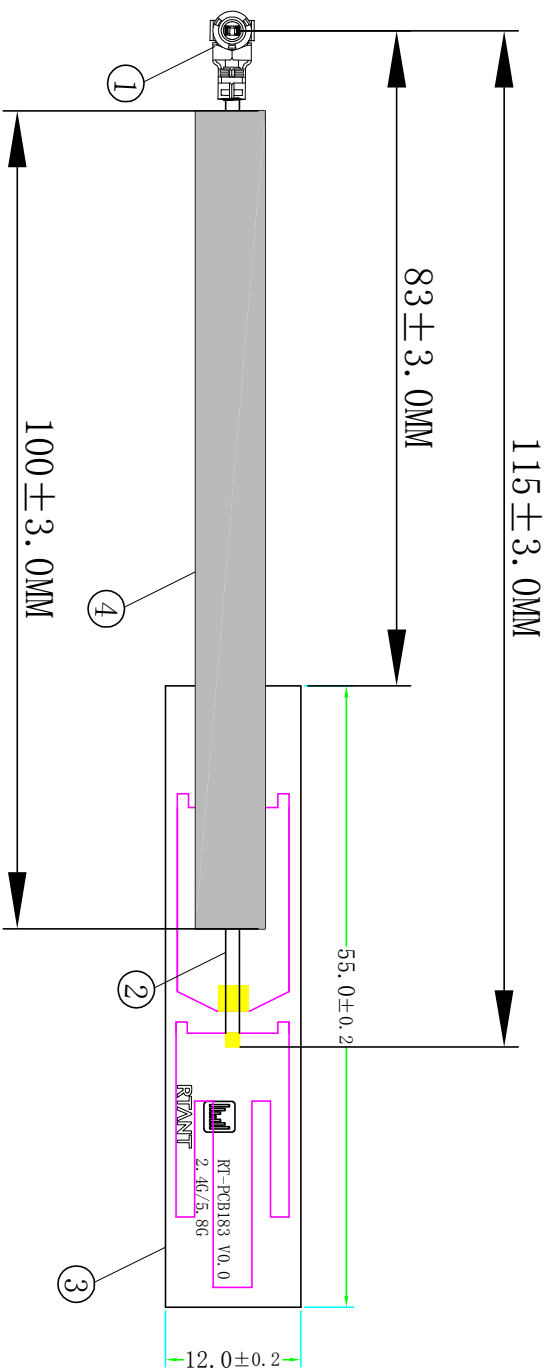


Specification

A. Electrical Properties	
Frequency Rang频段范围	2.4-2.5GHz
Impedance特性阻抗	50 Ω Nominal
VSWR电压驻波比	2.0Max. (带机盒)
Gain(peak)增益 (峰值)	2.07dBi
Efficiency效率	>40%
Out of roundness不圆度	3.0dB (Max.)
Radiation辐射方式	Omni-Directional/全向
Polarization极化方式	Linear Vertical/垂直
B. Physical Properties	
Connector Type连接方式	IPEX
Cable线材	Φ 1.13mm 灰色
Antenna Radiator天线振子体	PCB
Antenna Plastic天线塑胶	Body: Holder:
C. Environmental	
Storage Temp存储环境范围	-40 $^{\circ}$ C~+85 $^{\circ}$ C
Operating Temp工作环境	-10 $^{\circ}$ C~+60 $^{\circ}$ C
Storage humidity存储湿度	95%
Working humidity工作湿度	5%~95%

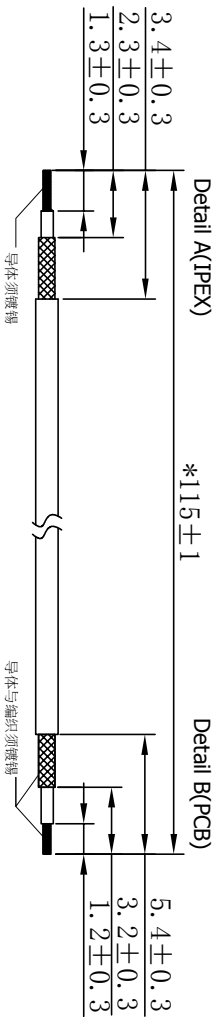
工程图

SIGN	DATE	DESCRIPTION	APPROVER
A0	23.10.25	New drawing	姜文祥



注：端子方向

剥线尺寸：
*115 ± 1



- NOTE:
1. 带"*"为重点管制尺寸;
 2. 电测:
FREQUENCY: 2.4~2.5GHz
5.15~5.85GHz
VSWR: 2.0MAX(带机壳)
 3. 工作环境: -40℃~+85℃
 4. 环保要求: RoHS;

No.	Part Number	Name	Material	Describe	Q'ty
5	---	双面胶	---	L55.0*W12.0	1
4	---	泡棉	---	L100.0*W15.0*TO.4MM	1
3	---	PCB	FR-4	字样“RT-PCB183 V0.0...”	1
2	W10-080009-A	φ1.13mm CABLE	镀锡铜	50欧姆 灰色 ROHS	1
1	Q20-160024-A	IPEX CONN#	CU	1.13 镀金	1

TITLE: 内置PCB天线		P/N: ---		CUSTOMER: 瑞利		DRAW NO.: RT404-10007-A	
DIMENSIONS TOLERANCES UNLESS OTHERWISE NOTED		SHEET: 1/1		SCALE: NONE		APPROVED	
TOLERANCE		UNIT: mm		REV: X0		DRAWN	
一般公差	XXX ±0.1	XX ±0.5	XX ±5	CHECKED	DRAWN		
	.X ±1.0	X ±3.0		姜文祥			


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contact information



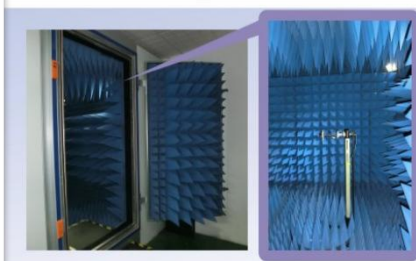
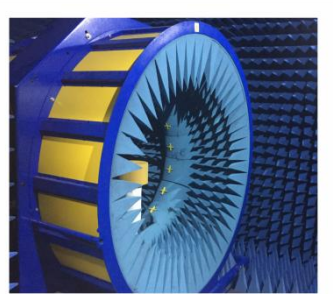
成立
11年

专注
无线

设计
研发



制造



更多了解 <http://www.rtant.com>

联系方式 - 姜磊

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东莞 (厚街) - 上海 (浦东新区)



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Thank you for your trust in Rtant