

供方 LOGO 和名称:



东莞市仁丰电子科技有限公司

Dongguan RF Electronic Technology Co., Ltd

公司地址: 东莞市塘厦镇清湖头三坑工业区1号 电话: 0769-38940168 传真: 0769-39010966 网址: <http://rflink.net.cn>

# 规格承认书

## SPECIFICATION FOR APPROVAL

客户名称 (CUSTOMER)	广东九联科技股份有限公司
客户型号 (MODEL NO)	(由九联填写)
客户料号 (PART NO)	(由九联填写)
供方型号 (MODEL NO)	(由供方填写)
供方料号 (PART NO)	U00T01S040N04819 (由供方填写)
最小包装量 (MPQ)	20 (由供方填写)
品牌 (BRAND)	Rf link (由供方填写)
送样日期 (DATE)	2023/12/22 (由供方填写)
样品数量 (QUANTITY)	30 (由供方填写)

供方确认			客户确认		
APPROVED SIGNATURES			APPROVED SIGNATURES		
承办	审核	核准	检测	审核	核准
PREPARED BY	CHECKED BY	APPROVED BY	TESTED BY	CHECKED BY	APPROVED BY

备注: 承认书一式一份; 送样时由供方**手工签名和加盖公司公章**

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联系人: 韦良松 手机: 18877417721

电子邮箱: [SevlynWei@rflink.net.cn](mailto:SevlynWei@rflink.net.cn)

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# 承 认 书

## SPECIFICATION FOR APPROVAL

客户名称

CUSTOMER NAME: 九联

产品名称

PRODUCT NAME: 2.4/5G 外露L=305/115MM

客户料号

CUSTOMER P/N:

仁丰料号

Ren Feng P/N: U00T01S040N04819 REV: A

内部结构

Internal structure: PCB


	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	杨振	
AUDITOR BY:	肖玉鹏	
APPROVED BY:	姚定军	
DATE:	2023-12-08	



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## Contents

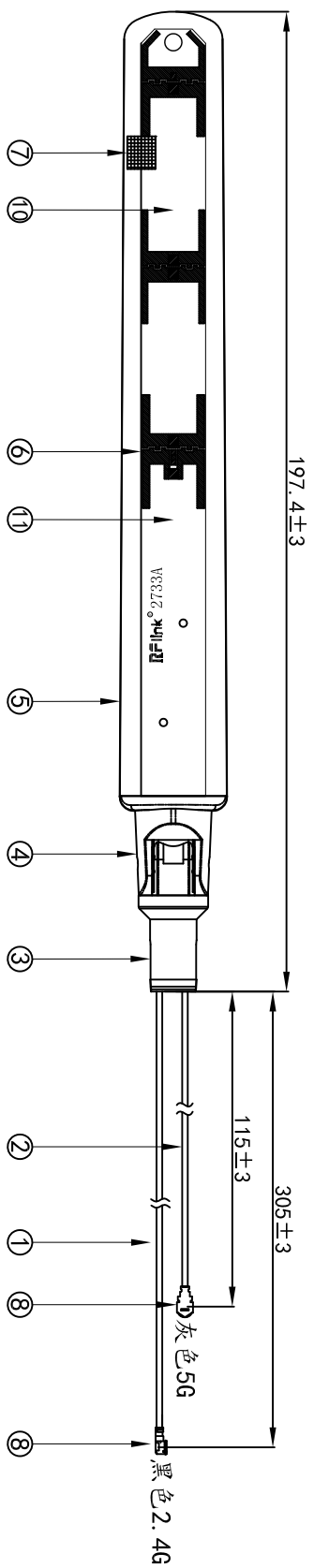
<i>Description</i>	<i>Page</i>
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产品主要技术参数

主要技术指标		Main technical specifications	
频率范围 (MHZ)	2400-2500 5150-5850	Frequency Range (MHZ)	2400-2500 5150-5850
中心频率 特性阻抗( $\Omega$ )	50	Impedance( $\Omega$ )	50
增益(dBi)	2.4G:4.95 5G:5.19	Gain(dBi)	2.4G:4.95 5G:5.19
反射损耗	$\leq -9.5$	Return Loss(dB)	$\leq -9.5$
输出电压 驻波比	$\leq 2.0$	VSWR	$\leq 2.0$
极化方式	垂直极化	Polarization	Linear, Vertical
方向性	全向性	Radiation	Omni-directional
连接方式	端子	Connector Type	MHF Plug
物理性能		Physical Properties	
天线本体材 料	PC+ABS	Antenna Base	PC+ABS
工作温度	$-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$	Operating Temp	$-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$
保存温度	$-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$	Storage Temp	$-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$

REV	DATE	DESCRIPTION
A	2023-12-08	NEW ISSUE



11	跳线	1	φ1.37 Gray
10	跳线	1	φ1.37 Black
9	铆钉	2	POM;Black
8	端子	2	Copper
7	泡棉	1	EVA;Black
6	POB板	1	FR-4
5	杆套	1	PC+ABS; Black
4	上固定座	1	ABS; Black
3	下固定座	1	PC+PBT ; Black
2	线材	1	φ1.37 Gray
1	线材	1	φ1.37 Black

NO.	DESCRIPTION	Q'TY	REMARK
1	线材	1	φ1.37 Black

尺寸 (mm)	公差 (mm)
0.1 ≤ L ≤ 6	±0.10
6.1 ≤ L ≤ 30	±0.10
30.1 ≤ L ≤ 90	±0.15
90.1 ≤ L ≤ 180	±0.20
180.1 ≤ L ≤ 315	±0.25
315.1 ≤ L ≤ 800	±0.35

APPROVED	CHECKED	DRAWING
CUSTOMER:	PART NO.:	
PARTNAME: RF Antenna Assembly	R.F P/NO. : U00T01S040N04819	
REV	UNIT	SCALE
A	mm	1:1
		A4
		10F1

角度	±0.5°
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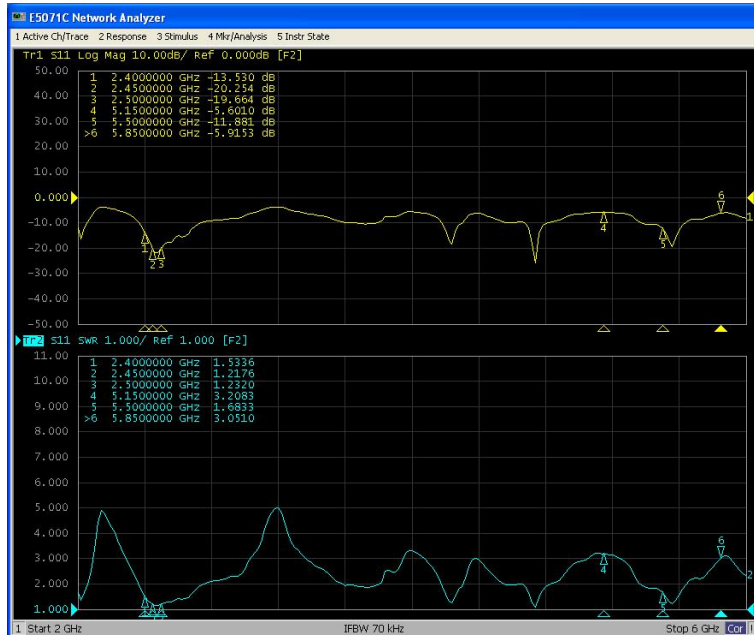
规格 (Specification) :  
 频率 (Frequency Range) : 2.4~2.5GHz  
 5.15~5.85GHz  
 回波损耗 (Return loss) : -9.5dB or less  
 驻波比 (VSWR) : 2.0max

带公差尺寸为检验尺寸	产品符合环保RoHS2.0之要求
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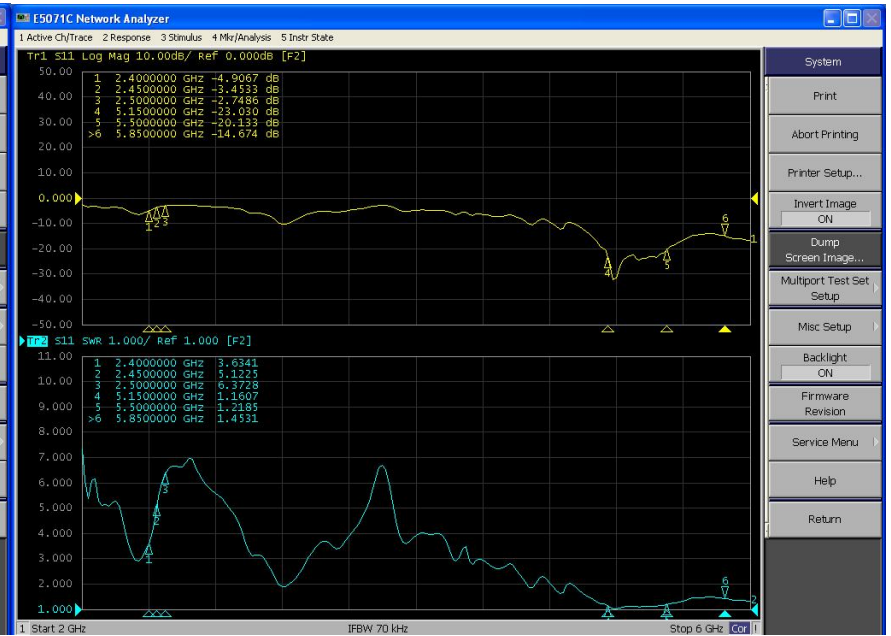
**RFlink**  
 东莞市仁丰电子科技有限公司  
 RenFeng Electronic  
 technology Co., LTD.

# 双频天线ANT2

## ANT2-2.4G/ANT2-5G回波损耗与电压驻波比VSWR



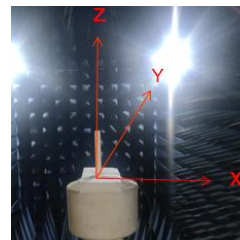
ANT2-2.4G



ANT2-5G

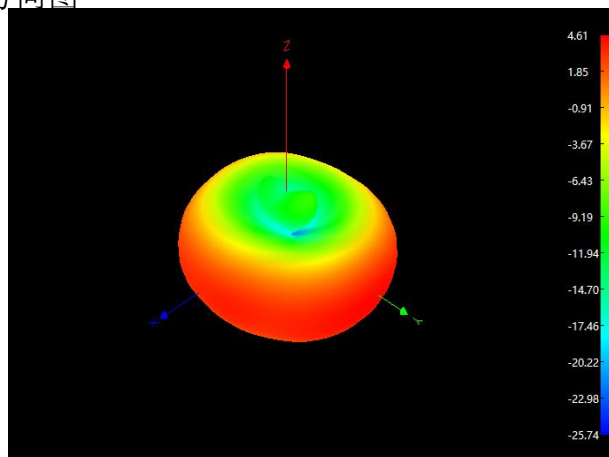
# ANT2-2.4G增益与远场方向图

2D/3D Pattern



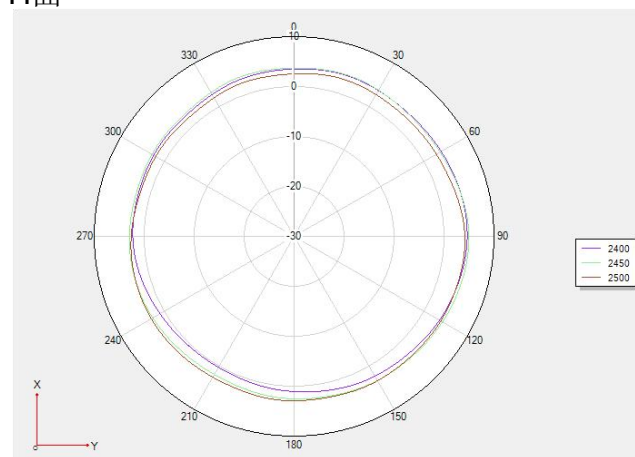
H面: XY (水平面)  
E1面: XZ  
E2面: YZ

远场方向图

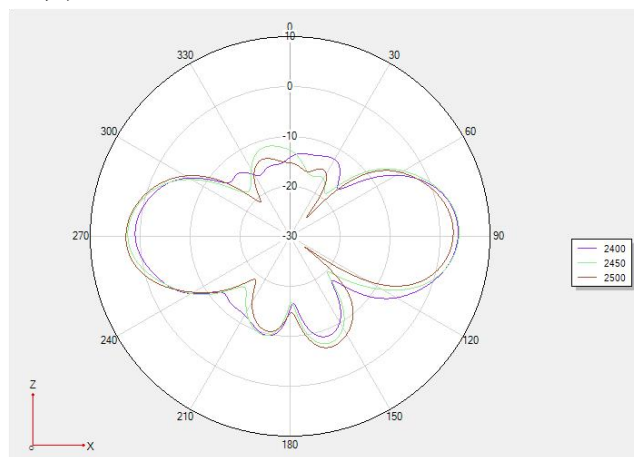


ANT2-  
2450MHz

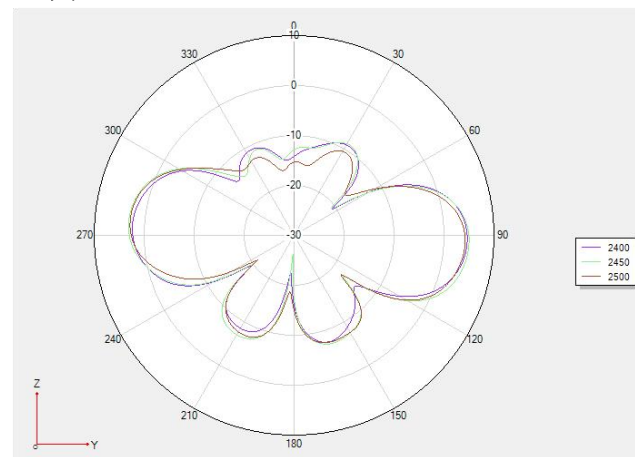
H面



E1面



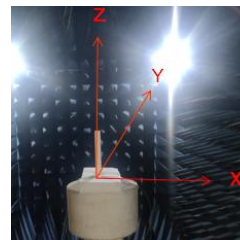
E2面





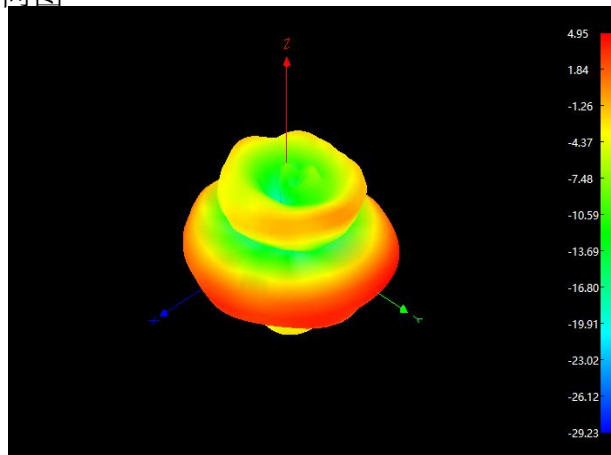
# ANT2-5G增益与远场方向图

2D/3D Pattern



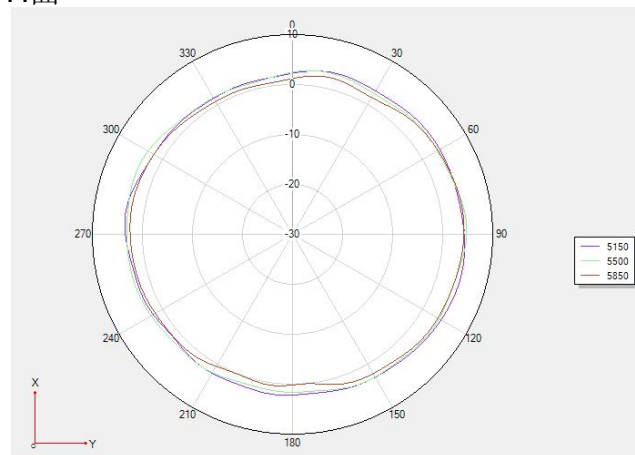
H面: XY (水平面)  
E1面: XZ  
E2面: YZ

远场方向图

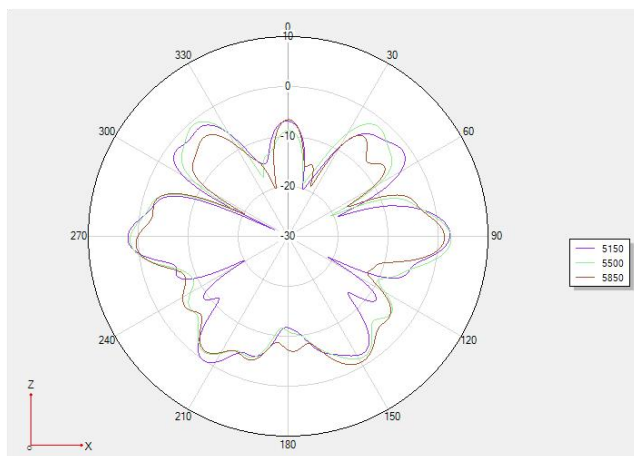


ANT2-  
5500MHz

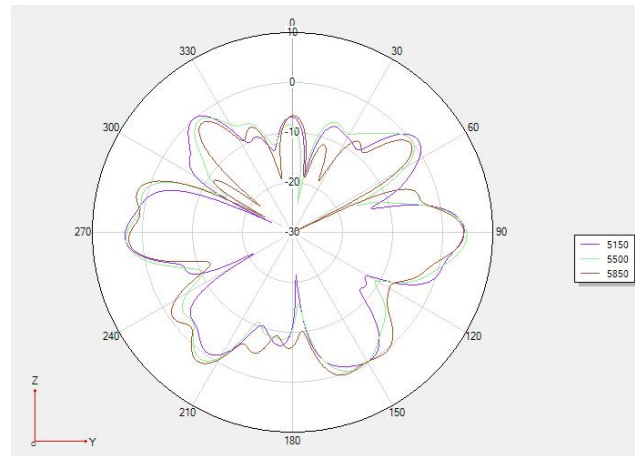
H面



E1面



E2面



# AX6000 Project

## 2.4G Peak Gain&Efficiency



2.4G_ANT2		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	65.39	4.94
2410	66.68	4.87
2420	66.97	4.80
2430	64.71	4.84
2440	67.61	4.77
2450	68.71	4.61
2460	64.42	4.62
2470	66.95	4.74
2480	67.24	4.95
2490	67.54	4.80
2500	65.95	4.79

5G_ANT2		
Freq (MHz)	Effi (%)	Gain (dBi)
5150	67.61	5.01
5200	69.02	4.95
5250	66.22	4.74
5300	70.63	4.93
5350	72.77	4.77
5400	73.83	4.71
5450	65.92	5.12
5500	68.55	4.95
5550	70.31	4.81
5600	70.31	4.67
5650	71.12	4.75
5700	70.96	4.93
5750	74.92	5.19
5800	67.92	5.05
5850	71.94	5.03

## OTA测试结果

2.4G							
Mode	Test Case	Channel	Date Rate (Mbps)	ANT1 Test Results (dBm)	ANT2 Test Results (dBm)	ANT3 Test Results (dBm)	ANT4 Test Results (dBm)
IEEE 802.11g	TRP (Total)	1	6	22.41	22.57	22.81	21.47
		6		22.50	21.37	21.78	21.38
		11		21.46	21.31	21.54	21.16
	TIS (Total)	1	54	-78.06	-78.08	-78.32	-77.24
		6		-78.60	-78.56	-78.24	-78.11
		11		-78.39	-78.35	-78.05	-77.68

5G							
Mode	Test Case	Channel	Date Rate (Mbps)	ANT1 Test Results (dBm)	ANT2 Test Results (dBm)	ANT5 Test Results (dBm)	ANT6 Test Results (dBm)
IEEE 802.11a	TRP (Total)	36	6	21.54	22.37	21.38	21.92
		149		20.65	21.21	21.66	21.88
		161		20.31	21.15	21.80	21.74
	TIS (Total)	36	54	-76.45	-76.36	-76.85	-76.69
		149		-75.88	-75.44	-76.82	-76.21
		161		-75.15	-75.05	-76.13	-76.35