

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)	U00T01S076N04821 (由供方填写)
最小包装量 (MPQ)	20 (由供方填写)
品牌 (BRAND)	RfLink (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**

地址: 广东省东莞市塘厦镇清湖头三坑路一号

电话: 0769-38940168 传真: 0769-39010966

联系人: 韦良松 手机: 18877417721

电子邮箱: SevlynWei@rflink.net.cn

公司网址: www.rflink.net.cn

承 认 书

SPECIFICATION FOR APPROVAL

客户名称

CUSTOMER NAME: 九联

产品名称

PRODUCT NAME: 2.4G 外露L=295MM

客户料号

CUSTOMER P/N:

仁丰料号

Ren Feng P/N: U00T01S076N04821 REV: B

内部结构

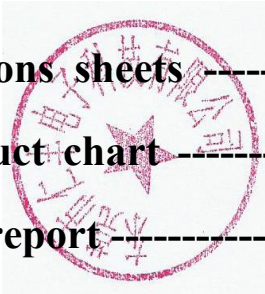
Internal structure: PCB+弹簧

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

履历表					
版次号	修改章节	修改页码	生效日期	文件和资料更改内容	更改记录人
A			2023-12-08	初版发行	杨振
B	五	5	2024-03-12	更改外观及方案	杨振

Contents

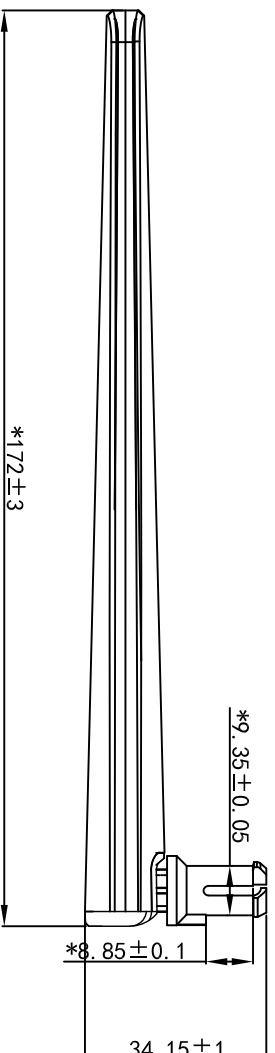
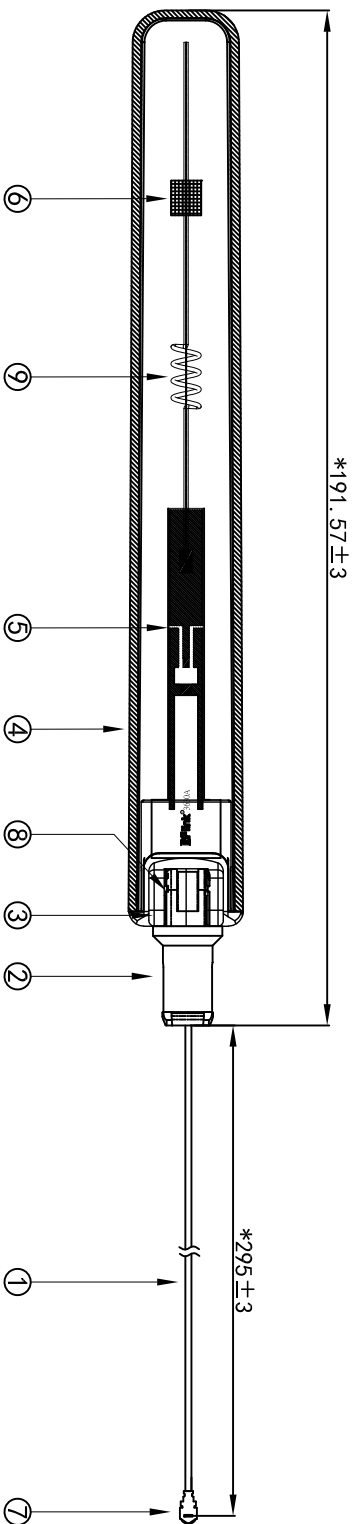
<i>Description</i>	<i>Page</i>
1、封面 Cover -----	1-2
2、履历表 Resume -----	3
3、目录 Contents-----	4
4、规格表 Specifications sheets -----	5
5、成品图 End product chart -----	6
6、测试报告 Testing report-----	7-13



产品主要技术参数

主要技术指标		Main technical specifications	
频率范围 (MHZ)	2400-2500	Frequency Range (MHZ)	2400-2500
中心频率 特性阻抗(Ω)	50	Impedance(Ω)	50
增益(dBi)	5.24	Gain(dBi)	5.24
反射损耗	≤ -10	Return Loss(dB)	≤ -10
输出电压 驻波比	≤ 1.92	VSWR	≤ 1.92
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	ABS	Antenna Base	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
B	2024-03-12	更改外观及方案



NO.	DESCRIPTION	Q'TY	REMARK
9	螺旋杆	1	Brass
8	铆钉	2	POM; Black
7	端子	1	Copper
6	泡棉	1	EVA; Black
5	POB板	1	FR-4
4	杆套	1	ABS; Black
3	上固定座	1	ABS; Black
2	下固定座	1	PC+PBT; Black
1	线材	1	Ø1.37 Black

尺寸范围 (mm)	公差 (mm)
0<L≤6	±0.10
6<L≤30	±0.10
30<L≤60	±0.15
60<L≤180	±0.20
180<L≤315	±0.25
315<L≤800	±0.35

角度	公差
角度	±0.5°

APPROVED	CHECKED	DRAWING

CUSTOMER:	PART NO.:	PARTNAME:	R.F P/NO.:
		RF Antenna Assembly	U00T01S076N04821

REV	UNIT	SCALE	SIZE	SHEET
B	mm	1:1	A4	10F1

规格 (Specification) :
 频率 (Frequency Range) : 2.4~2.5GHz
 回波损耗 (Return loss) : -10dB or less
 驻波比 (VSWR) : 1.92max

RFlink
 东莞市仁丰电子科技有限公司
 RenFeng Electronic
 technology Co., LTD.

A

B

C

D

E

F

G

A

B

C

D

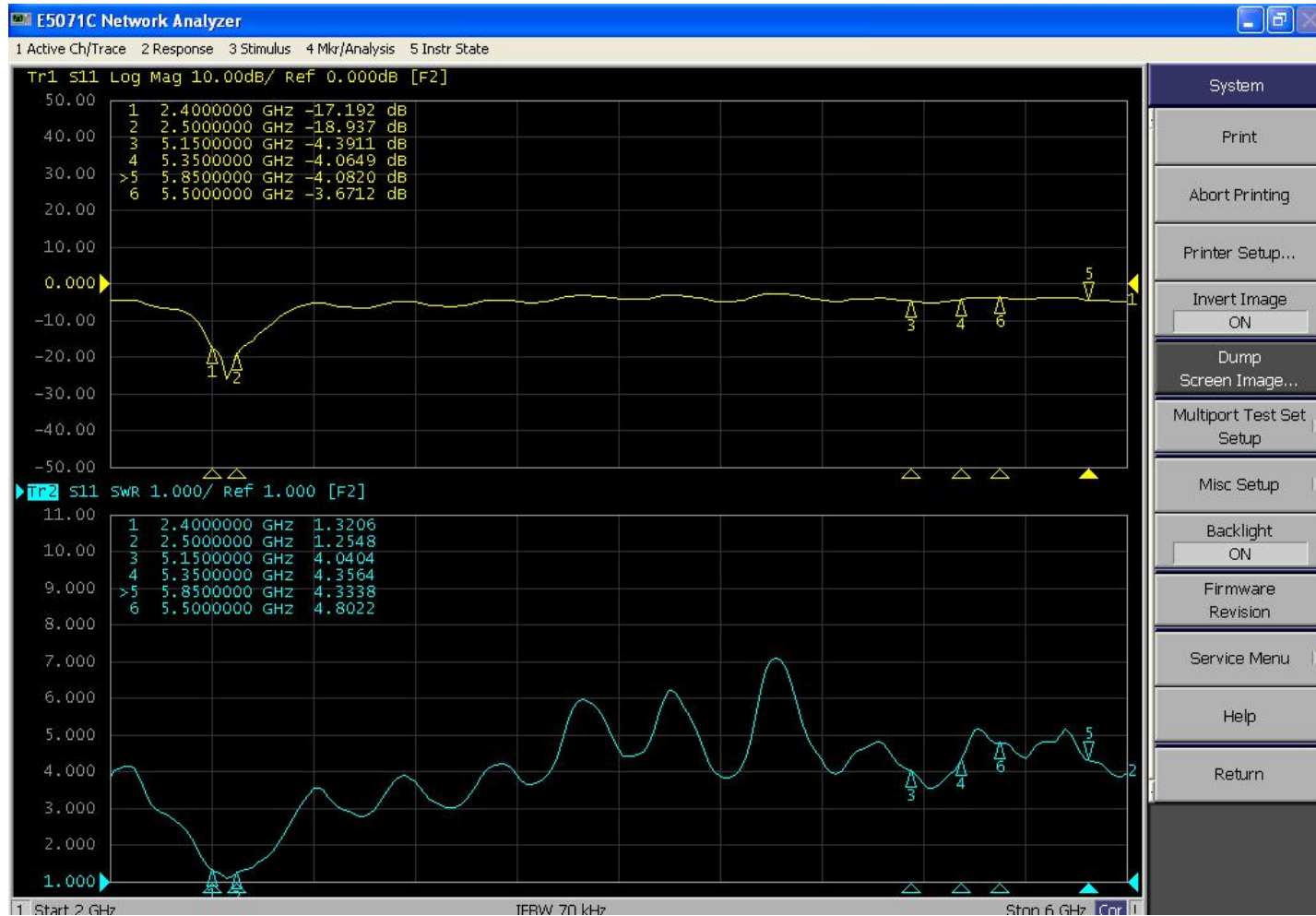
E

F

G

单频2.4G天线

ANT4-2.4G回波损耗与电压驻波比VSWR



ANT4-2.4G

ANT4增益与远场方向图

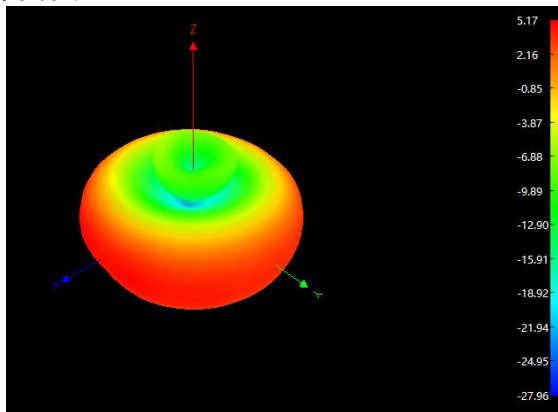
2D/3D Pattern

H面: XY (水平面)

E1面: XZ

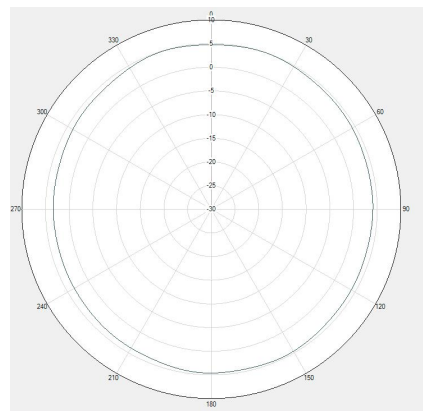
E2面: YZ

远场方向图

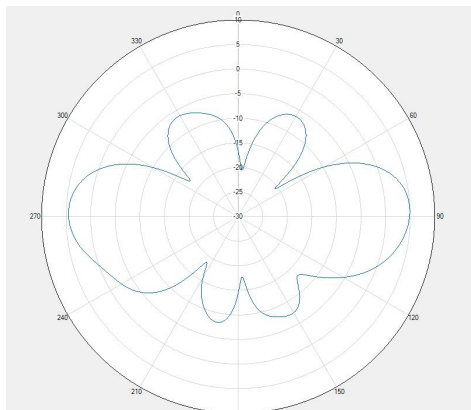


ANT4-
2400MHz

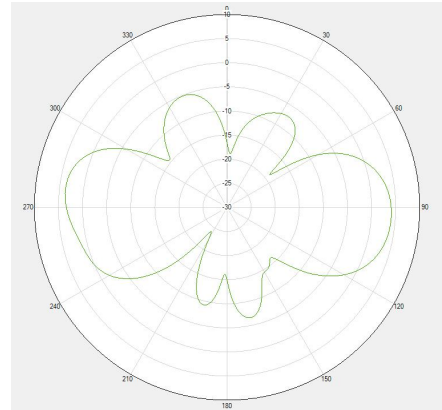
H面



E1面



E2面



ANT4增益与远场方向图

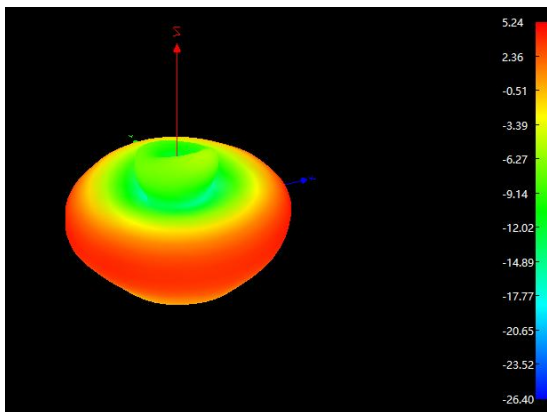
2D/3D Pattern

H面: XY (水平面)

E1面: XZ

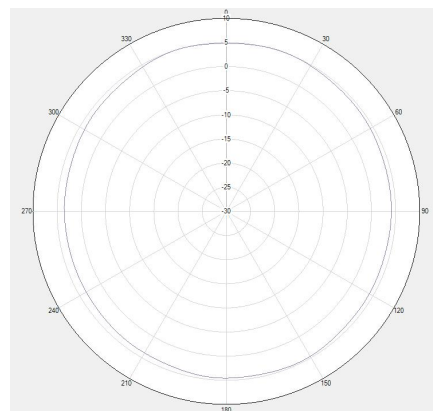
E2面: YZ

远场方向图

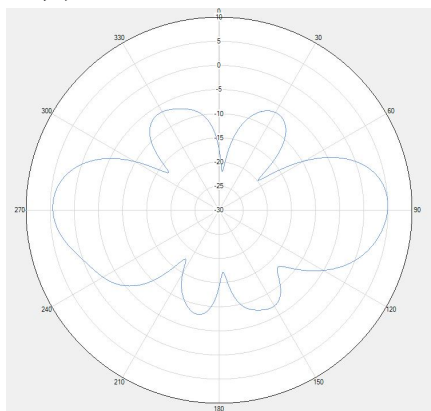


ANT4-
2450MHz

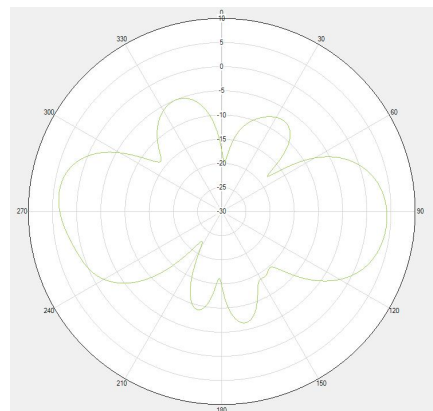
H面



E1面



E2面



ANT4增益与远场方向图

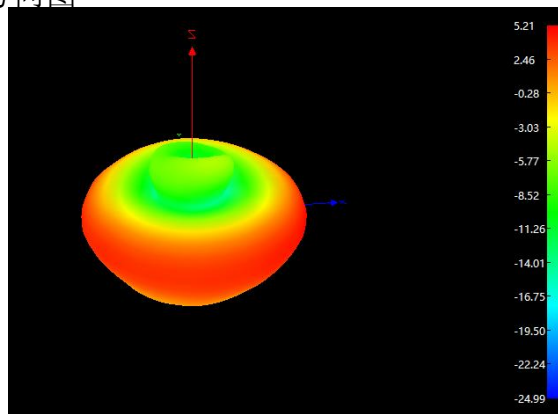
2D/3D Pattern

H面: XY (水平面)

E1面: XZ

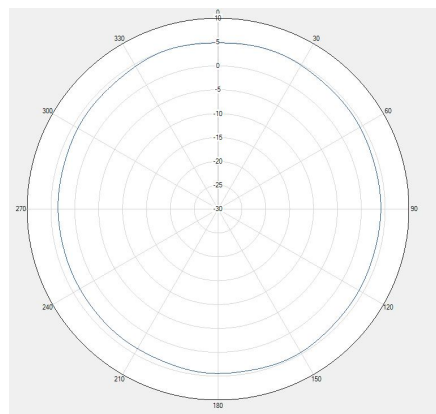
E2面: YZ

远场方向图

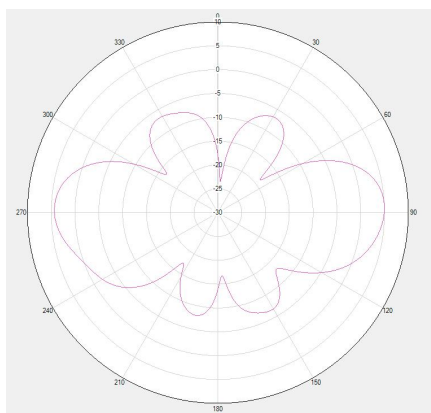


ANT4-
2500MHz

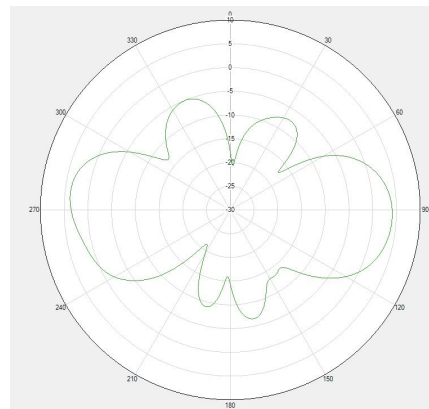
H面



E1面



E2面



AX6000 Project

2.4G Peak Gain&Efficiency



2.4G_ANT4		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	71.78	5.17
2410	74.30	4.92
2420	72.16	4.97
2430	72.51	4.77
2440	73.80	4.93
2450	70.25	5.24
2460	71.45	5.05
2470	74.30	5.01
2480	73.28	5.17
2490	70.31	5.20
2500	68.55	5.21

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

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 (MAX)	1	6	28.16	28.60	30.21	29.92
				28.79	28.61	29.41	28.65
				29.11	29.24	28.95	28.63
	TIS (MIN)	1	54	-85.79	-85.12	-86.64	-86.20
				-85.92	-85.76	-86.62	-85.97
				-86.69	-85.88	-85.73	-86.48

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 (MAX)	36	6	29.16	29.82	29.35	29.16
		149		28.72	28.54	29.22	28.74
		161		28.01	28.31	28.83	28.69
	TIS (MIN)	36	54	-84.22	-83.80	-84.35	-84.54
		149		-83.23	-83.26	-84.22	-84.43
		161		-83.07	-83.19	-84.07.	-84.15