



东莞市仁丰电子科技有限公司

Dongguan RF Electronic Technology Co., Ltd

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规格书

SPECIFICATION FOR APPROVAL

客户名称

CUSTOMER NAME: 国光电器

产品名称

PRODUCT NAME: 2.4G BT 内置天线 L=280mm

客户料号

CUSTOMER P/N:

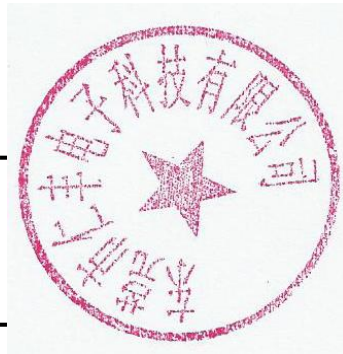
仁丰料号:

Ren Feng P/N: U00T02S000N06569 REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	赵文天	
AUDITOR BY:	姚鑫	
APPROVED BY:	姚定军	
DATE:	2024-07-19	

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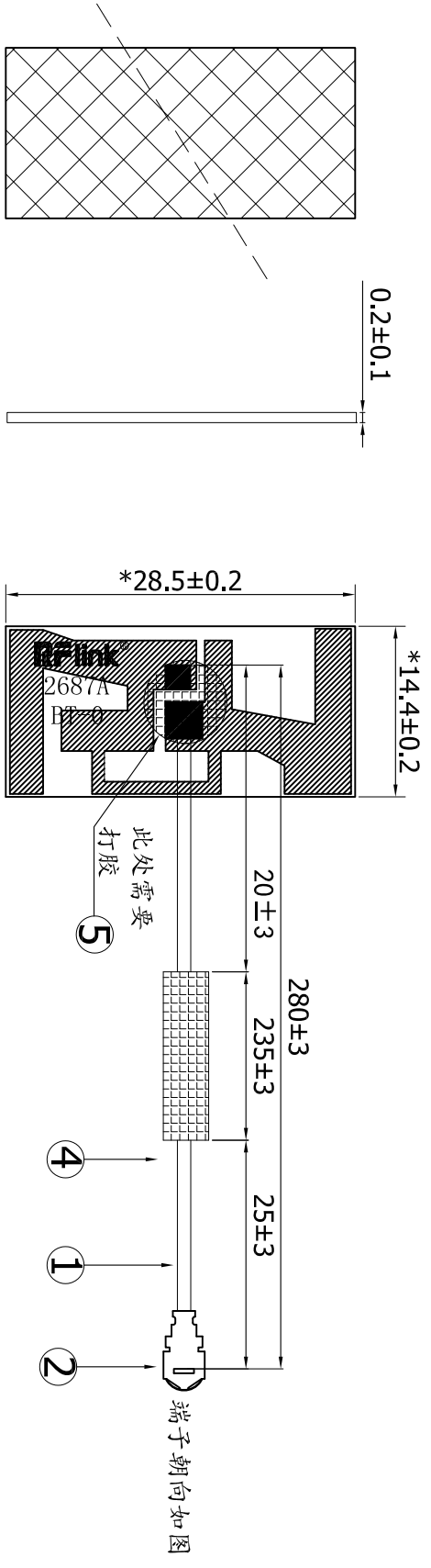
产品主要技术参数

Main technical specifications

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)	≤ 3.75	Gain(dBi)	≤ 3.75
回波损耗	≤ -9.5	Return Loss(dB)	≤ -9.5
输出电压 驻波比	≤ 2.0	VSWR	≤ 2.0
极化方式	线极化	Polarization	Linear Polarization
方向性	全向性	Radiation	Omni-directional
连接方式	端子	Connector Type	MHF Plug

REV	DATE	DESCRIPTION	Change the code
A	2024-07-19	NEW ISSUE	

虚线处切断离型纸，
做手撕位



规格 Specification:
频率 Frequency Range: 2.4-2.5GHz

NO.	DESCRIPTION	QTY	REMARK
5	胶水	1	UV胶
4	海绵	1	海绵；海绵胶
3	PCB	1	PI；
2	端子	1	Copper；
1	线材	1	φ1.37 Gray；

带公差尺寸为检验尺寸
产品符合环保RoHS2.0之要求

尺寸范围 (mm)	公差 (mm)	APPROVED
0<L≤6	±0.10	
6<L≤30	±0.10	
30<L≤90	±0.15	
90<L≤180	±0.20	
180<L≤315	±0.25	
315<L≤800	±0.35	

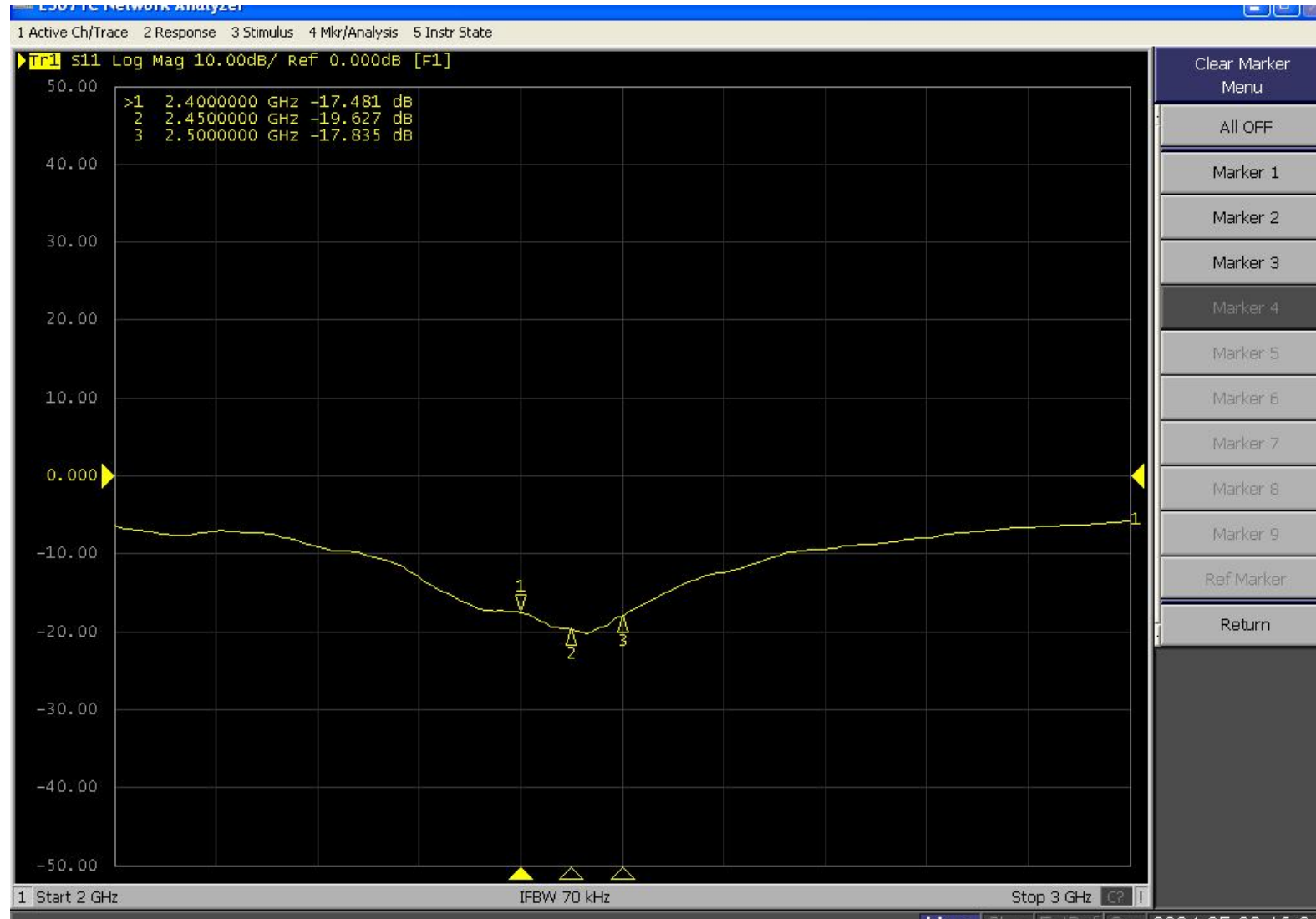
角度 ±0.5°

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

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

无源S11 (Passive S11)

◆ 无源S11 (Passive S11) 原天线新位置



无源效率、增益测试报告 (Passive efficiency and gain test report)

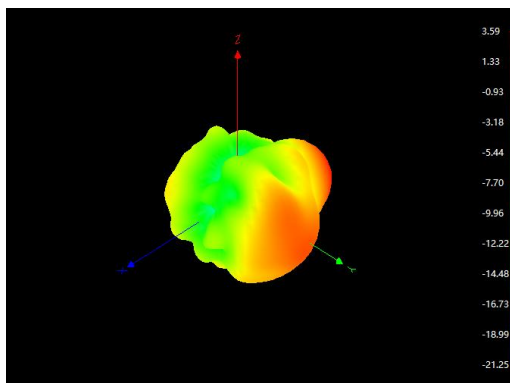
◆ 无源效率、增益测试报告 (Passive efficiency and gain test report) 新方案

Frequency / MHz	Efficiency / %	Gain/ dBi
2400	66.45	3.59
2410	67.17	3.43
2420	67.72	3.47
2430	68.27	3.57
2440	69.66	3.61
2450	69.35	3.75
2460	67.98	3.72
2470	65.54	3.69
2480	66.16	3.51
2490	64.34	3.11
2500	65.8	3.31

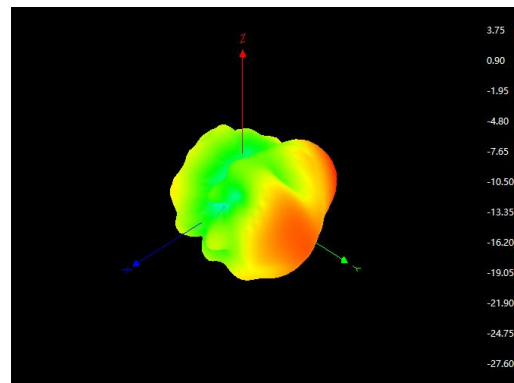
辐射方向图 (Radiation pattern)

◆ 辐射方向图 (Radiation pattern) 原天线新位置

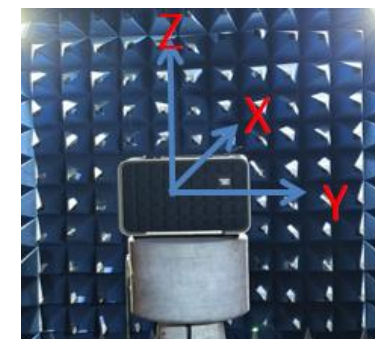
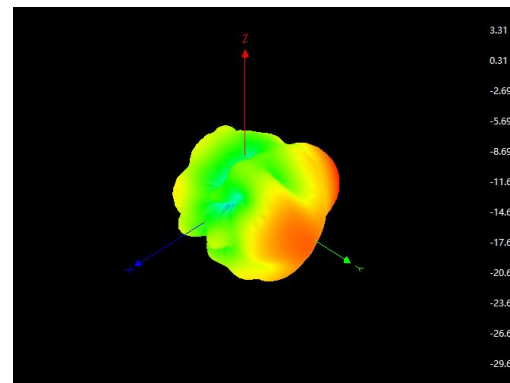
3D 2400MHz



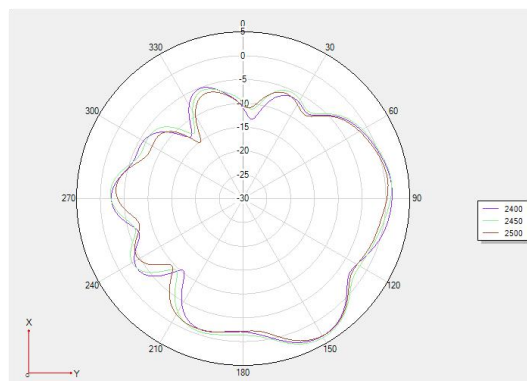
3D 2450MHz



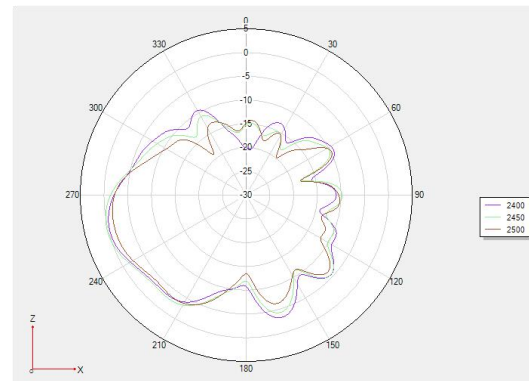
3D 2500MHz



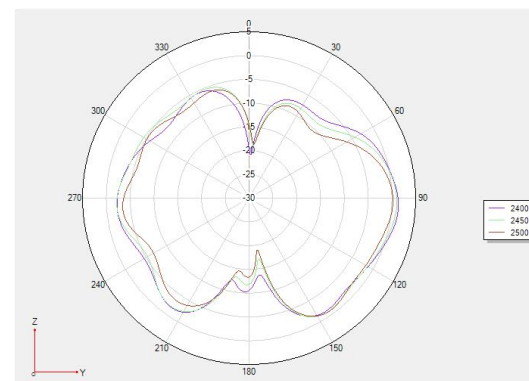
XY面



ZX面



ZY面



辐射方向图 (Radiation pattern)

◆ 有源TIS、TRP (Active TIS、TRP) 原天线新位置 #1

Item	Measurement	Azimuths	Elevations	Standard	Band	Channel	Frequency	Total
1	TRP	Every30	Every30	BLUETOOTH	BLUETOOTH	0	2402	6.26
2	TRP	Every30	Every30	BLUETOOTH	BLUETOOTH	39	2441	6.19
3	TRP	Every30	Every30	BLUETOOTH	BLUETOOTH	78	2480	6.01
4	TIS(EIRP)	Every30	Every30	BLUETOOTH	BLUETOOTH	0	2402	-91.01
5	TIS(EIRP)	Every30	Every30	BLUETOOTH	BLUETOOTH	39	2441	-90.84
6	TIS(EIRP)	Every30	Every30	BLUETOOTH	BLUETOOTH	78	2480	-90.11

辐射方向图 (Radiation pattern)

◆ 有源TIS、TRP (Active TIS、TRP) 原天线新位置 #2

Item	Measurement	Azimuths	Elevations	Standard	Band	Channel	Frequency	Total
1	TRP	Every30	Every30	BLUETOOTH	BLUETOOTH	0	2402	6.16
2	TRP	Every30	Every30	BLUETOOTH	BLUETOOTH	39	2441	6.1
3	TRP	Every30	Every30	BLUETOOTH	BLUETOOTH	78	2480	6.06
4	TIS(EIRP)	Every30	Every30	BLUETOOTH	BLUETOOTH	0	2402	-91.34
5	TIS(EIRP)	Every30	Every30	BLUETOOTH	BLUETOOTH	39	2441	-91.27
6	TIS(EIRP)	Every30	Every30	BLUETOOTH	BLUETOOTH	78	2480	-90.57

辐射方向图 (Radiation pattern)

◆ 传导TIS、TRP (Conduction TIS、TRP)

Measurement	Channel	Frequency	Total
TRP	0	2402	8.93
TRP	39	2441	8.95
TRP	78	2480	8.89
TIS	0	2402	-95
TIS	39	2441	-96
TIS	78	2480	-96