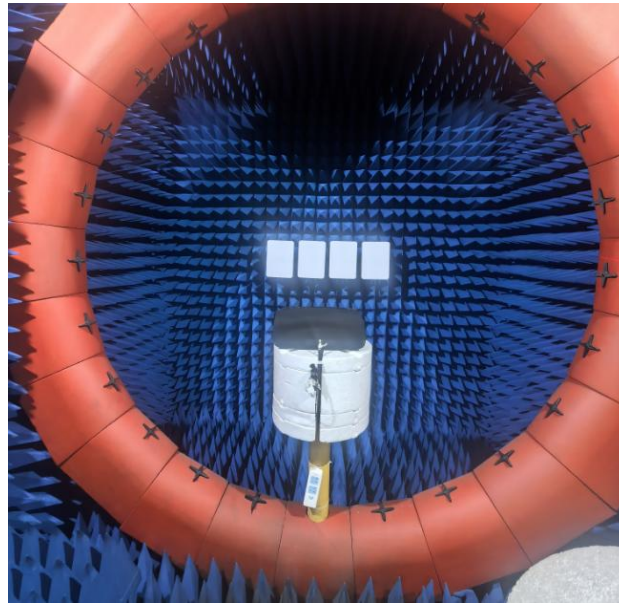
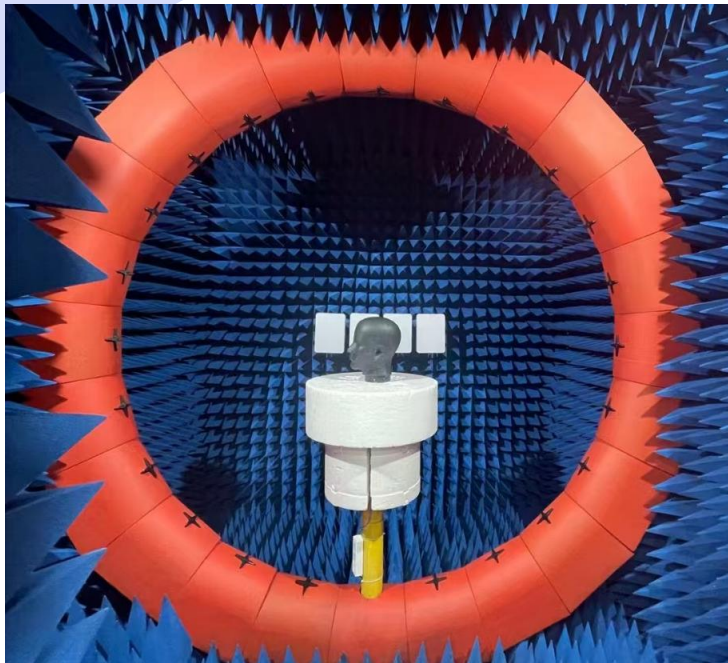


TS2415 Antenna Specifications

Customer	捷美斯
Project	TS2415
Antenna BAND	BT
Product Description	IFA (FPC+CABLE)
Product No	V1.0

Product Overview & Dimension



This report is to measure the performance of BT antenna for **TS2415**. The antenna operating frequency at (2400-2500MHZ) , All test data are showed as below.

Content

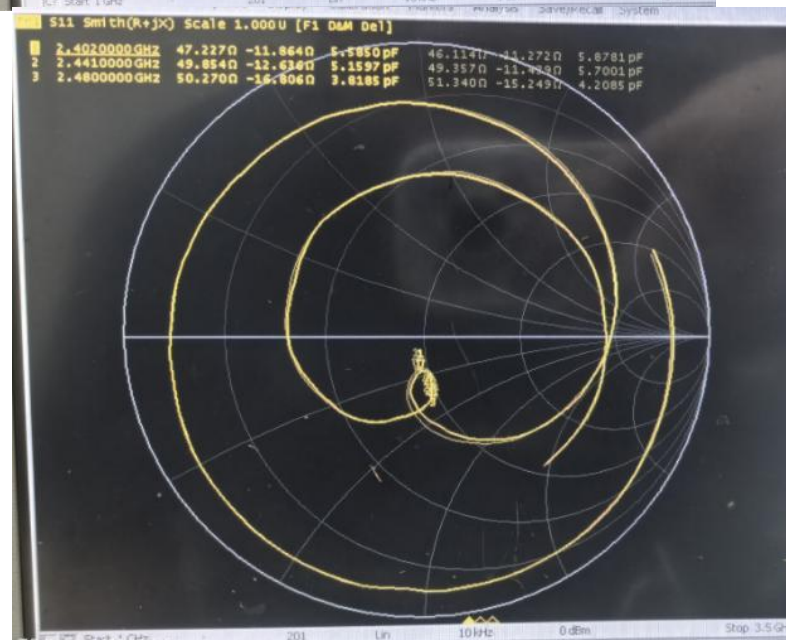
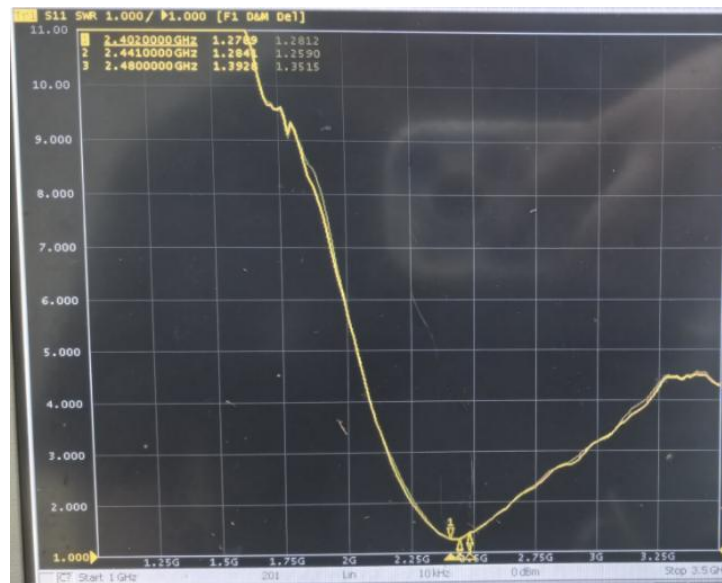
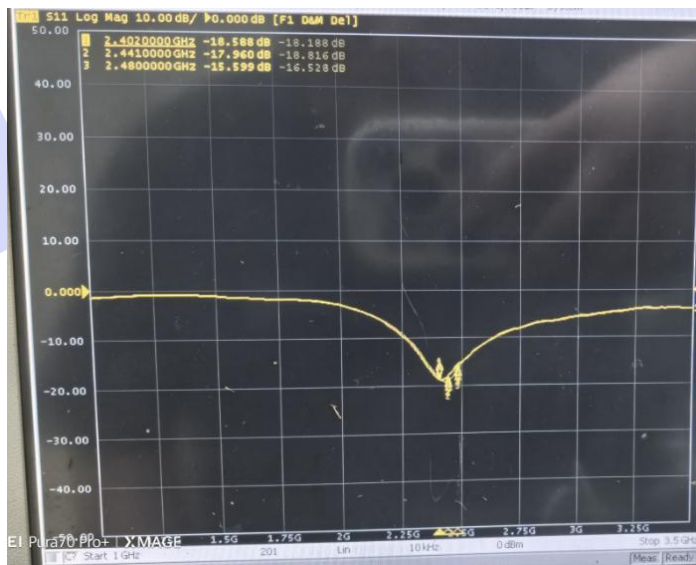
1. Product Overview & Dimension
2. Test system
3. Antenna Matching Network
4. Test Result
 - 4.1 S11 Parameter
 - 4.2 Gain & Efficiency
 - 4.3 Test coordinate
 - 4.4 2D Pattern
 - 4.5 OTA Data
 - 4.6 BT Boot measured
5. Antenna Assembly & environmental processing

2. Test System

Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & HP 8753
OTA Test	TRP&TIS	CMW500 & CMW270 ETS& FT SG24
Gain & Efficiency	Gain & Efficiency	ETS&FT SG24 Agilent 5071C



S11



Frequency (MHz)	2400	2450	2500
Smith	47.22	49.85	50.27
Log mag	-18.58	-17.96	-15.59
VSWR	1.27	1.28	1.39

Match network parameters

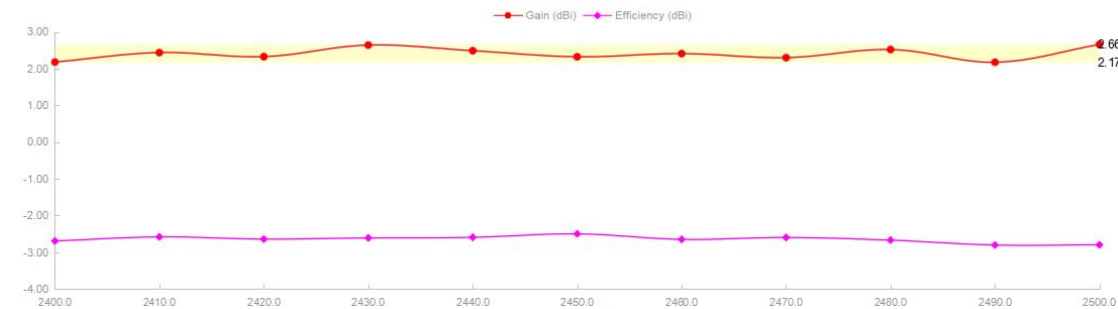
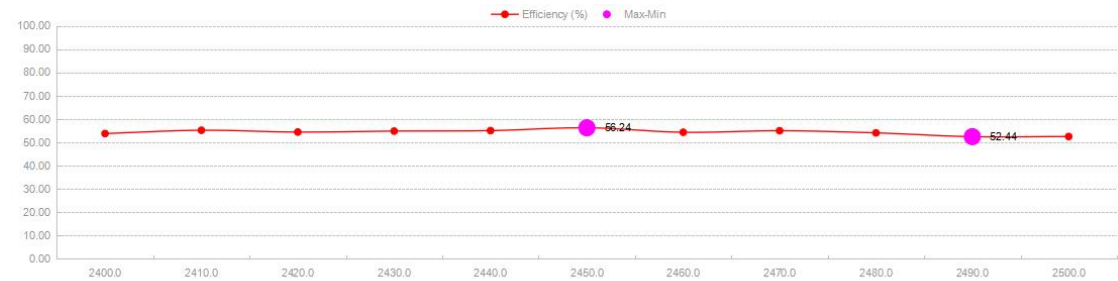


Suggest using Murata brand high-precision capacitors, resistors, and inductors, The packaging specification is 0402



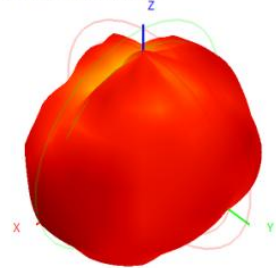
深圳市合拓科技有限公司

Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-2.69	-2.58	-2.64	-2.61	-2.59	-2.50	-2.65	-2.60	-2.67	-2.80	-2.80
Gain (dBi)	2.18	2.44	2.33	2.64	2.49	2.32	2.41	2.30	2.52	2.17	2.66
Efficiency (%)	53.79	55.19	54.42	54.83	55.04	56.24	54.33	54.99	54.07	52.44	52.51
Directivity (dB)	4.87	5.02	4.97	5.25	5.08	4.82	5.06	4.90	5.19	4.98	5.46
Peak Gain Position (Theta)	90.00	90.00	90.00	90.00	90.00	75.00	90.00	90.00	90.00	135.00	135.00
Peak Gain Position (Phi)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Efficiency ThetaPol (%)	21.19	21.72	20.89	20.91	20.99	21.96	21.28	21.90	21.89	21.59	21.88
Efficiency PhiPol (%)	32.60	33.47	33.53	33.93	34.05	34.28	33.05	33.09	32.19	30.85	30.62
Upper Hem. Efficiency (%)	29.34	29.53	29.21	29.31	29.39	29.81	29.13	29.03	29.37	27.70	27.72
Lower Hem. Efficiency (%)	24.45	25.66	25.21	25.52	25.65	26.43	25.21	25.96	24.71	24.74	24.78

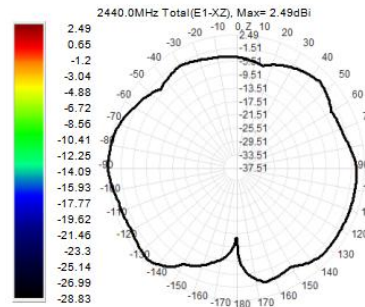
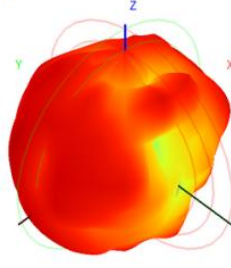


3D Pattern

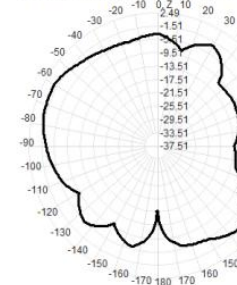
2440.0MHz Total, Eff: 55.0%



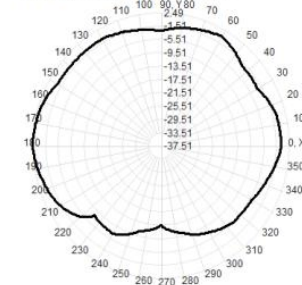
Back View



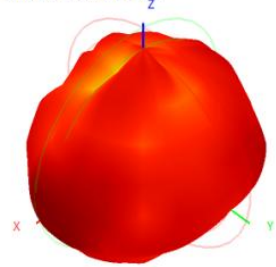
2440.0MHz Total(E2-YZ), Max= -0.59dBi



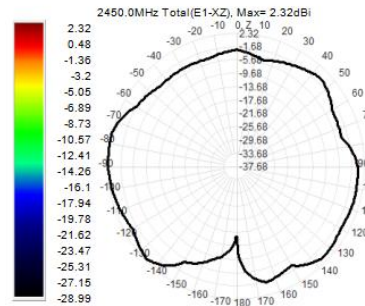
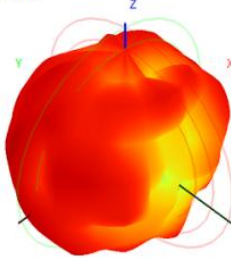
Total(H+XY), Max= 2.49dBi, CirD=16.17



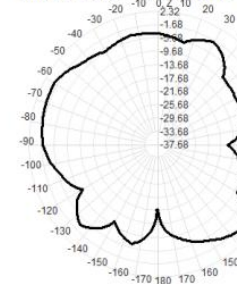
2450.0MHz Total, Eff: 56.2%



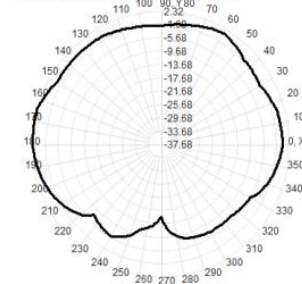
Back View



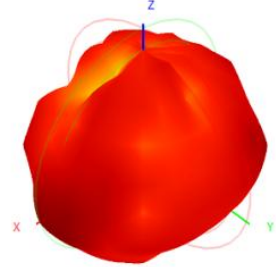
2450.0MHz Total(E2-YZ), Max= -0.66dBi



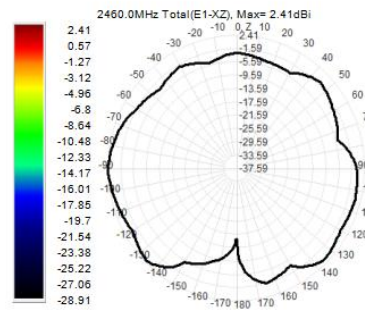
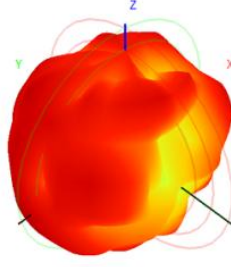
Total(H+XY), Max= 2.31dBi, CirD=18.20



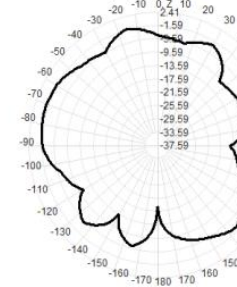
2460.0MHz Total, Eff: 54.3%



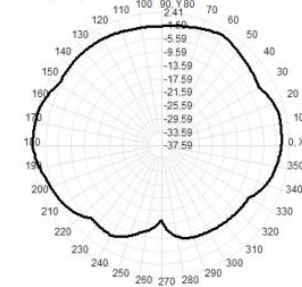
Back View



2460.0MHz Total(E2-YZ), Max= -0.95dBi



Total(H+XY), Max= 2.41dBi, CirD=17.65



BTANT-**FS**

Test Equipment:	R&S CMW500			
Test Condition:	3D chamber			
Band	Wireless Protocol	Channel	TRP(dBm)	TIS(dBm)
BT	CLASS 1	0		
		39		
		78		

Thanks for your comment!

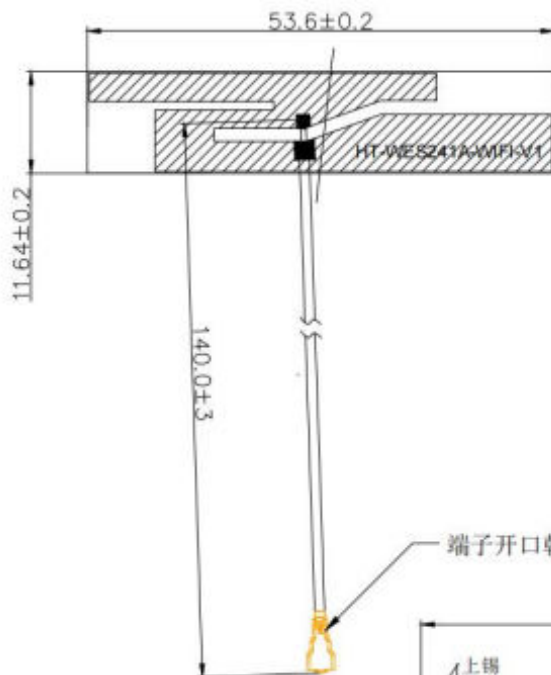
✧ *Shenzhen Hetuo Technology Co., Ltd*

✧ *1202B, Building C6, Hengfeng Industrial City, Xixiang, Bao'an District, Shenzhen*

✧ *DT;15302757983*

报价
开模
估测
出图
审核
参考
其他

REV	DESCRIPTION	DATE	CHANGED



技术要求:

1. 材质: FPC 1 MiL pi基材 /0.50z铜 背面要求背胶
2. 背胶: 3M9471 焊接cable 1.13黑色线材配第1代端子
3. 表面黑色哑光油墨 丝印白色字符
4. 需符合最新环保要求: RoHS&REACH;

深圳合拓科技有限公司		Drawn
DESIGNER		Designed
CHECKER		Checked
APPROVER		Approved
MATERIAL		PART NAME: HT-250110001-WES241A
SPECIFICATION		CUSTOMER: HT-WES241A-WMF-V1-A00M
SCALE: 1:1		DATE: 20240427