SPECIFICATION FOR APPROVAL

CUSTOMER ： _____

CUSTOMER'S P/N ： _____

PART NUMBER ： WAN3216F245H0X

DESCRIPTION ： Chip Antenna 3216 L Ant 2.45G Type 0X

VERSION ： V2.2

ISSUE DATE ： 2018/07/01

CUSTOMER APPROVED

R&D CENTER		
APPROVAL	CHECKED	DRAWN
Ray	Nate	Kelvin

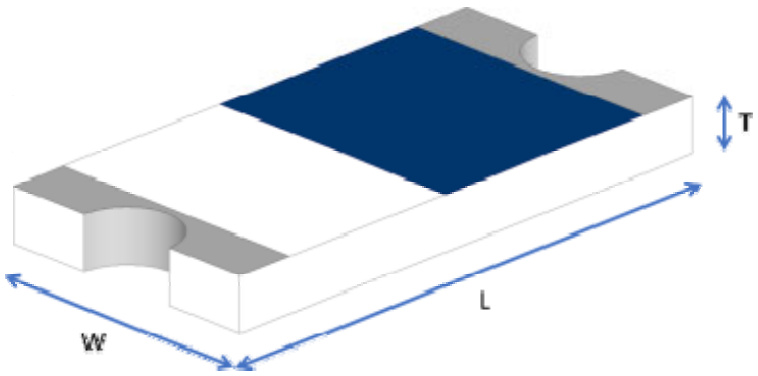
OneWave Electronic Co., Ltd. 2F., No.163, Sec. 1, Xi'an St., Beitou Dist.,
Taipei City 112, Taiwan
TEL: +886 2 2898-2220
FAX: +886 2 2898-5055

RoHS compliant

Pb lead-free

3216 Chip antenna

For Bluetooth / WLAN Applications



P/N: WAN3216F245H0X

	Dimension (mm)
L	3.23 ± 0.20
W	1.66 ± 0.20
T	0.45 ± 0.20

Part Number Information

WAN	3216	F	245	H	0X
A	B	C	D	E	F

A	Product Series	Antenna
B	Dimension L x W	3.2X1.6mm (+-0.2mm)
C	Material	High K material
D	Working Frequency	2.4 ~ 2.5GHz
E	Feeding mode	PIFA & Single Feeding
F	Antenna type	X=06,07,08 / Type=06,07,08

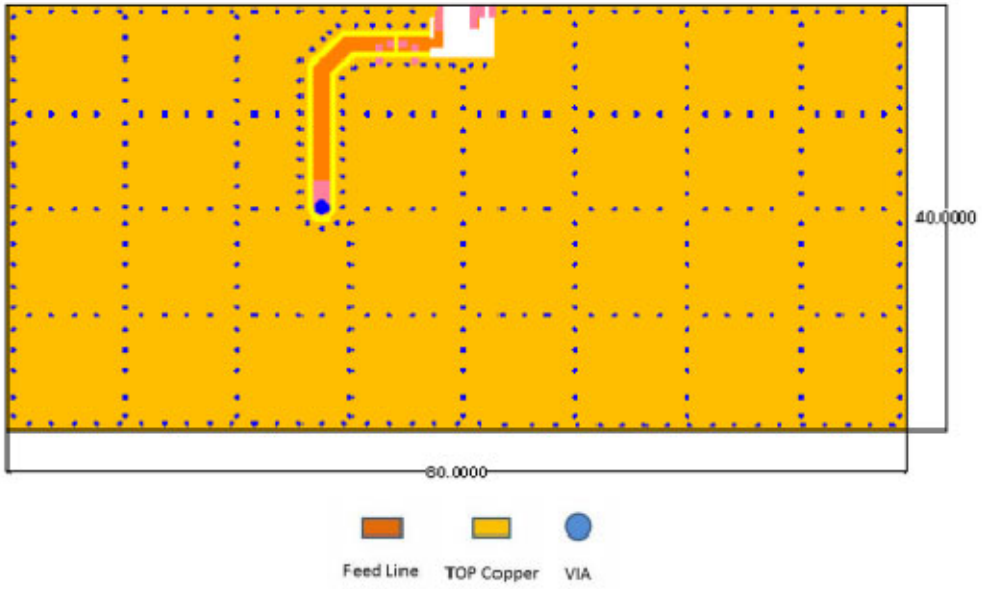
1. Electrical Specification

Specification		
Part Number	WAN3216F245H0X	
Central Frequency	2450	MHz
Bandwidth	120 (Min.)	MHz
Return Loss	-6.5 (Max)	dB
Peak Gain	1.75	dBi
Impedance	50	Ohm
Operating Temperature	-40 ~ +85	℃
Maximum Power	4	W
Resistance to Soldering Heats	10 (@ 260℃)	sec.
Polarization	Linear	
Azimuth Beamwidth	Omni-directional	
Termination	Ni / Au (Leadless)	

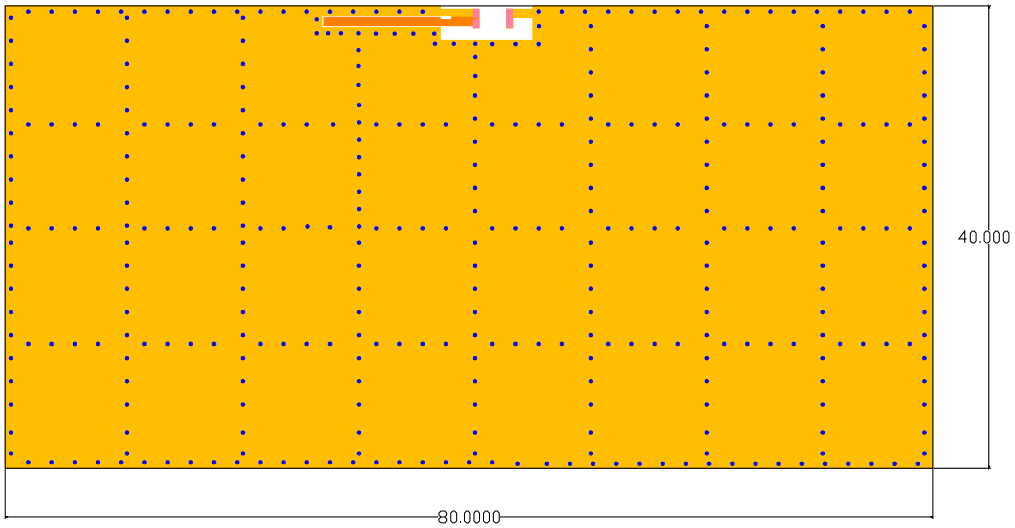
Remark : Bandwidth & Peak Gain was measured under evaluation board of next page

2. Recommended PCB Pattern

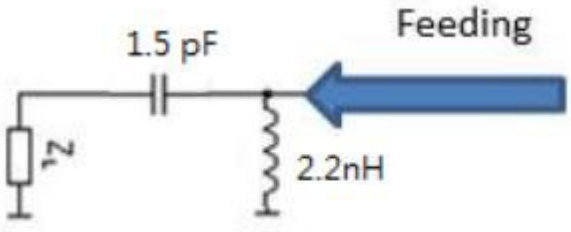
Evaluation Board Dimension



2nd Evaluation Board Dimension

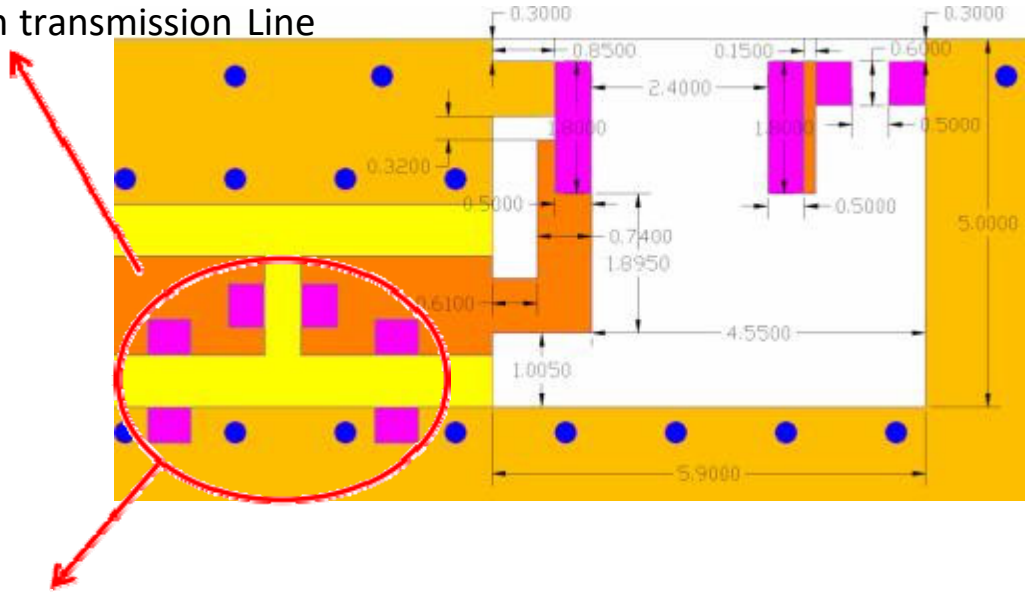


Suggested Matching Circuit



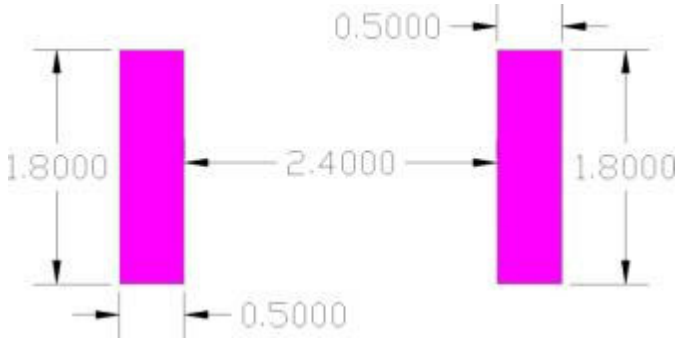
Layout Dimensions in Clearance area(Size=5.9*5.0mm)

50 ohm transmission Line

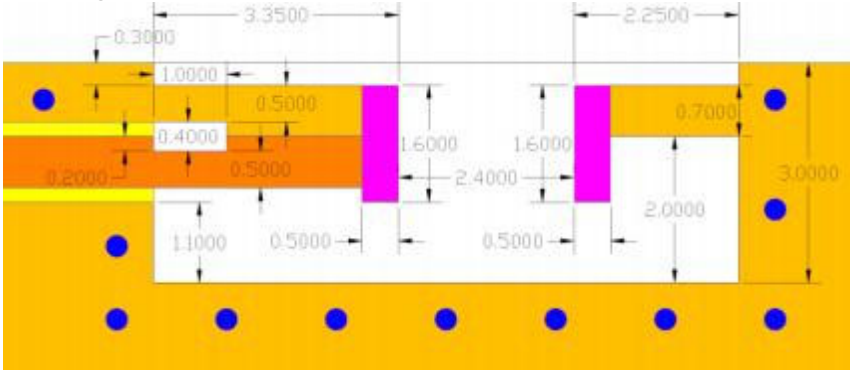


Matching Circuit

FootPrint (Unit : mm)

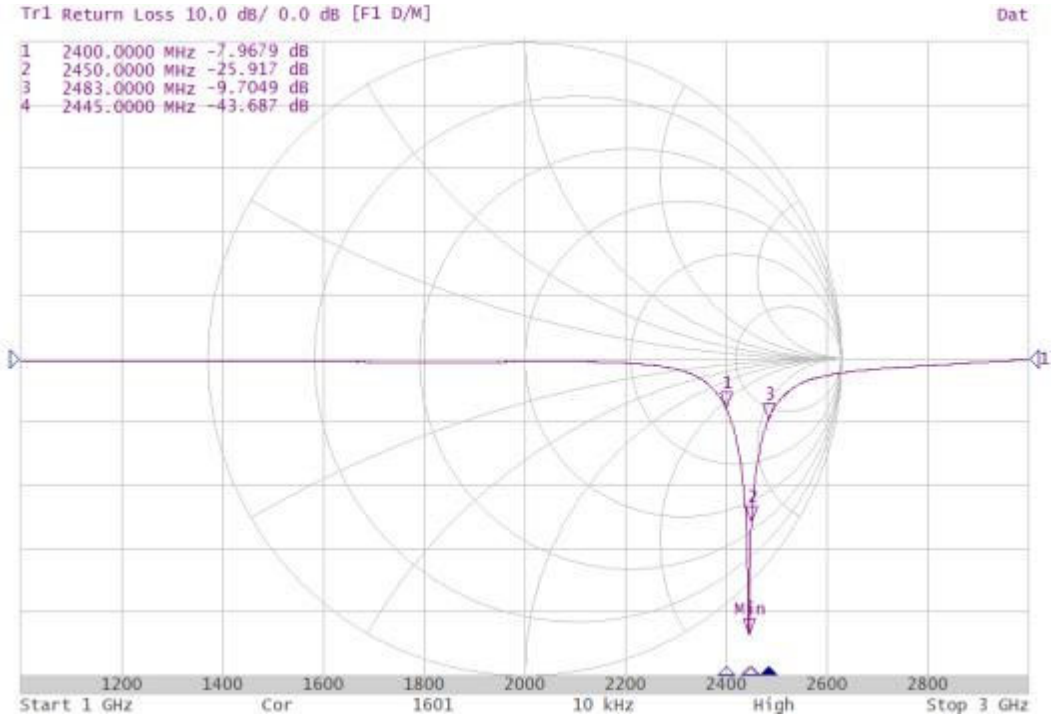


- **2nd Layout Dimensions in Clearance area(Size=8.0*3.0mm)**

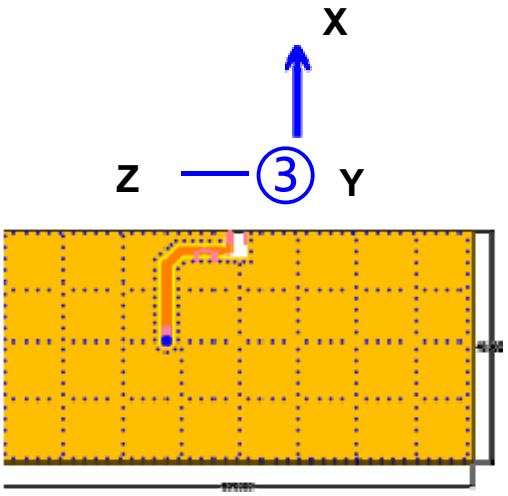


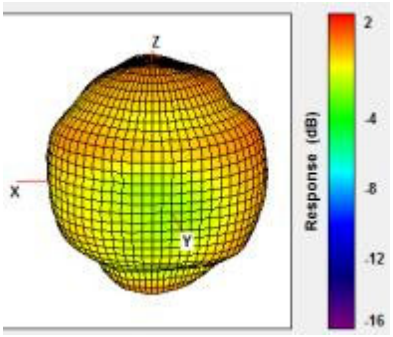
3. Measurement Results

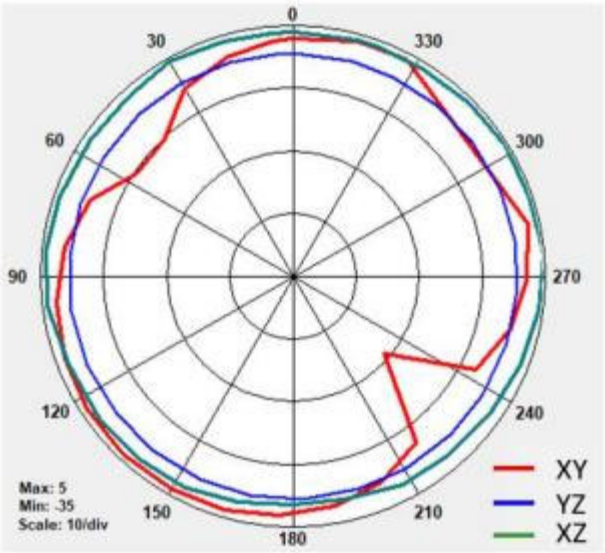
Return Loss



Radiation Pattern

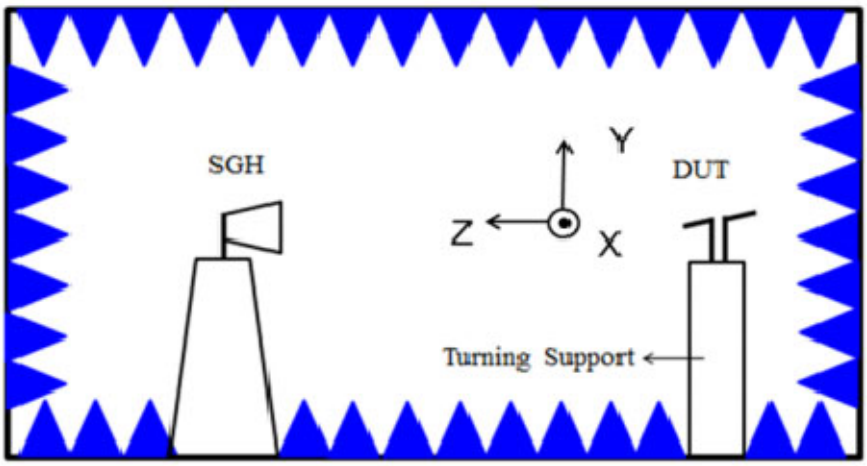






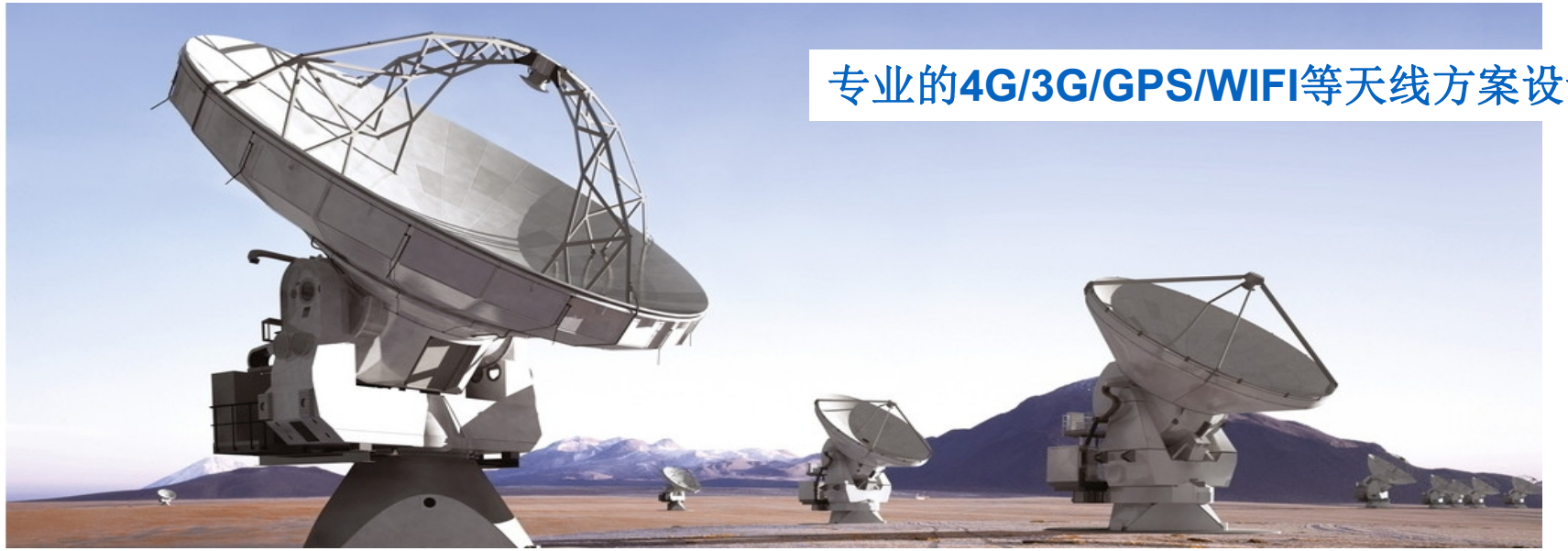
	Efficiency	Peak Gain	Directivity
2450MHz	85.65%	1.75 dBi	1.75 dBi

Chamber Coordinate System



Antena Test Report

锐锋电子
RUI ELECTRONIC



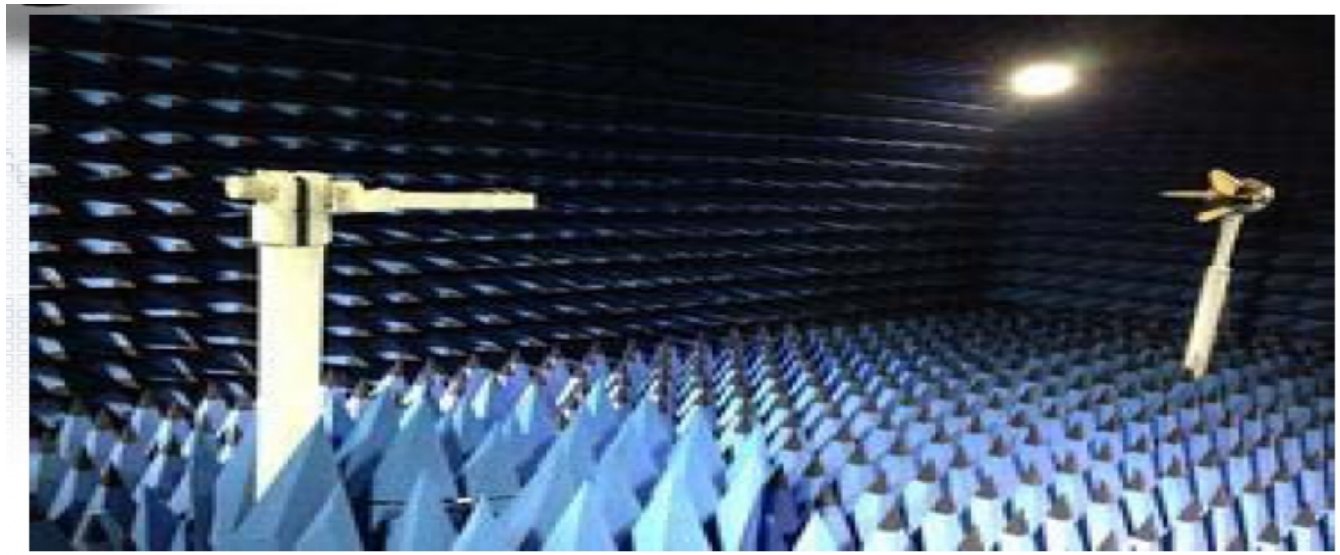
客户名称： 创力能　　项目名称：C8MaX

频段：WIFI2.4G/BT

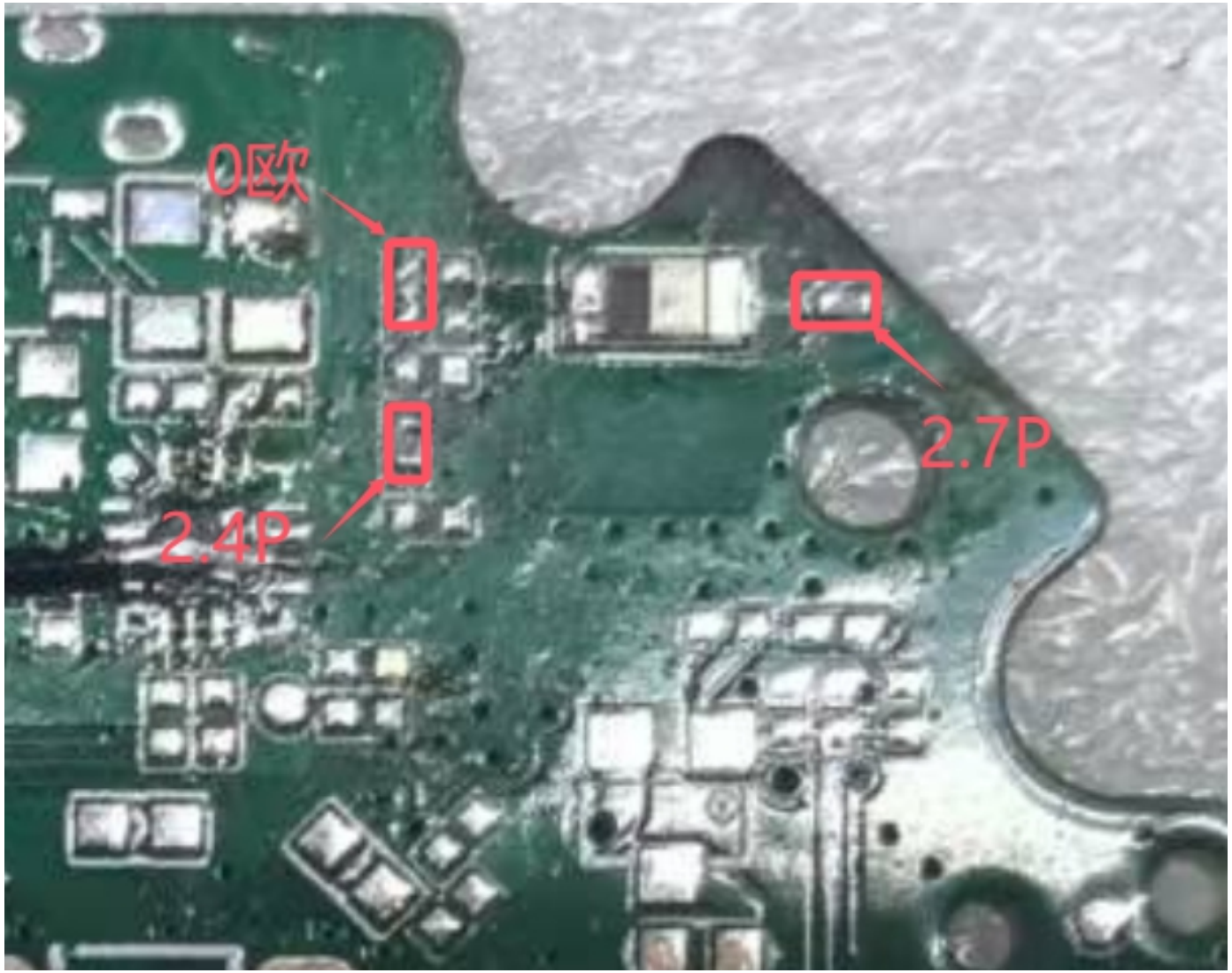
版本：A　　制作日期：2024-12-23

Test system

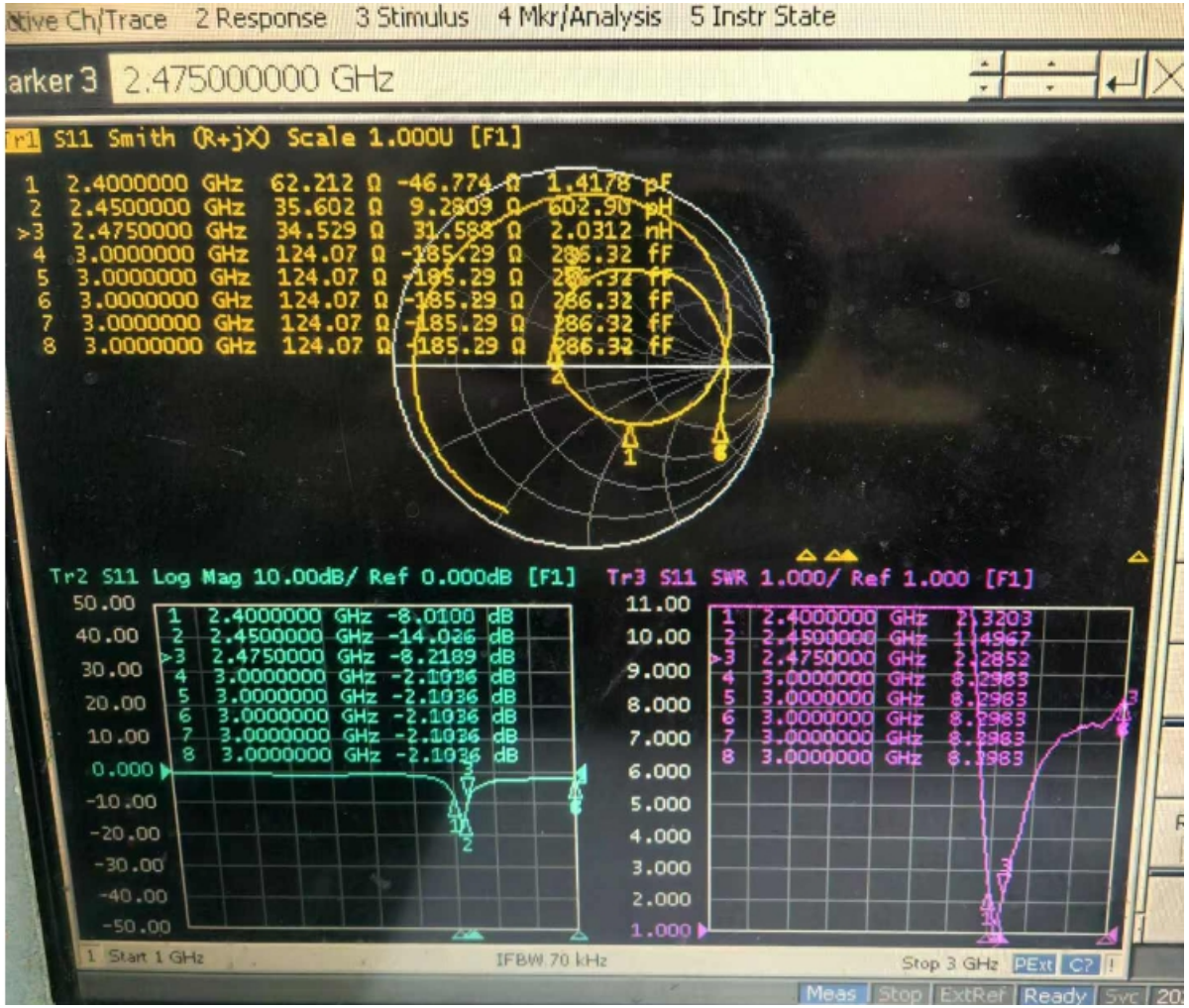
Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & Agilent 5062A
OTA Test	TRP&TIS	Agilent 8960 E5515C& Agilent 4438C&CMW500 &CMW270 ETS&SATIMO
Gain & Efficiency	Gain & Efficiency	ETS&SATIMO Agilent 5071C



主板电路有修改



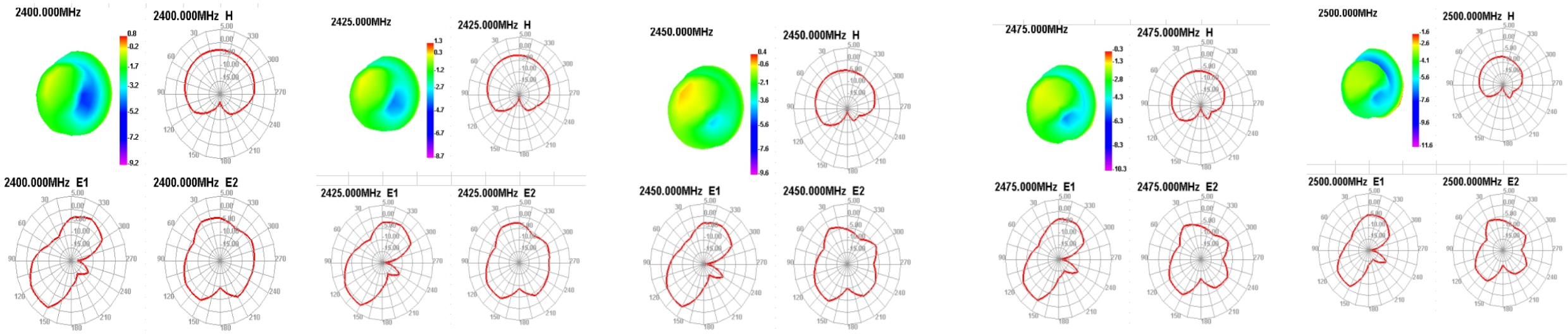
BT S11 SWR /Smith/ Log Mag



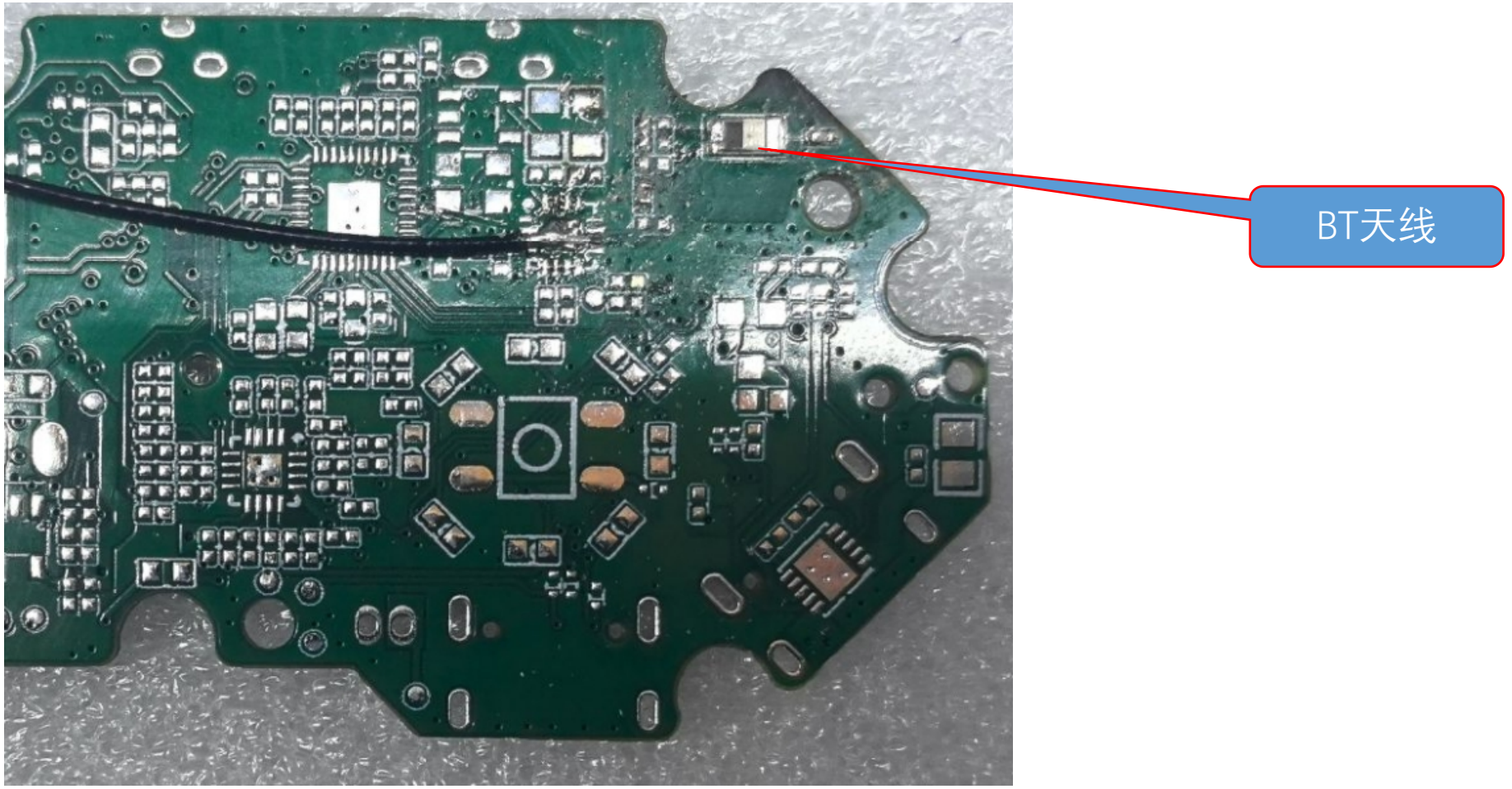
频率（MHZ）	2400	2450	2475
驻波比	2.3	1.4	2.2
阻抗	62.2Ω	35.6Ω	34.5Ω
回损	-8	-14	-8.2

BT 增益&效率

Frequency (MHz)	Efficiency (%)	Efficiency (db)	Peak GAIN (dBi)
2400	39.13	-4.08	0.83
2425	40.46	-3.93	1.26
2450	33.36	-4.77	1.75
2475	28.13	-5.51	-0.26
2500	20.76	-6.83	-1.57



天线位置图



Thanks