

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

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R&D CENTER

APPROVAL	CHECKED	DRAWN
Ray	Nate	Kelvin

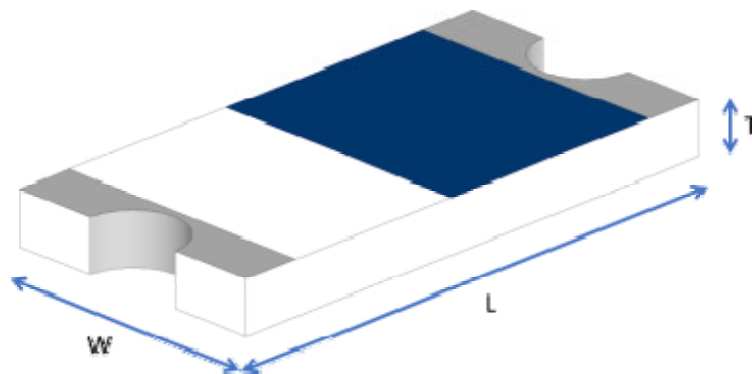
OneWave Electronic Co., Ltd. 2F., No.163, Sec.

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Taipei City 112, Taiwan
TEL: +886 2 2898-2220
FAX: +886 2 2898-5055



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

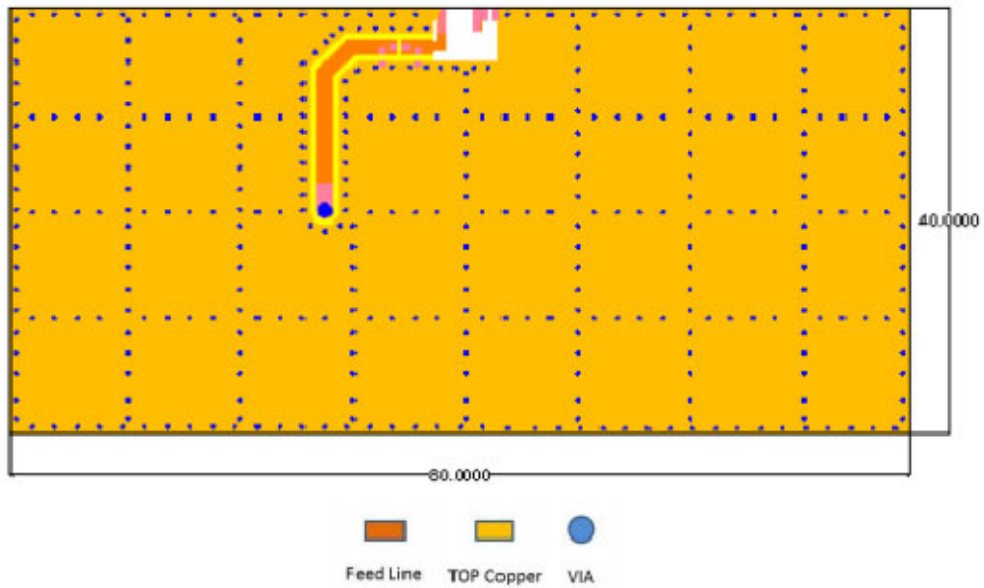
A	Product Series	Antenna
B	Dimension L x W	3.2X1.6mm (+-0.2mm)
C	Material	High K material
D	Working Frequency	2.4 ~ 2.5GHz
E	Feeding mode	PIFA & Single Feeding
F	Antenna type	X=06,07,08 / Type=06,07,08

1. Electrical Specification

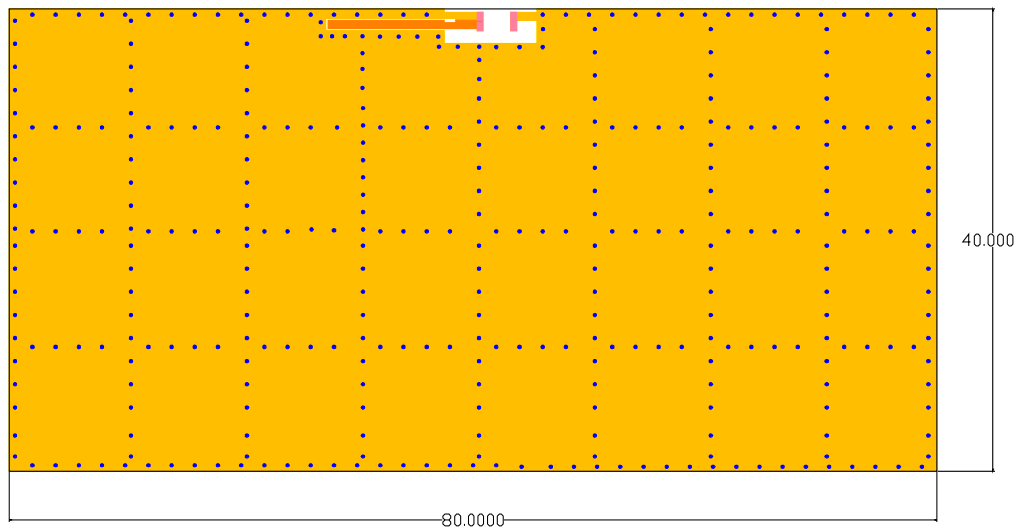
Specification		
Part Number	WAN3216F245H0X	
Central Frequency	2450	MHz
Bandwidth	120 (Min.)	MHz
Return Loss	-6.5 (Max)	dB
Peak Gain	1.75	dBi
Impedance	50	Ohm
Operating Temperature	-40 ~ +85	°C
Maximum Power	4	W
Resistance to Soldering Heats	10 (@ 260°C)	sec.
Polarization	Linear	
Azimuth Beamwidth	Omni-directional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

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

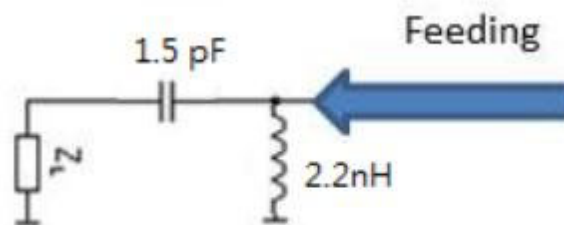
2. Recommended PCB Pattern Evaluation Board Dimension



2nd Evaluation Board Dimension



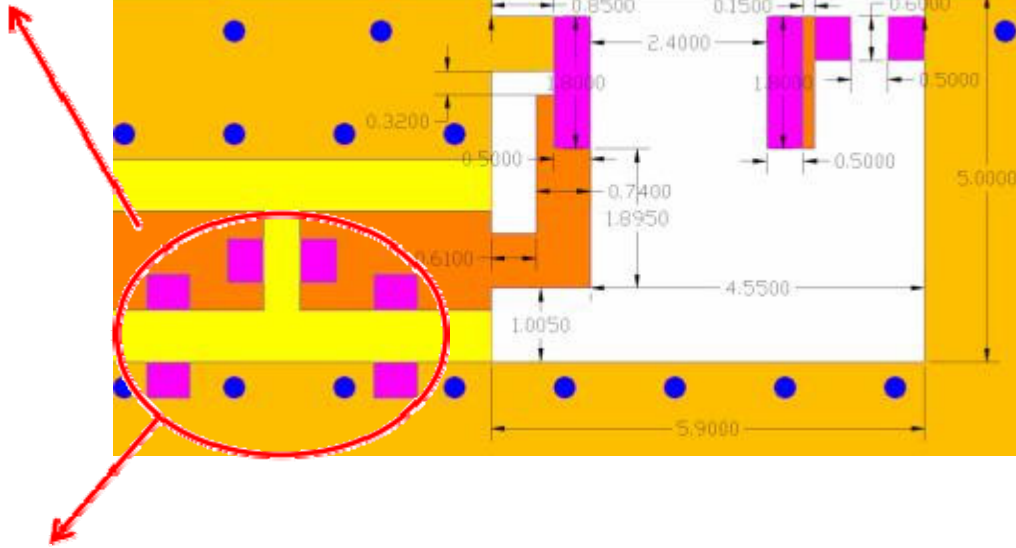
Suggested Matching Circuit



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

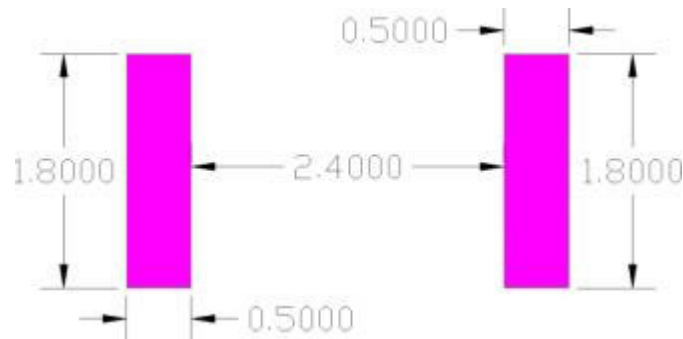


50 ohm transmission Line

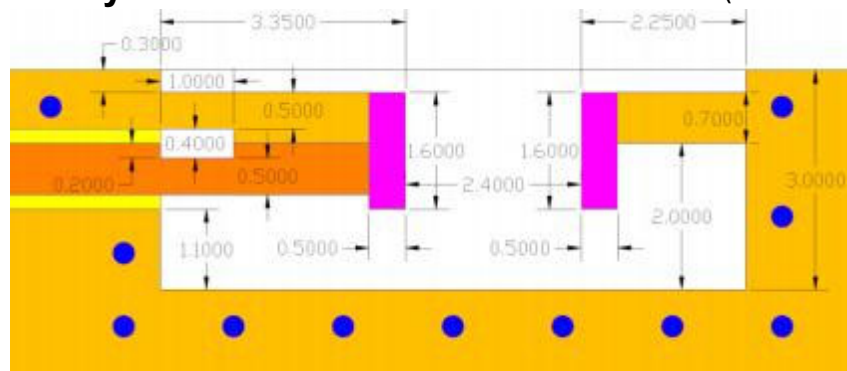


Matching Circuit

FootPrint (Unit : mm)

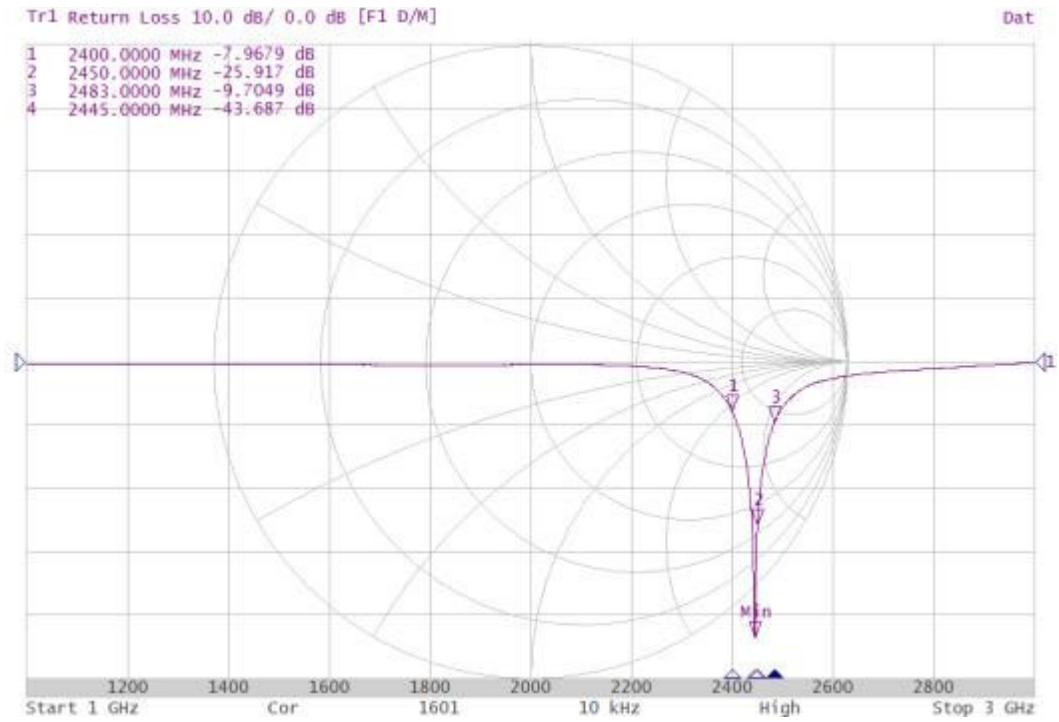


◆ 2nd Layout Dimensions in Clearance area(Size=8.0*3.0mm)

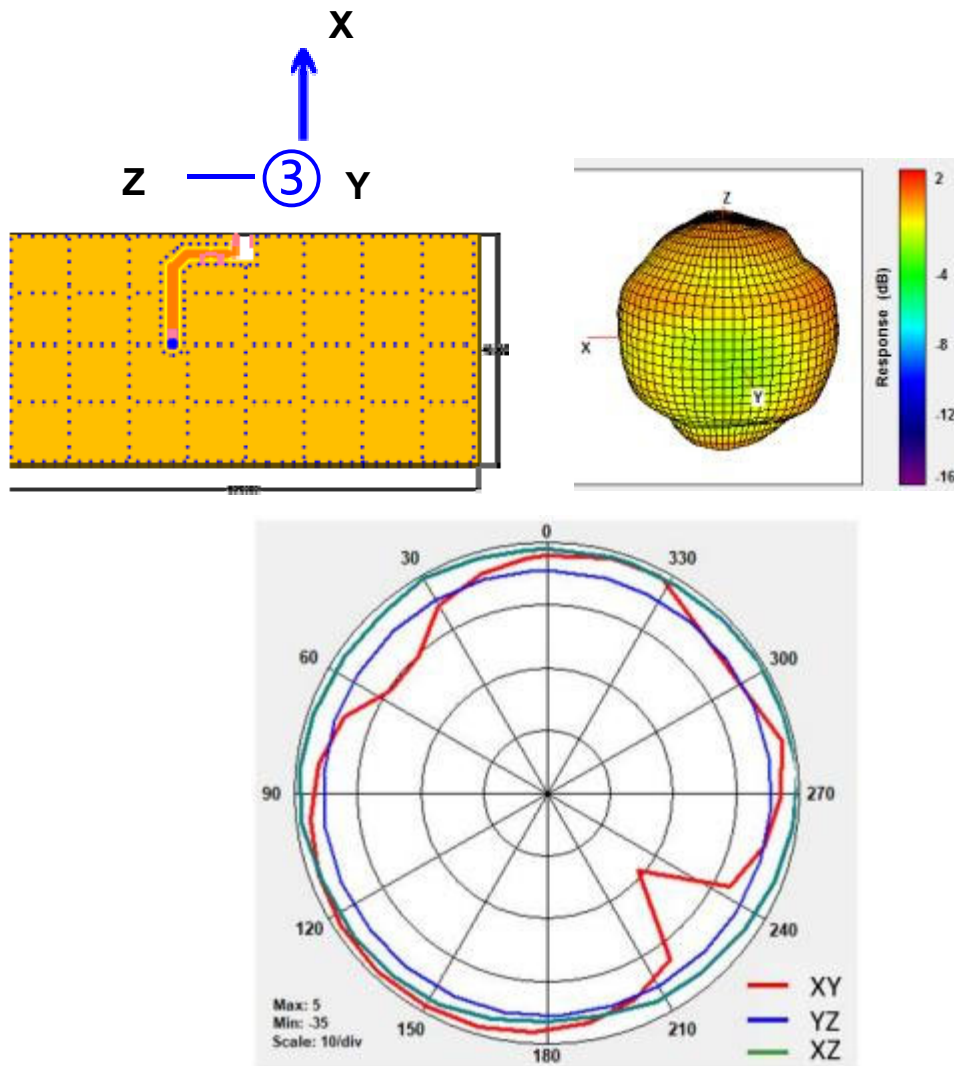


3. Measurement Results

Return Loss

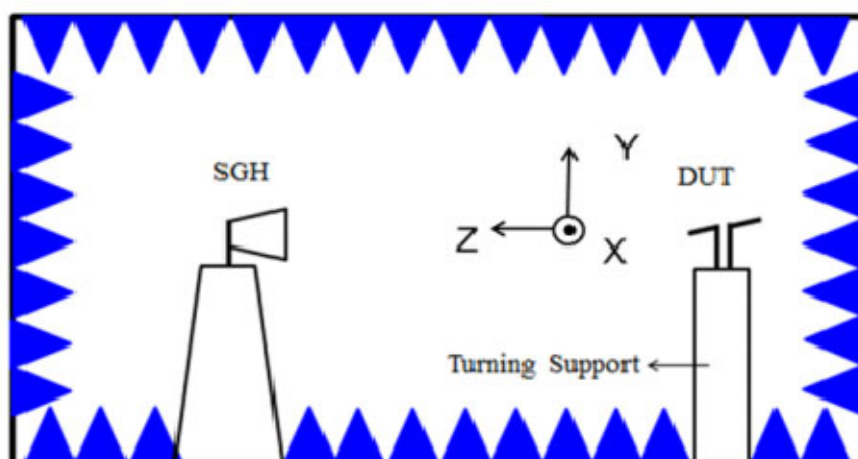


Radiation Pattern



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

Chamber Coordinate System



Antena Test Report



专业的4G/3G/GPS/WIFI等天线方案设计及供应商

客户名称： 创力能

项目名称： C8MaX

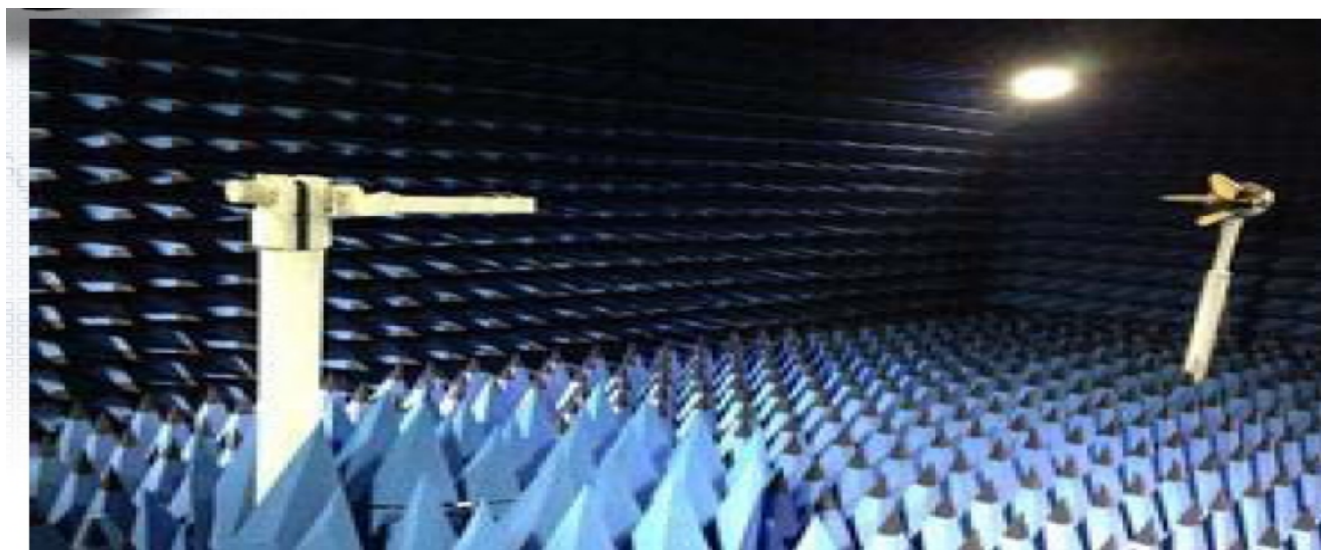
频段： WIFI2.4G/BT

版本： A

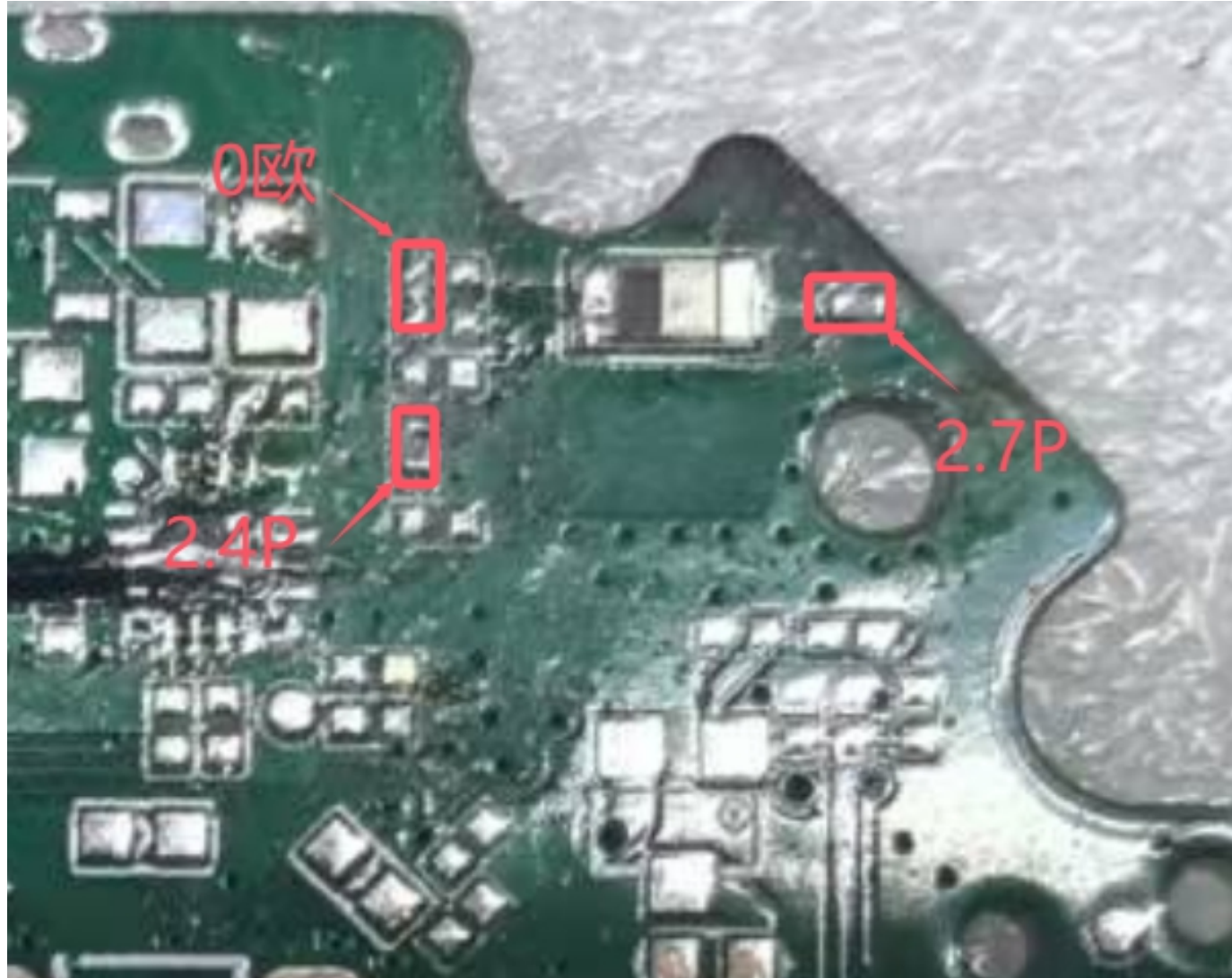
制作日期： 2024-12-23

Test system

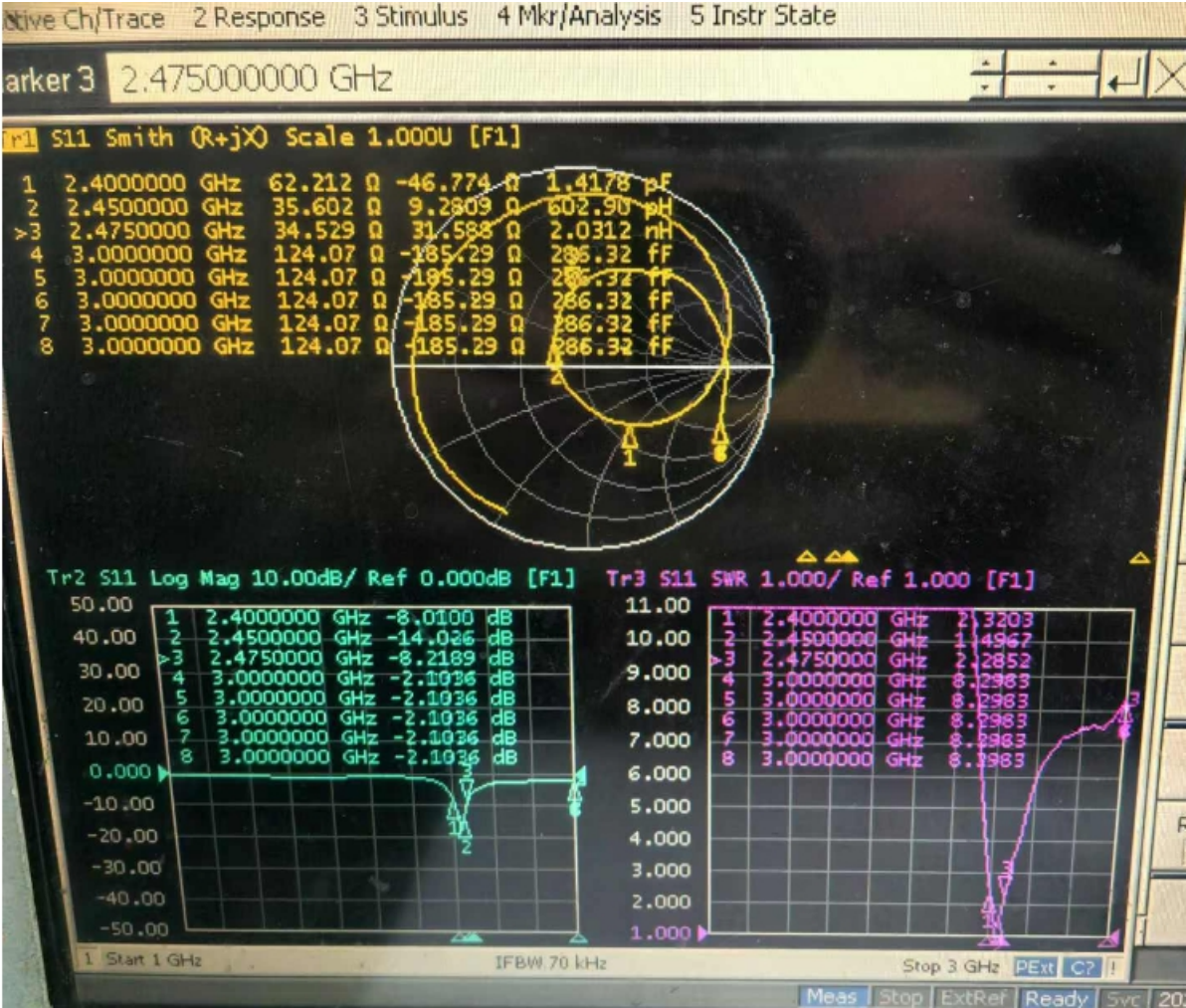
Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & Agilent 5062A
OTA Test	TRP&TIS	Agilent 8960 E5515C& Agilent 4438C&CMW500 &CMW270 ETS&SATIMO
Gain & Efficiency	Gain & Efficiency	ETS&SATIMO Agilent 5071C



主板电路有修改



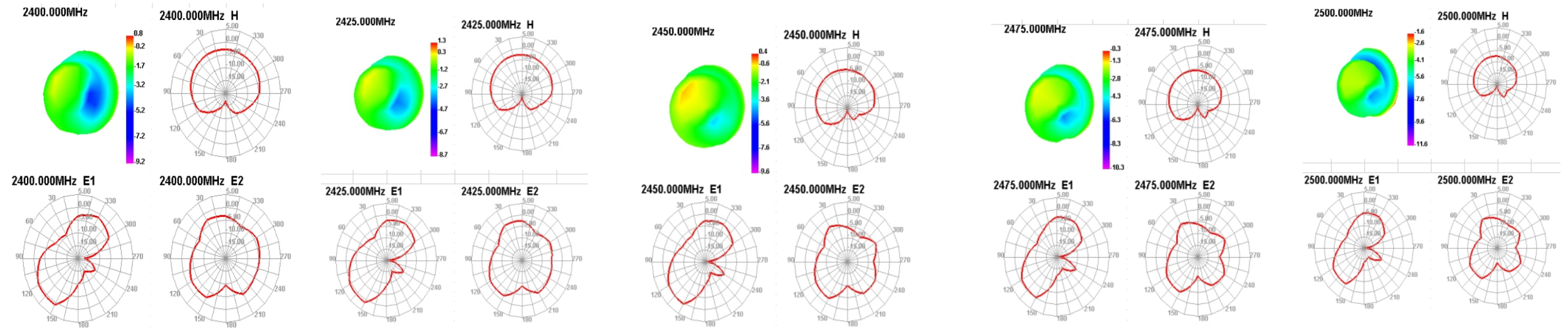
BT S11 SWR /Smith/ Log Mag



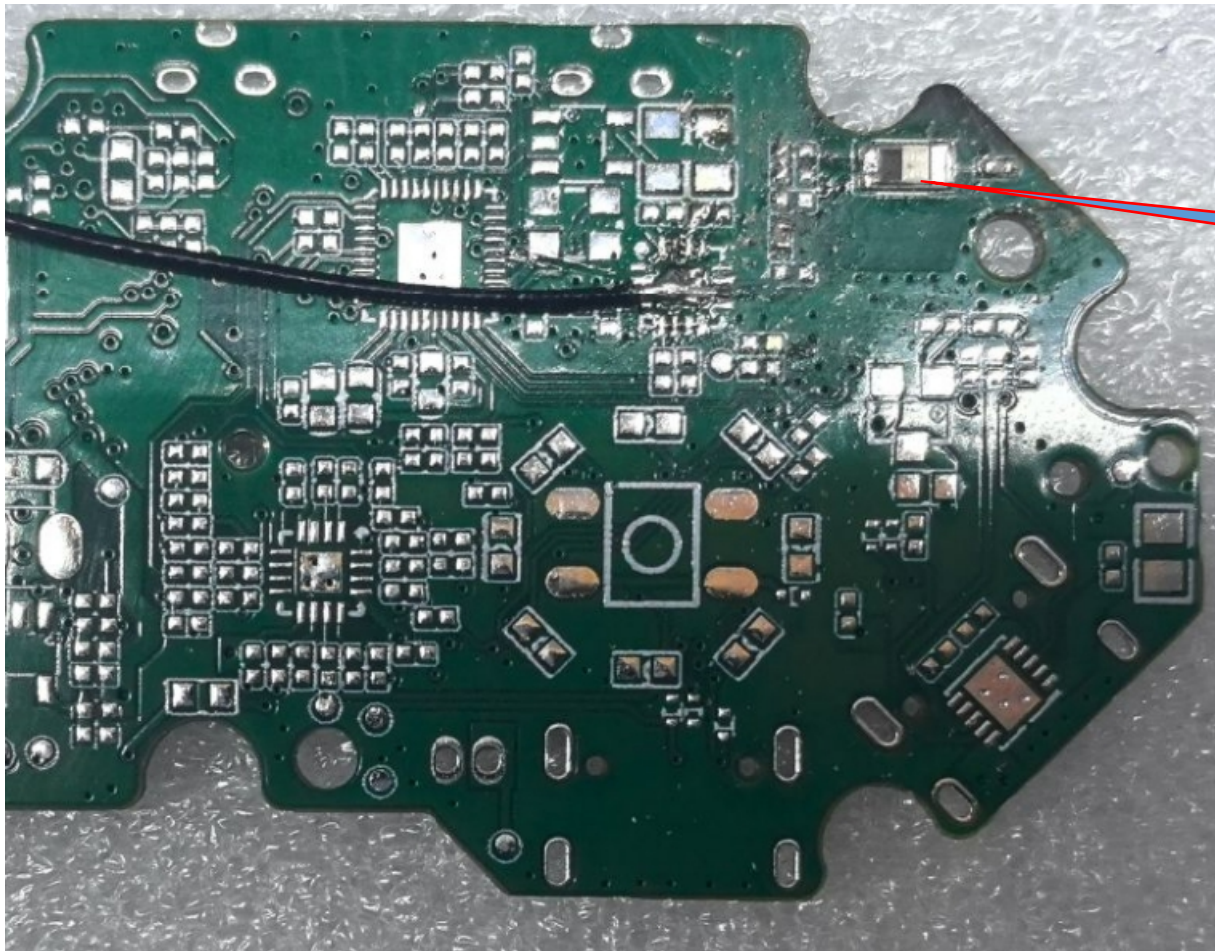
频率 (MHZ)	2400	2450	2475
驻波比	2.3	1.4	2.2
阻抗	62.2 Ω	35.6 Ω	34.5 Ω
回损	-8	-14	-8.2

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



BT 天线

Thanks