Shenzhen Luomandi Electronic Technology Co., Ltd

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Antenna Test Report

Customer	
Project	TS12-3
Antenna Revision	**A0**
Product Description	PCB
Product No	

Purpose

This report is to measure the performance of *p'c'b* antenna for 台 德—**BT256**. All test date are showed as below.

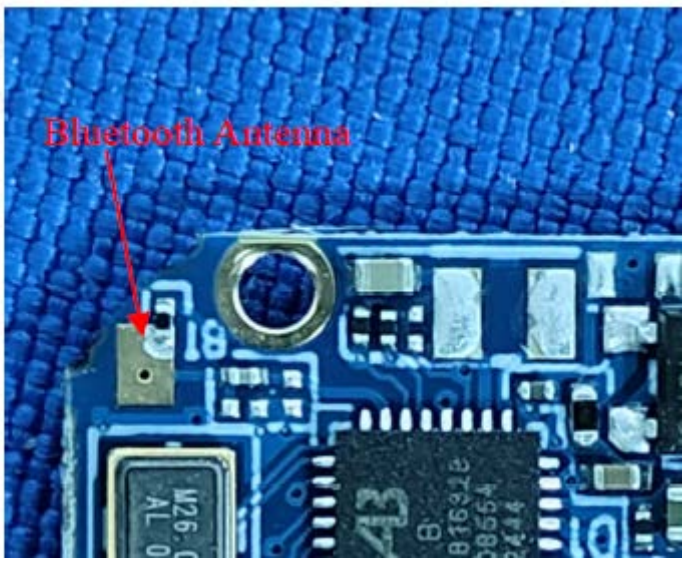
Content

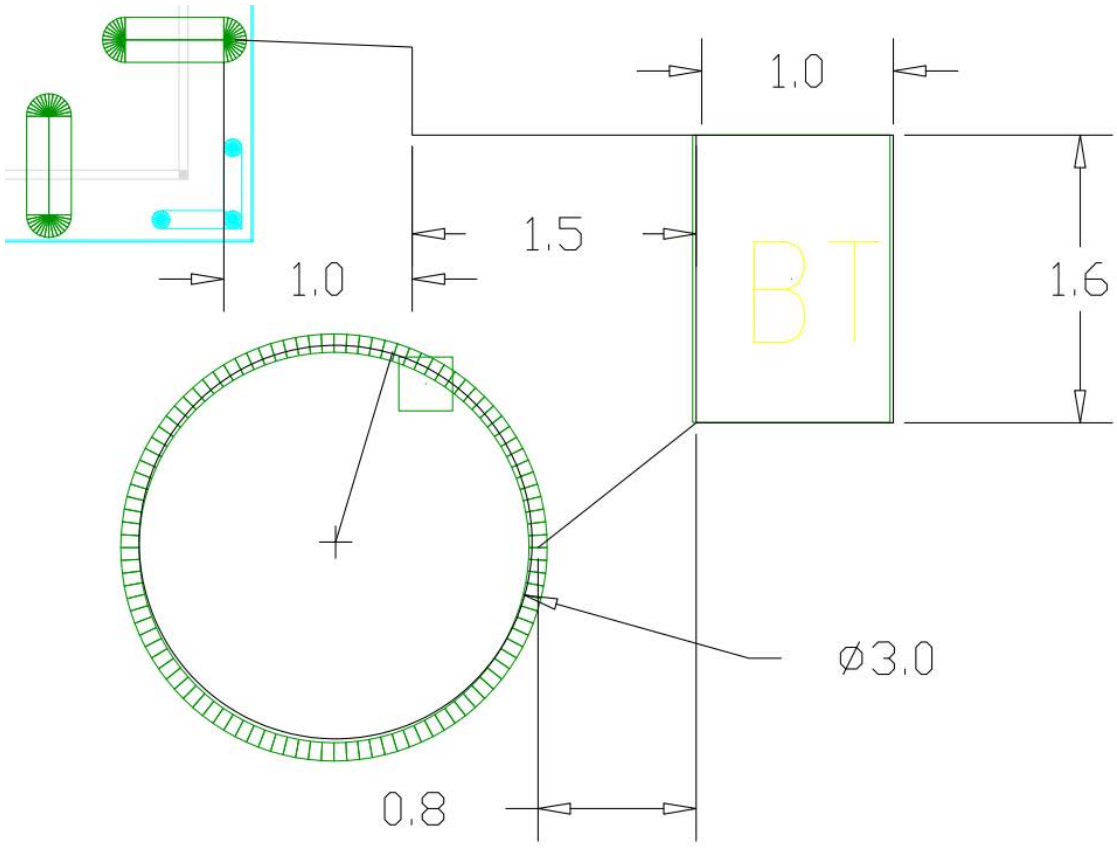
1： Product Overview & Dimension

2： Test Result

1. Product Overview & Dimension

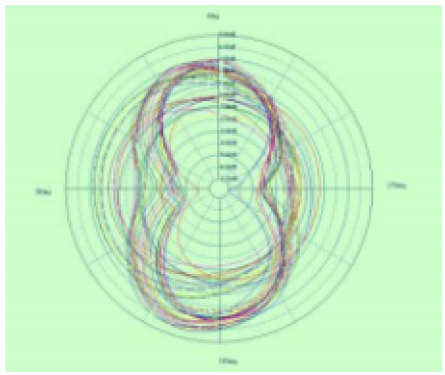
Antenna

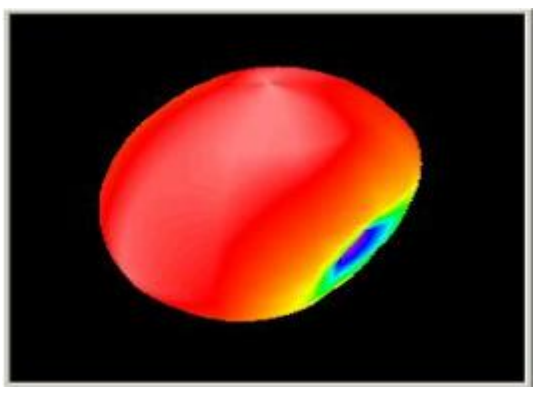




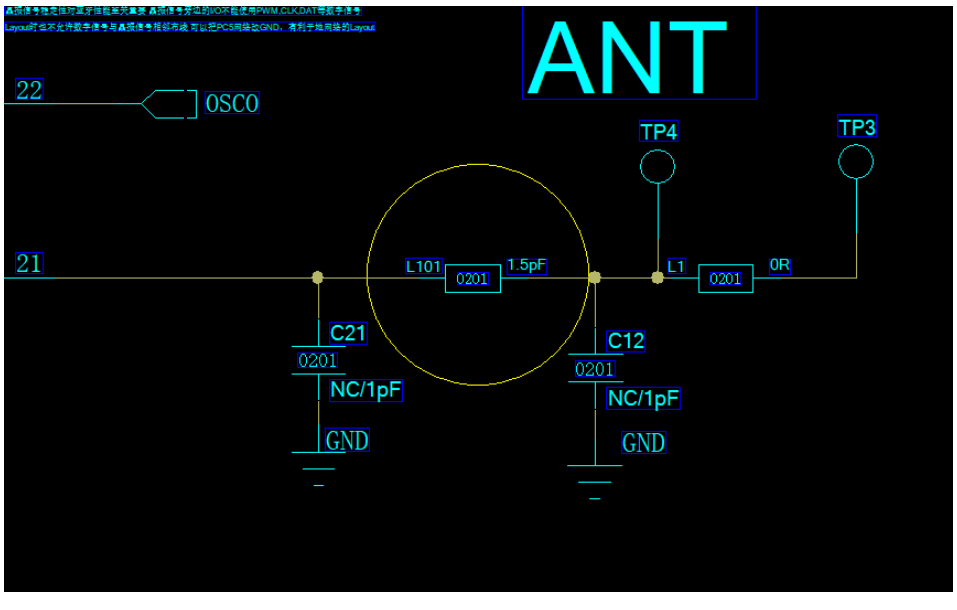
2. Test System

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





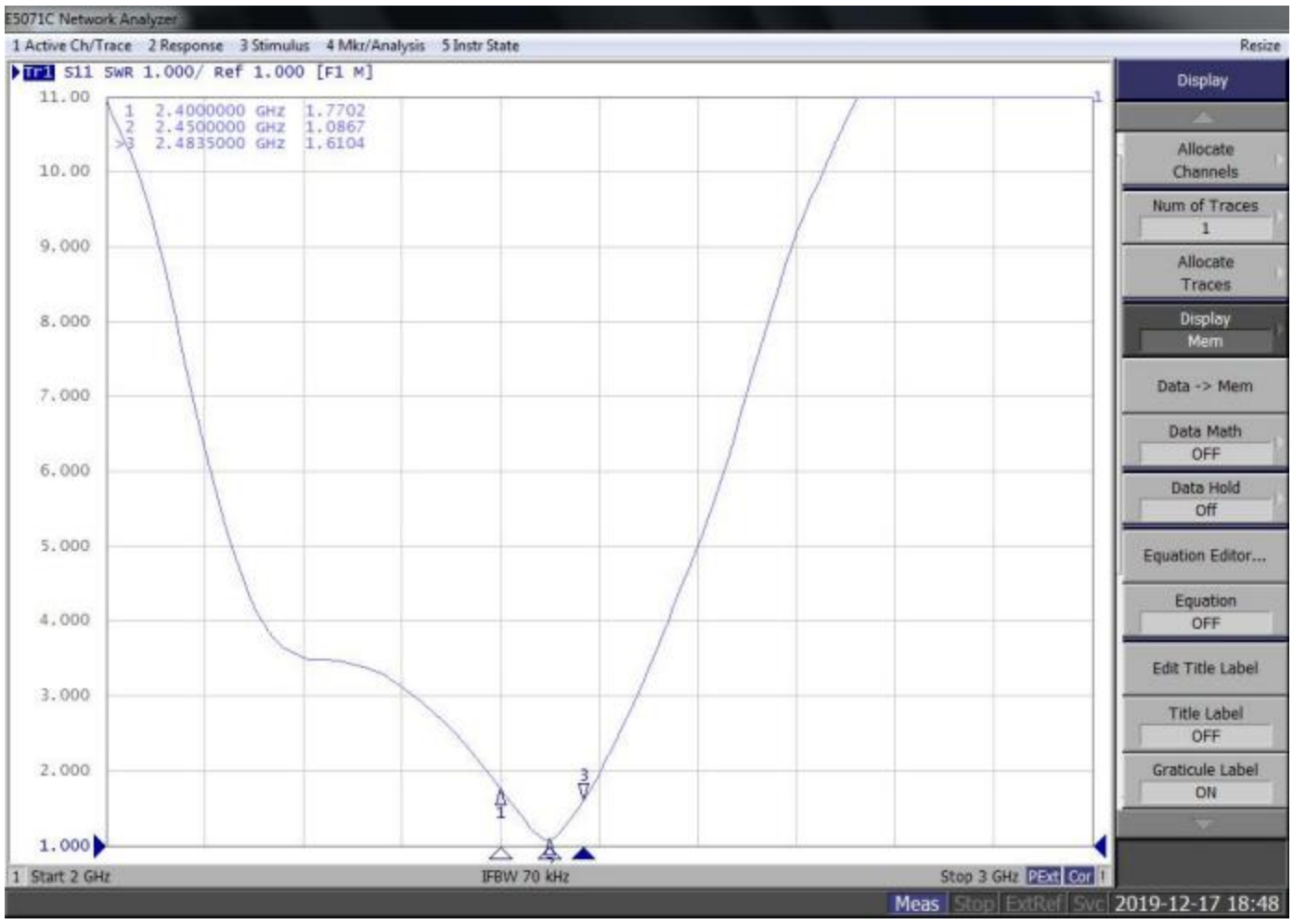
2.1 Antenna Matching Network



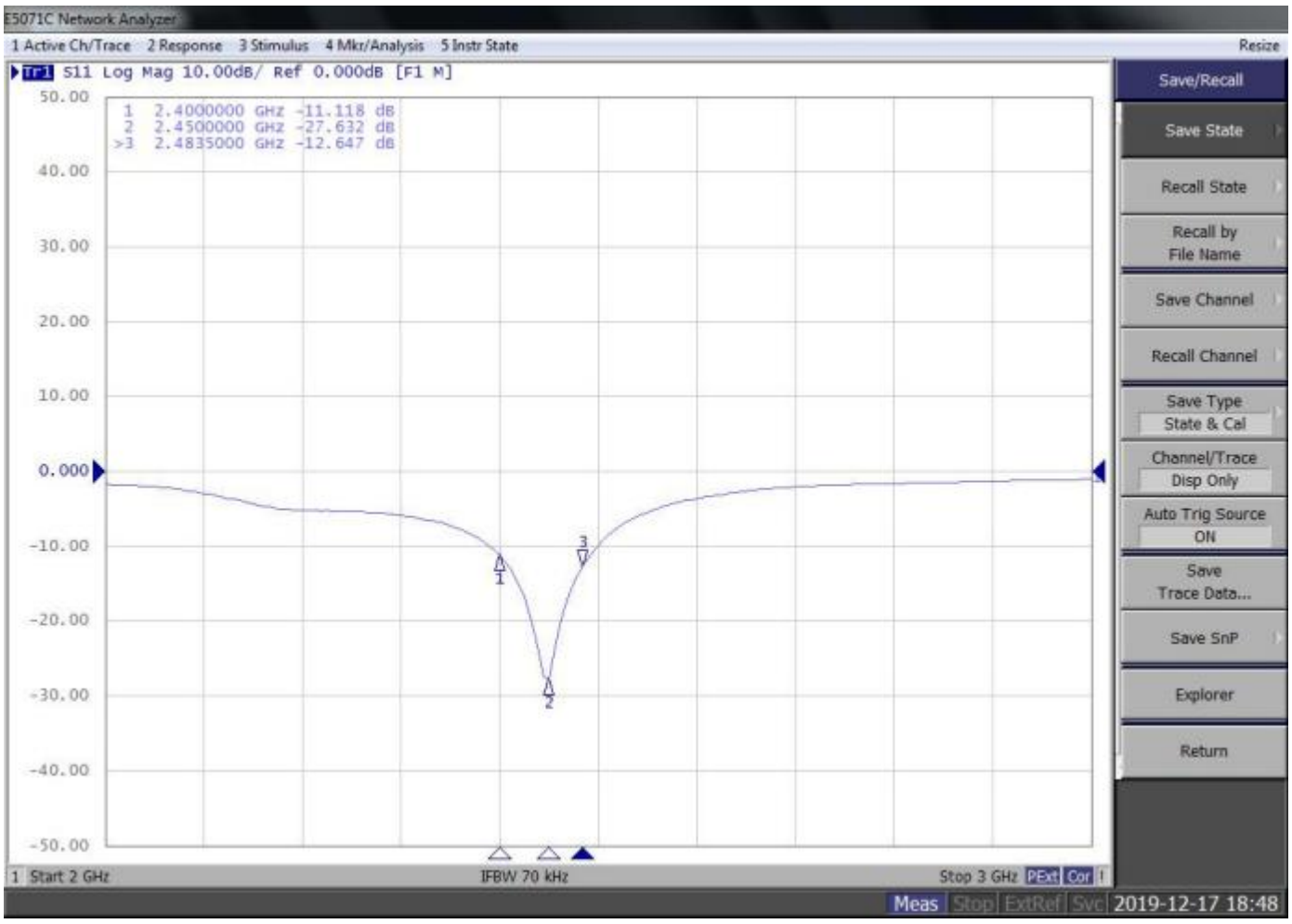
Element	Value
L1（0201）	1.5pF
21(0201)	NC

C12（0201）	NC
L1（0201）	0R

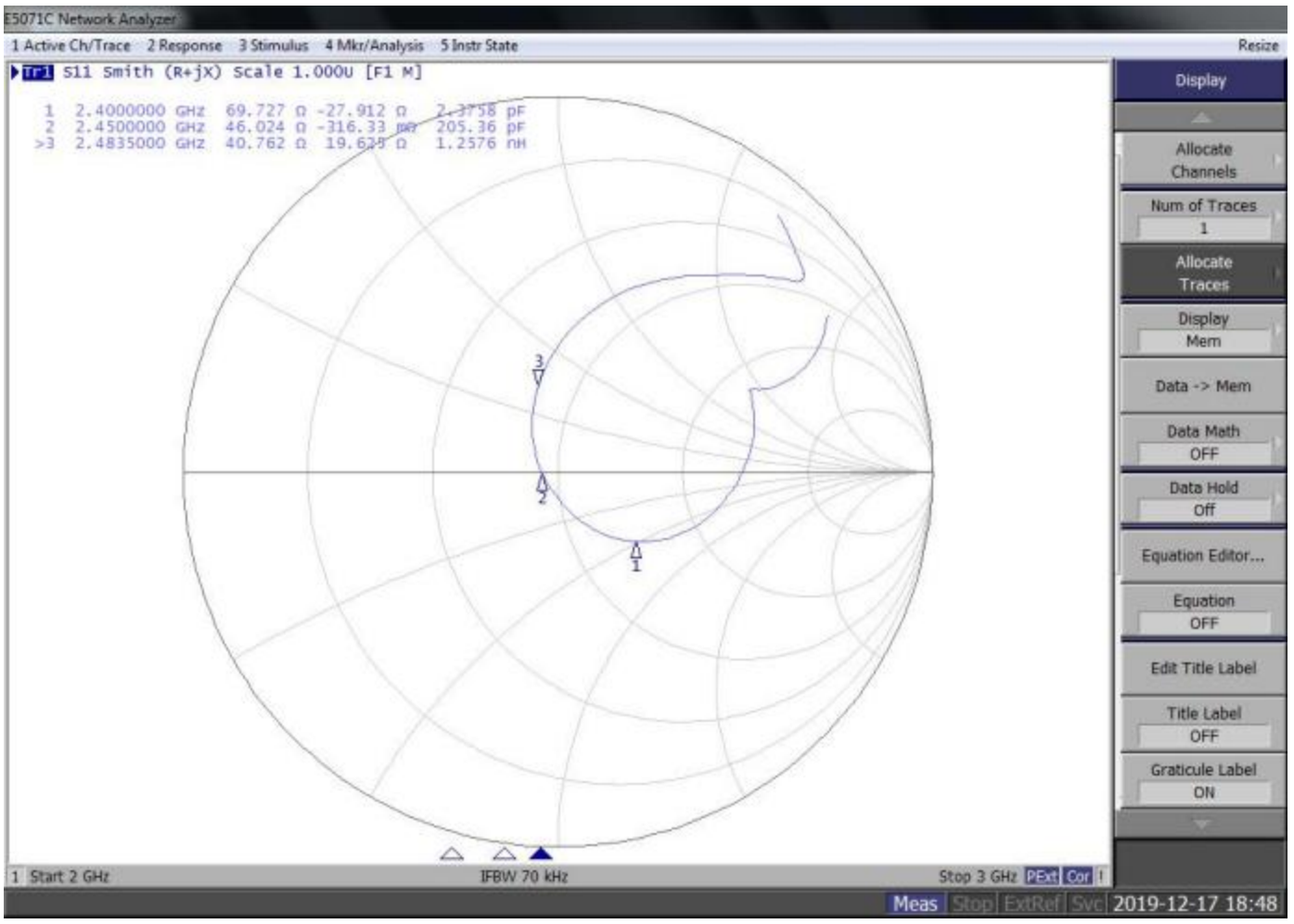
2.2 VSWR


E5071C Network Analyzer
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State
Resize
Tr1 S11 SWR 1.000/ Ref 1.000 [F1 M]
1 2.4000000 GHz 1.7702
2 2.4500000 GHz 1.0867
>3 2.4835000 GHz 1.6104
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Start 2 GHz
IFBW 70 kHz
Stop 3 GHz
PExt
Cor
Display
Allocate Channels
Num of Traces
1
Allocate Traces
Display Mem
Data -> Mem
Data Math
OFF
Data Hold
Off
Equation Editor...
Equation
OFF
Edit Title Label
Title Label
OFF
Graticule Label
ON
Meas
Stop
ExtRef
Svc
2019-12-17 18:48

2.3 RETURN LOSS



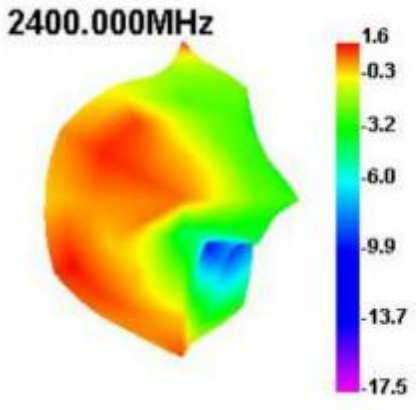
2.4 SMITH

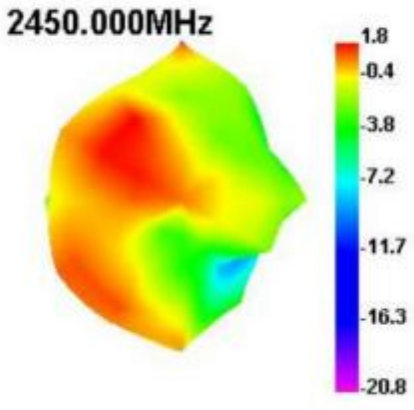

E5071C Network Analyzer
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State
Resize
Tr1 S11 Smith (R+jX) Scale 1.000U [F1 M]
1 2.4000000 GHz 69.727 Ω -27.912 Ω 2.3758 pF
2 2.4500000 GHz 46.024 Ω -316.33 mΩ 205.36 pF
>3 2.4835000 GHz 40.762 Ω 19.625 Ω 1.2576 nH
Display
Allocate Channels
Num of Traces 1
Allocate Traces
Display Mem
Data -> Mem
Data Math OFF
Data Hold Off
Equation Editor...
Equation OFF
Edit Title Label
Title Label OFF
Graticule Label ON
1 Start 2 GHz
IFBW 70 kHz
Stop 3 GHz PExt Cor
Meas Stop ExtRef Svc 2019-12-17 18:48

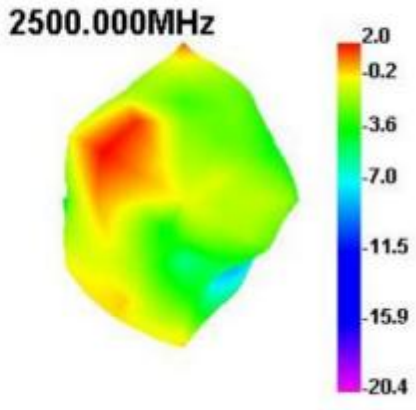
2.5 *GAIN & Efficiency*

Passive Test For 2.4G				
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)
2400	51.96	-2.84	1.62	-0.53
2410	55.03	-2.59	1.99	-0.16
2420	54.81	-2.61	2.02	-0.13
2430	54.93	-2.6	2.03	-0.12
2440	52.84	-2.77	1.88	-0.27
2450	51.93	-2.85	1.83	-0.32
2460	51.63	-2.87	1.83	-0.32
2470	50.01	-3.01	1.87	-0.28
2480	53.08	-2.75	2.08	0.13
2490	50.18	-2.99	2.09	0.04
2500	45.45	-3.42	2.01	-0.14

2.6 ***2****D/3D DATA*


2400.000MHz
1.6
-0.3
-3.2
-6.0
-9.9
-13.7
-17.5

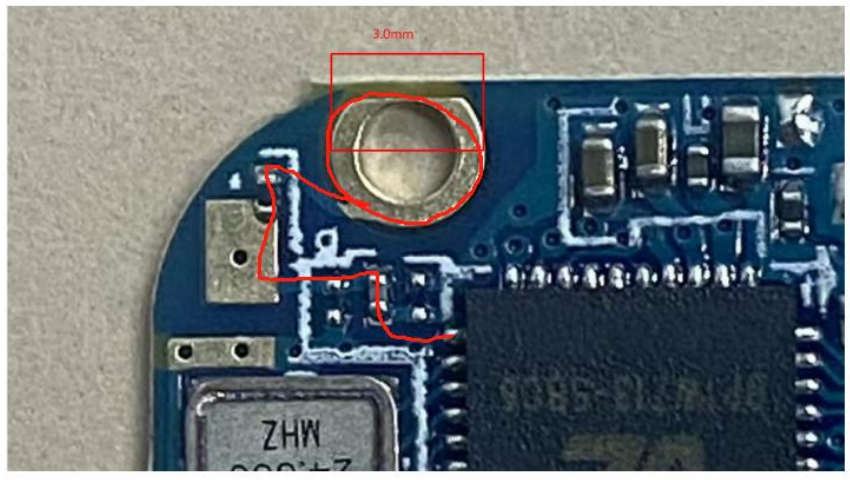

2450.000MHz
1.8
-0.4
-3.8
-7.2
-11.7
-16.3
-20.8


2500.000MHz
2.0
-0.2
-3.6
-7.0
-11.5
-15.9
-20.4

3. Conclusion

天线尺寸直径3.0mm

Antenna size
Diameter 3.0mm



4. Conclusion

PCB板端匹配电路,L1串0Ω连接天线，天线尺寸剪短，现长度3.0mm，无源驻波调试到2.0以下，初步判定合格。
PCB board end matching circuit,L1 series 0Ω connected antenna, antenna size cut short, the current length of 3.0mm, passive standing wave debugging to below 2.0, preliminarily qualified.