

东莞市信博联电子科技有限公司

Dongguan Sinbolin Electronic Technology Co.,Ltd.

Adress: Xiaobian Xinhe Industrial Zone, Chang 'an Town, Dongguan City,
Guangdong Province, China

BT Antenna information

Record for version modification

Date	Revision	Modify Content	Author
2022-4-25	V1.0	1 st Version	

东莞市信博联电子科技有限公司

Dongguan Sinbolin Electronic Technology Co.,Ltd.

Adress: Xiaobian Xinhe Industrial Zone, Chang 'an Town, Dongguan City,
Guangdong Province, China

Contents

1. Project information.....	3
2. Appearance and specification	4
3. Performance parameter	5
4.Throughput Test	11

东莞市信博联电子科技有限公司

Dongguan Sinbolin Electronic Technology Co.,Ltd.

Adress: Xiaobian Xinhe Industrial Zone, Chang 'an Town, Dongguan City,
Guangdong Province, China

1. Project information

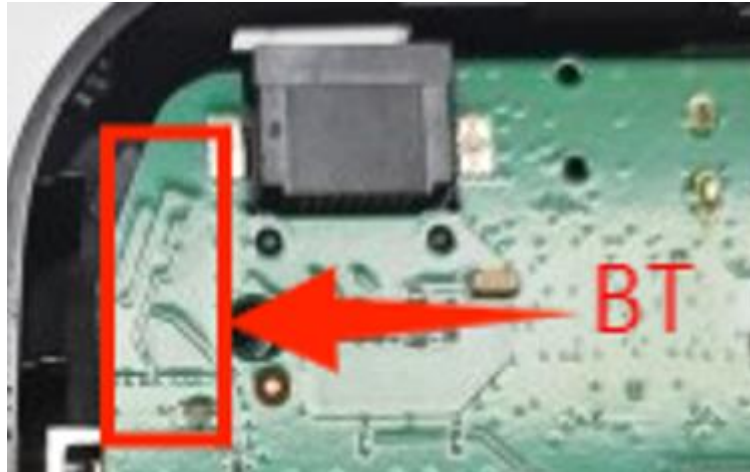
Model No.	BT
HW Version	N/A
SW Version	N/A
Antenna type	PCB
Date	2022/4/25

东莞市信博联电子科技有限公司

Dongguan Sinbolin Electronic Technology Co.,Ltd.

Adress: Xiaobian Xinhe Industrial Zone, Chang 'an Town, Dongguan City,
Guangdong Province, China

2. Appearance and specification



3. Performance parameter

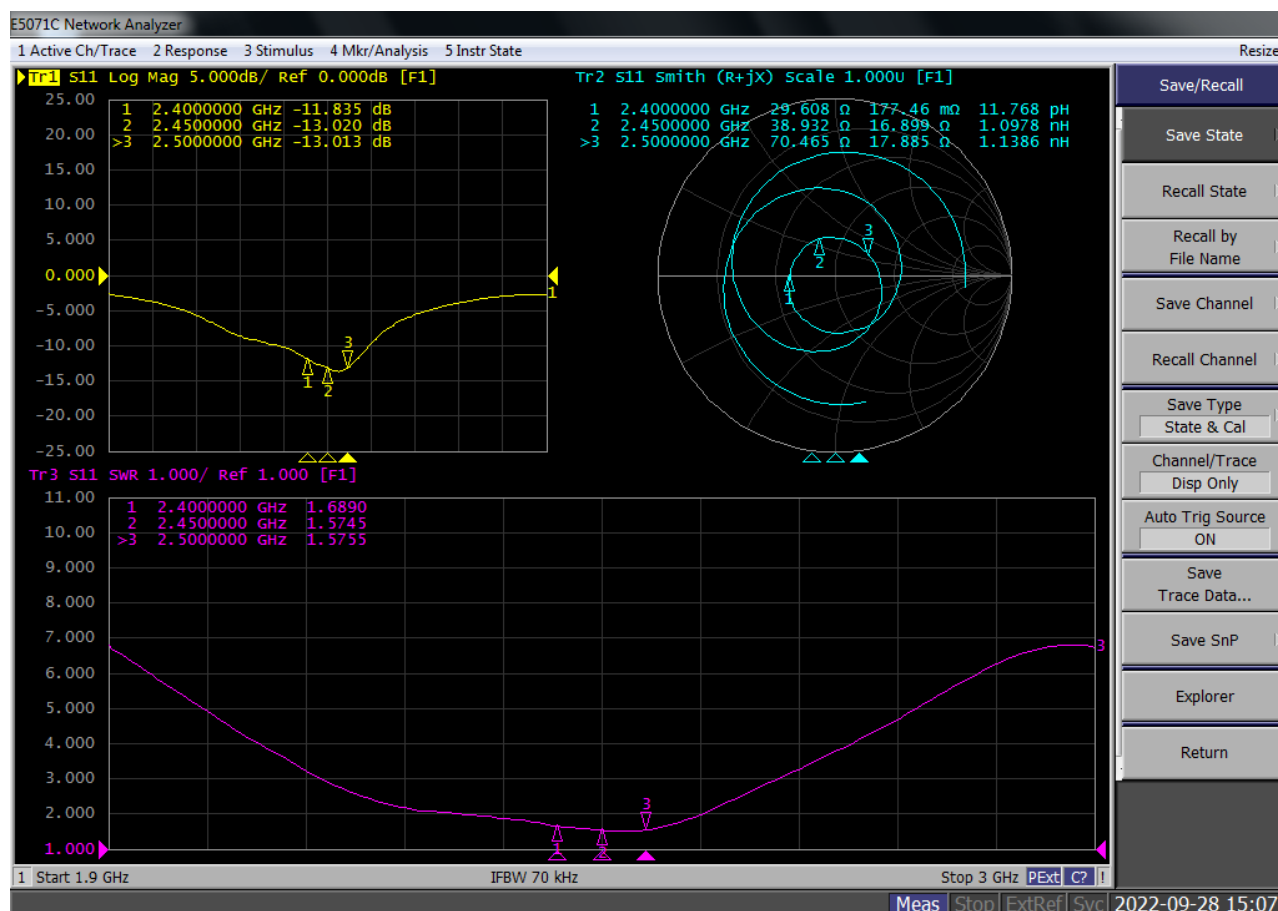
3.1 Antenna passive test

Frequency	2400Mhz~2500Mhz
Impedance	50Ω
Max Antenna Gain	0.85dBi
Power capacity	<12w
Radiation	Omni-directional

3.1.1 Reflection loss&V.S.W.R

Test tools: network analyzer

Standard: Reflection loss≤-10db V.S.W.R≤2



东莞市信博联电子科技有限公司

Dongguan Sinbolin Electronic Technology Co.,Ltd.

Adress: Xiaobian Xinhe Industrial Zone, Chang 'an Town, Dongguan City,
Guangdong Province, China

V.S.W.R

Freq/GHz	2.4	2.45	2.5
VSWR	1.0	1.6	1.4

3.1.2 Gain & Efficiency

Test tools: Microwave Anechoic Chamber+Agiilent Technologies E5071C

Standard: 2.4G $1.5\text{dBi} \leq \text{Gain} \leq 6\text{dBi}$ Efficiency $\geq 50\%$

5G $1.7\text{dBi} \leq \text{Gain} \leq 6\text{dBi}$ Efficiency $\geq 50\%$

Testing Environment: As shown in the figure



Agilent Technologies E5071C



ROHDE&SCHWARZ CMW500

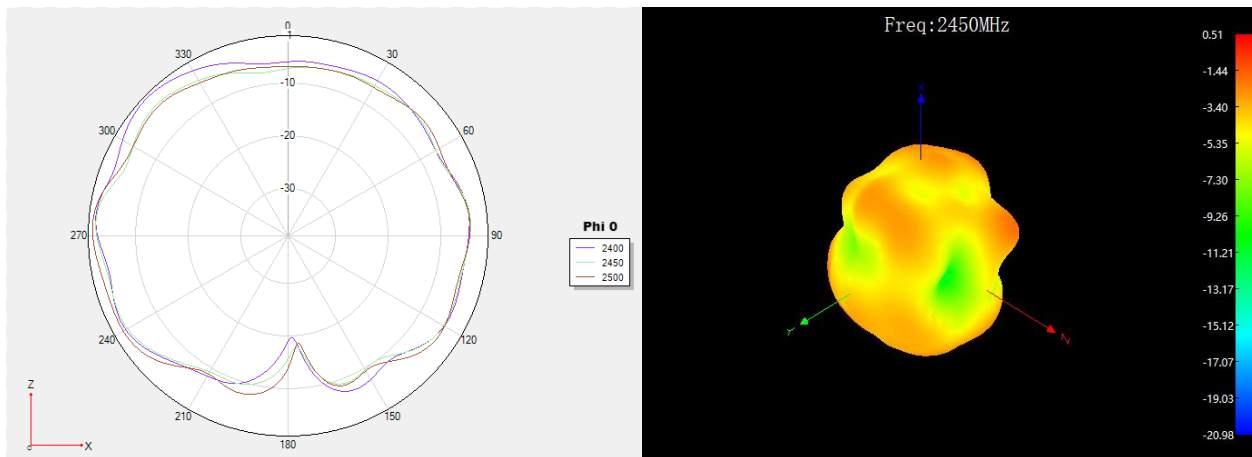
东莞市信博联电子科技有限公司

Dongguan Sinbolin Electronic Technology Co.,Ltd.

Adress: Xiaobian Xinhe Industrial Zone, Chang 'an Town, Dongguan City,
Guangdong Province, China

BT		
Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400	0.85	39.9
2410	0.82	38.02
2420	0.83	36.73
2430	0.65	34.59
2440	0.67	34.83
2450	0.51	33.96
2460	0.64	34.91
2470	0.63	35.08
2480	0.71	35.65
2490	0.8	36.06
2500	0.76	34.99

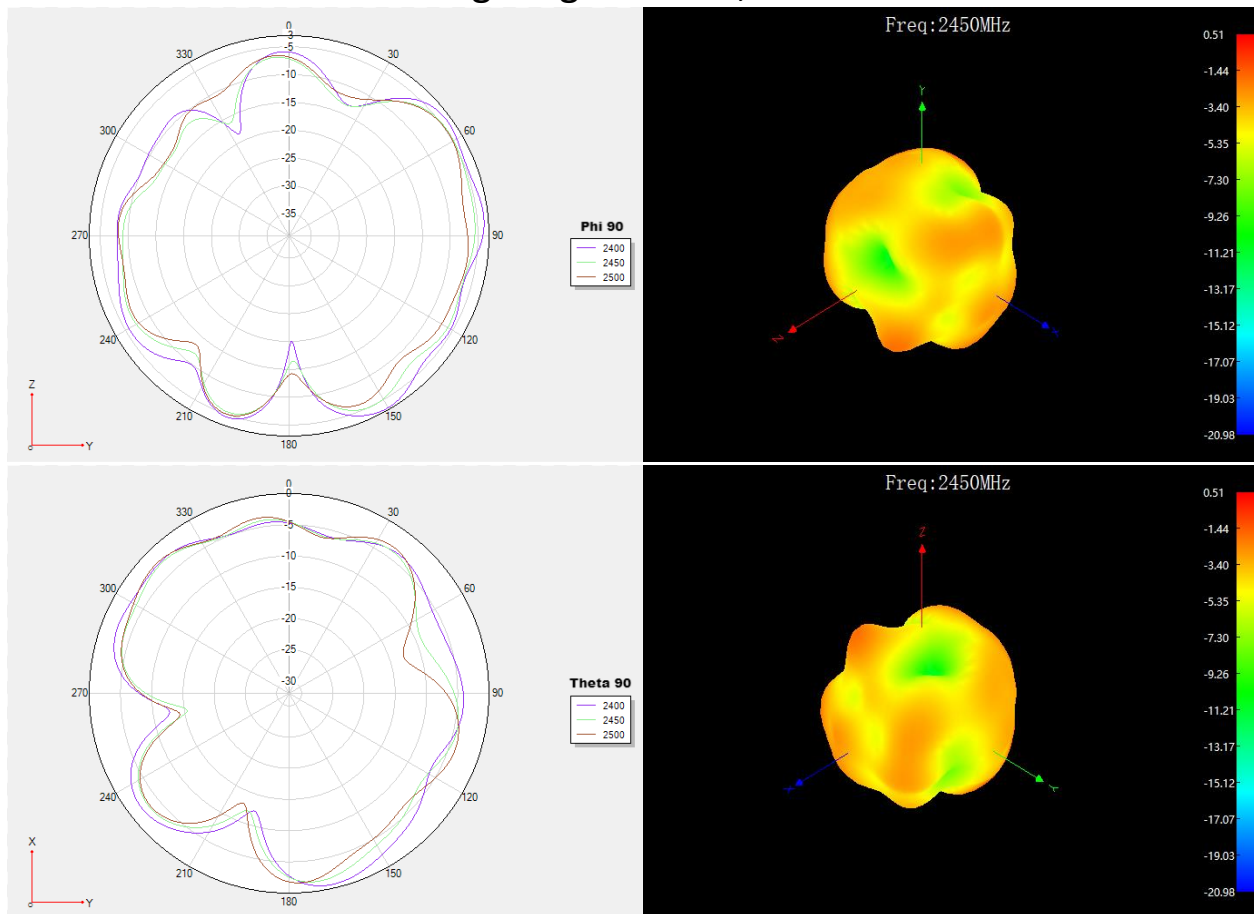
Unit: dBi



东莞市信博联电子科技有限公司

Dongguan Sinbolin Electronic Technology Co.,Ltd.

Adress: Xiaobian Xinhe Industrial Zone, Chang 'an Town, Dongguan City,
Guangdong Province, China



3.1.3 Antenna isolation

Test tools: network analyzer

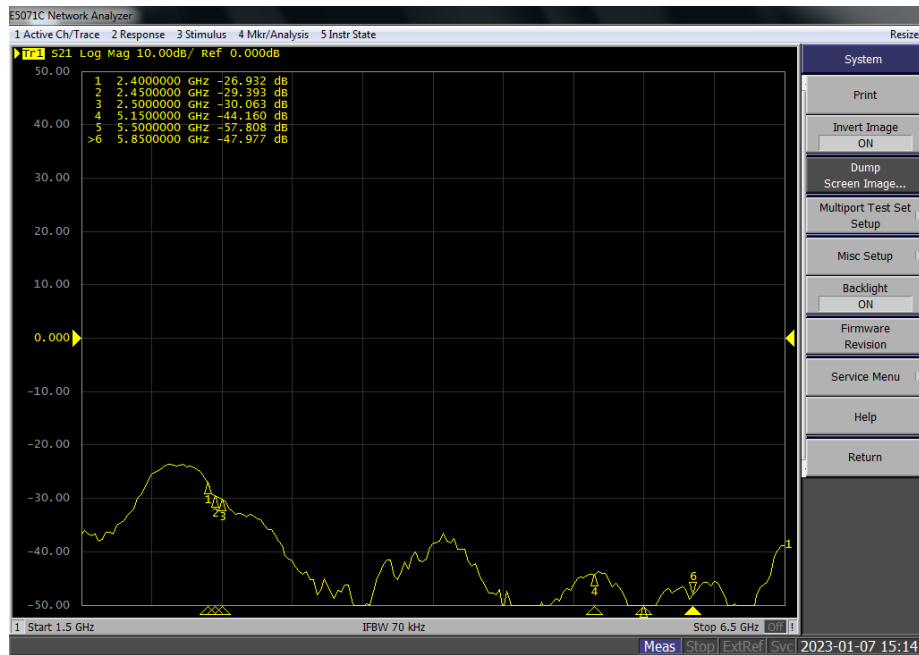
Standard: Isolation $\leq -20\text{dB}$

Isolation of BT antenna

东莞市信博联电子科技有限公司

Dongguan Sinbolin Electronic Technology Co.,Ltd.

Adress: Xiaobian Xinhe Industrial Zone, Chang 'an Town, Dongguan City,
Guangdong Province, China



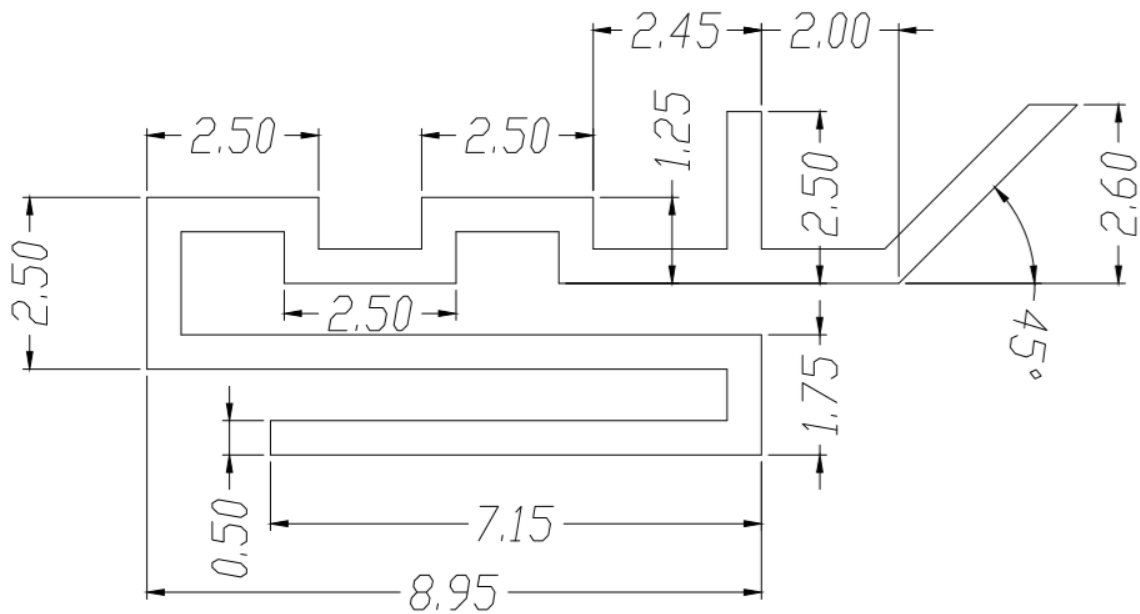
Isolation of BT antenna

东莞市信博联电子科技有限公司

Dongguan Sinbolin Electronic Technology Co.,Ltd.

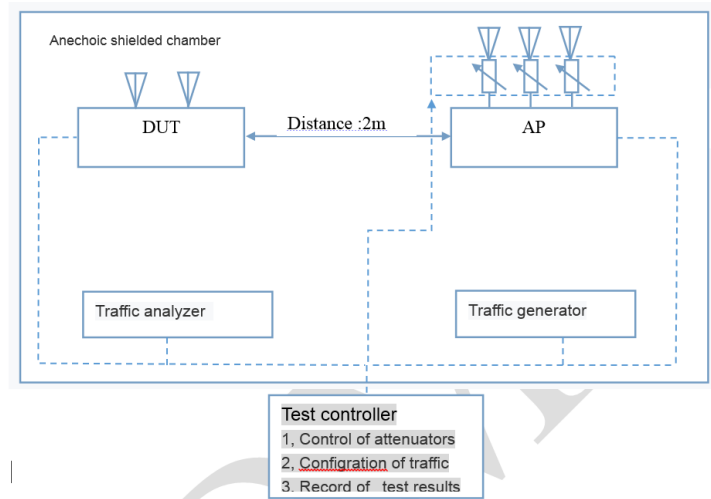
Adress: Xiaobian Xinhe Industrial Zone, Chang 'an Town, Dongguan City,
Guangdong Province, China

3.1.4 Drawing 产品结构图(BT Antenna)



4.Throughput Test

4.1 Test Setup



1. The test setup SHALL locate in the anechoic shielded chamber.
2. A Traffic Generator/Analyzer, sending the Ethernet packets, connects to the LAN interface of the AP. The peer AP antenna is located in 2 meter to the DUT.
3. Additional attenuation is added in each RF chain of AP to simulate the incremental distance.
4. The host SHALL send the Ethernet packet at the maximum rate which the DUT can achieve theoretically.
5. TCP connection SHALL be used for Ethernet packet transmission in the test.