

深圳市英佳创电子科技有限公司

Shenzhen Yingjiachang Electronic Technology Co., LTD.

公司地址：深圳市光明区马田办石围社区将石油麻岗 11 号宏域光明谷A.C栋

Company address: guangming district, shenzhen city, ma tian ban shiwei community will petroleum magang 11 hongyu guangming valley A.C building

BT Antenna information

Record for version modification

Date	Revision	Modify Content	Author
2022-4-24	V1.0	1 st Version	

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1. Project information

Model No.	B047
HW Version	N/A
SW Version	N/A
Antenna type	PCB
Date	2022/4/24

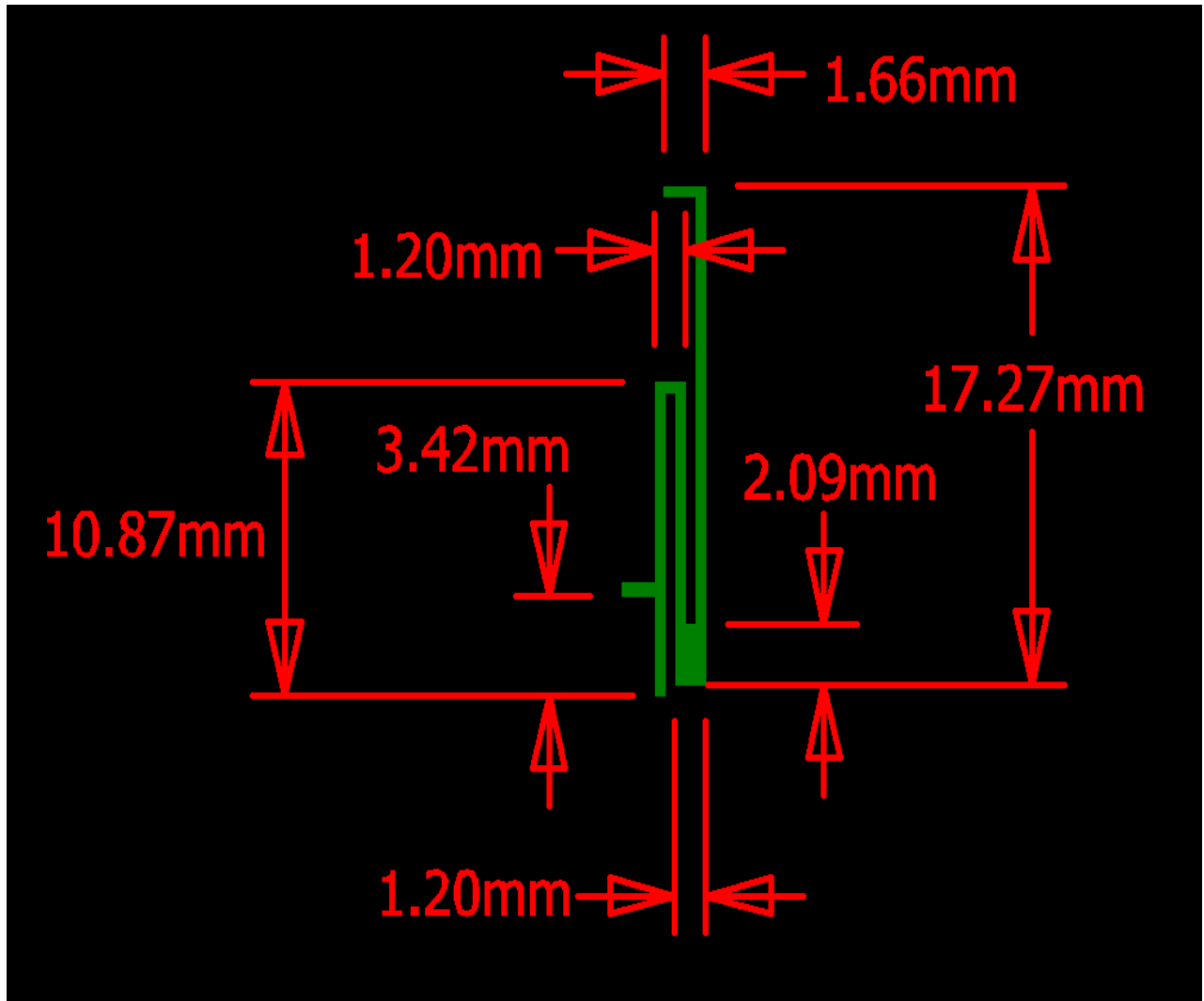
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2. Appearance and specification(BT Antenna)



3. Performance parameter

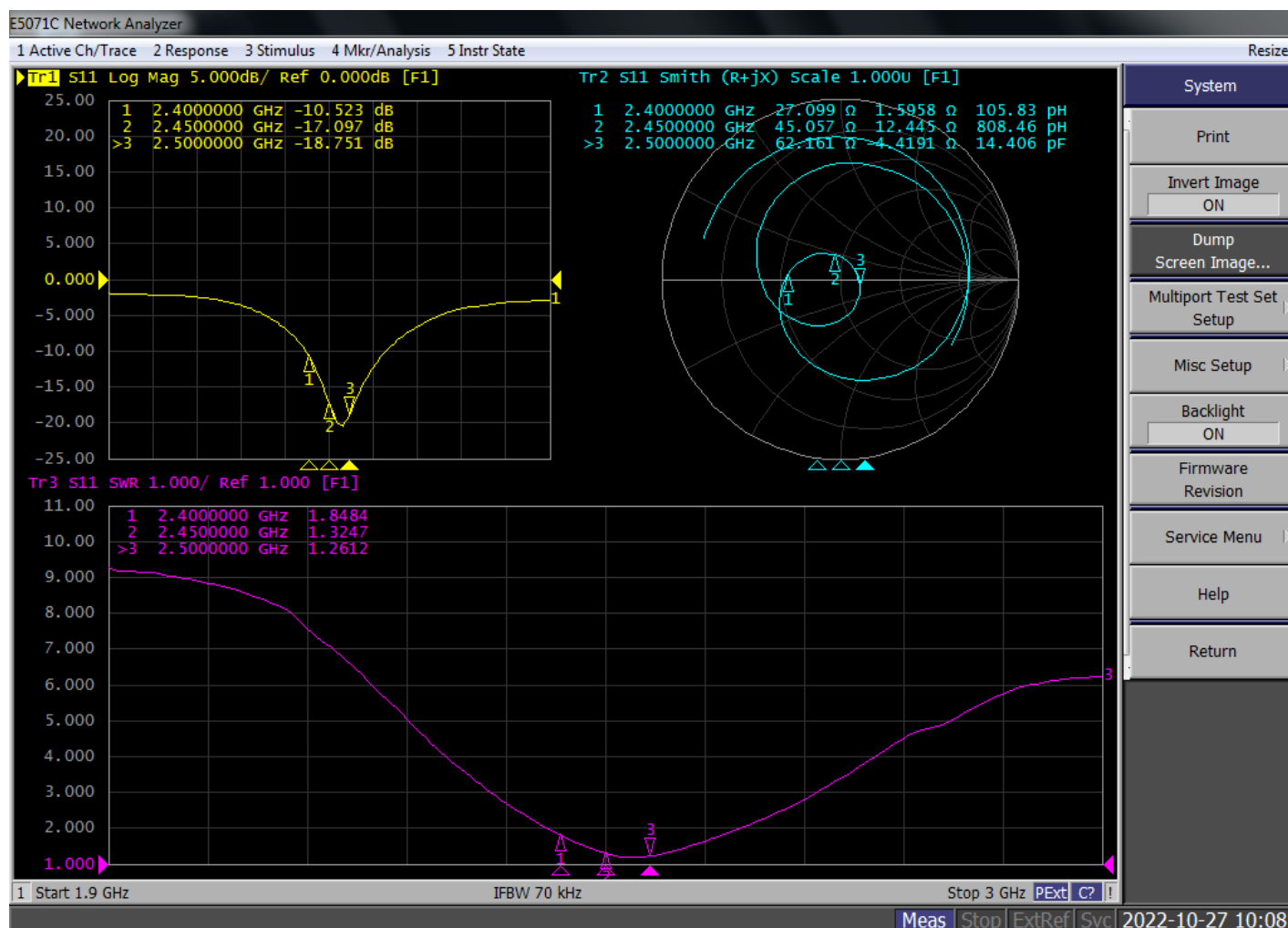
3.1 Antenna passive test

Frequency	2400MHz~2500MHz
Impedance	50Ω
Max Antenna Gain	2.29dBi
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



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V.S.W.R

Freq/GHz	2.4	2.45	2.5
VSWR	1.0	1.6	1.4

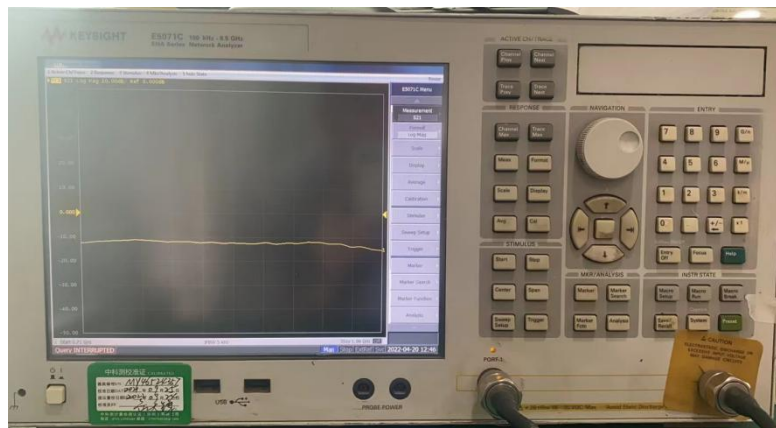
3.1.2 Gain & Efficiency

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

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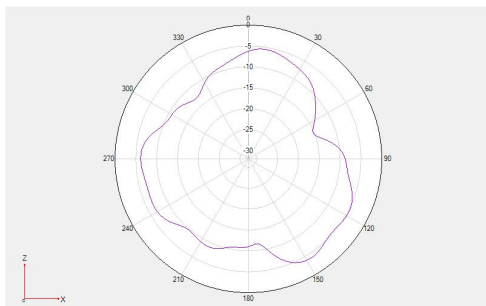
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BT		
Frequency / MHz	Gain/ dBi	Efficiency / %
2400	1.44	33.04
2410	1.70	34.99
2420	1.95	37.07
2430	2.00	37.76
2440	2.20	40.18
2450	2.17	40.64
2460	2.25	42.27
2470	2.25	42.95
2480	2.29	43.95
2490	2.28	44.77
2500	2.08	44.16

2D/3D directional diagram :

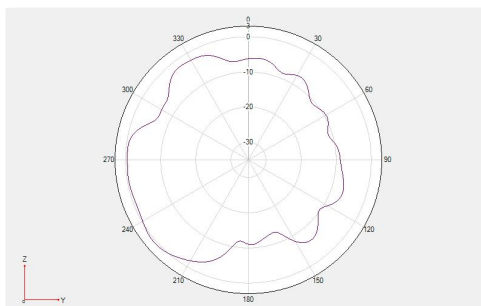
Phi =0 freq=2400MHz

(unit: dBi)



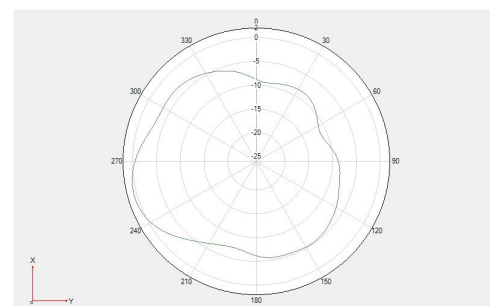
Phi =90 freq=2400MHz

(unit: dBi)

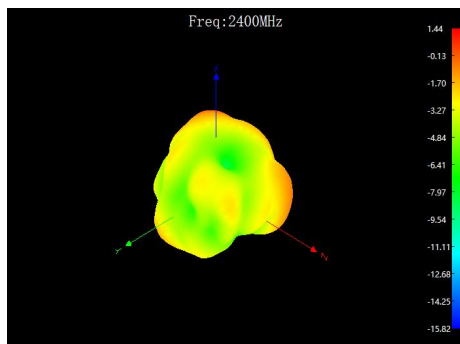


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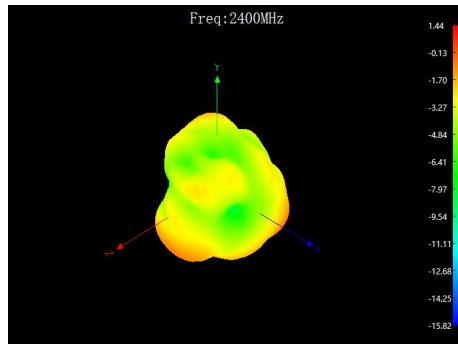
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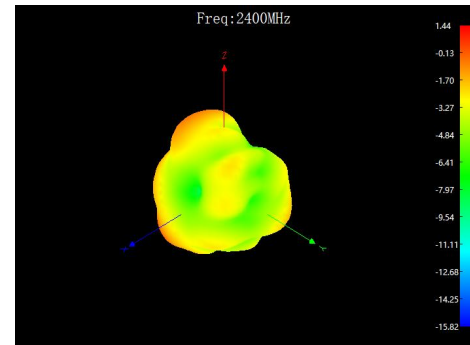
(unit: dBi)



(unit: dBi)



(unit: dBi)

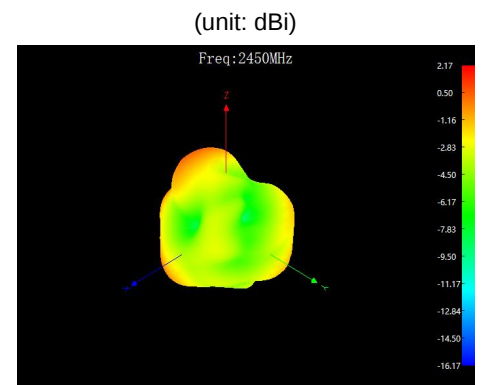
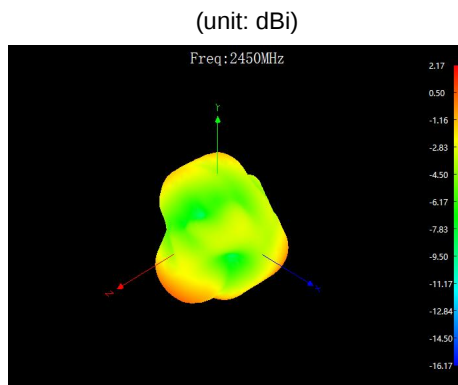
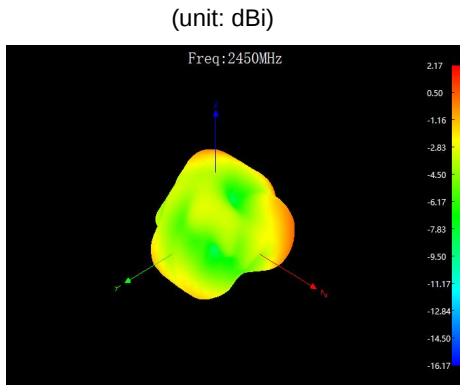
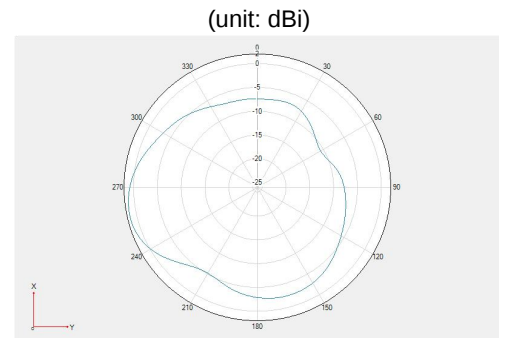
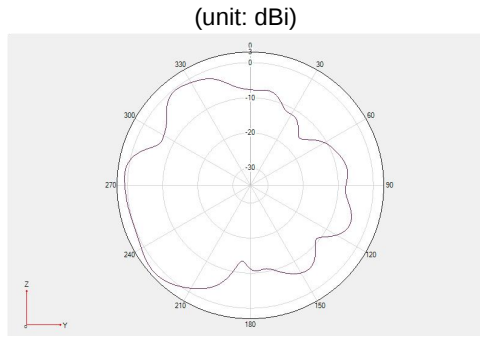
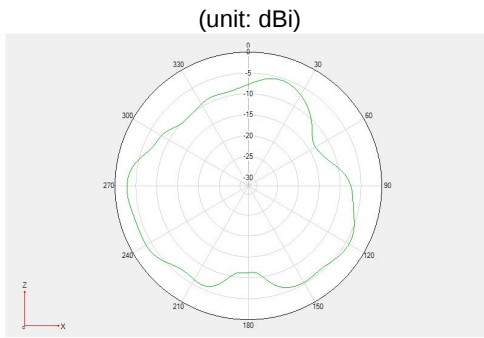


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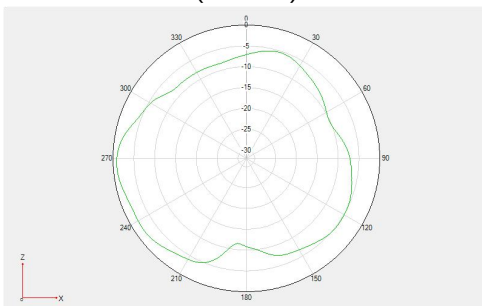
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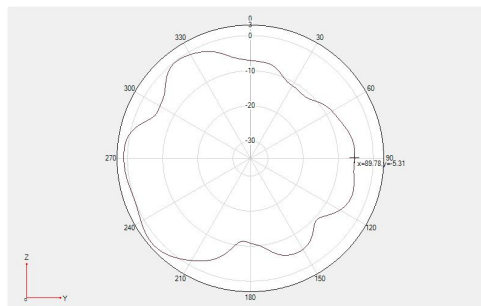
Phi =0 freq=2500MHz

(unit: dBi)



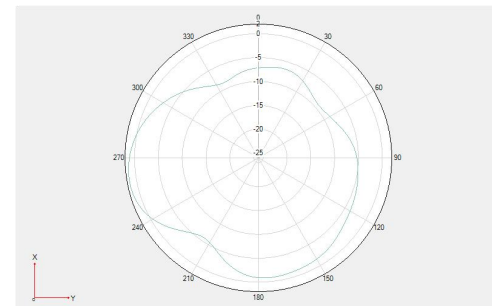
Phi =90 freq=2500MHz

(unit: dBi)

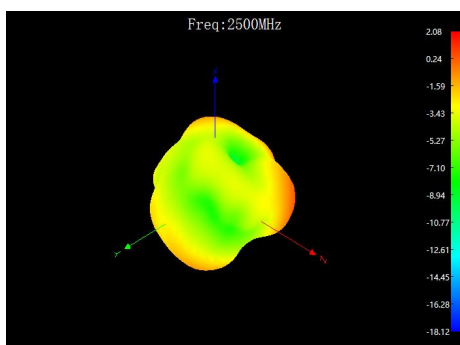


Theta =90 freq=2500MHz

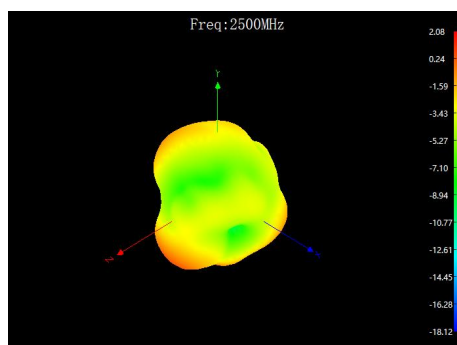
(unit: dBi)



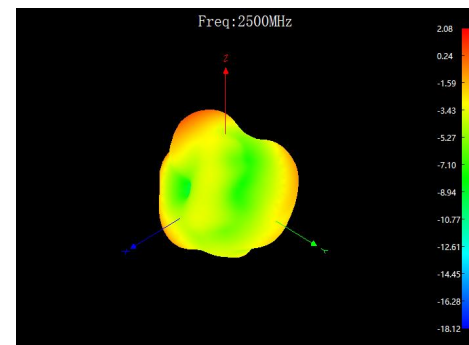
(unit: dBi)



(unit: dBi)



(unit: dBi)



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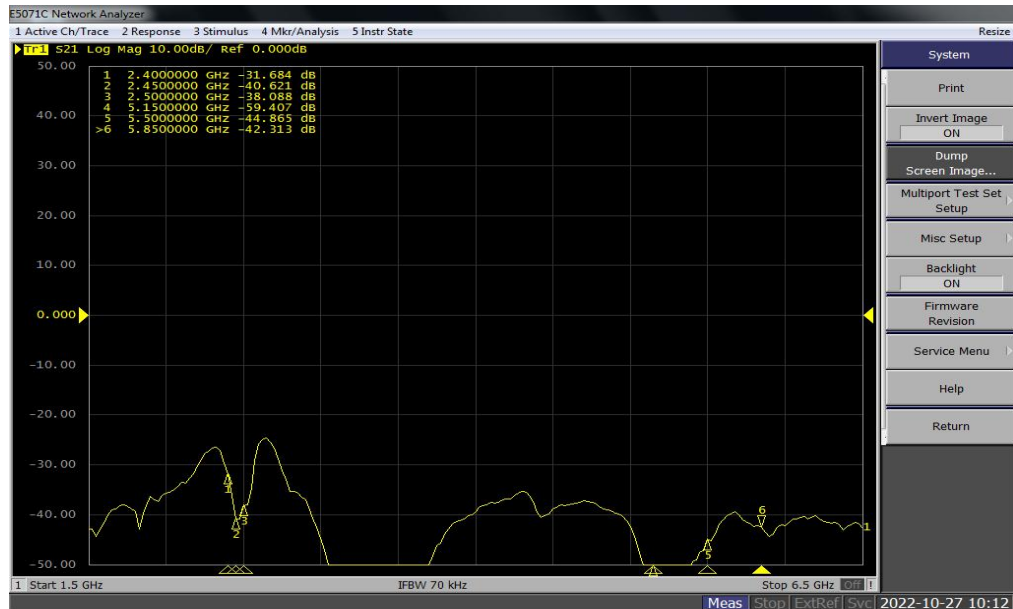
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3.1.3 Antenna isolation

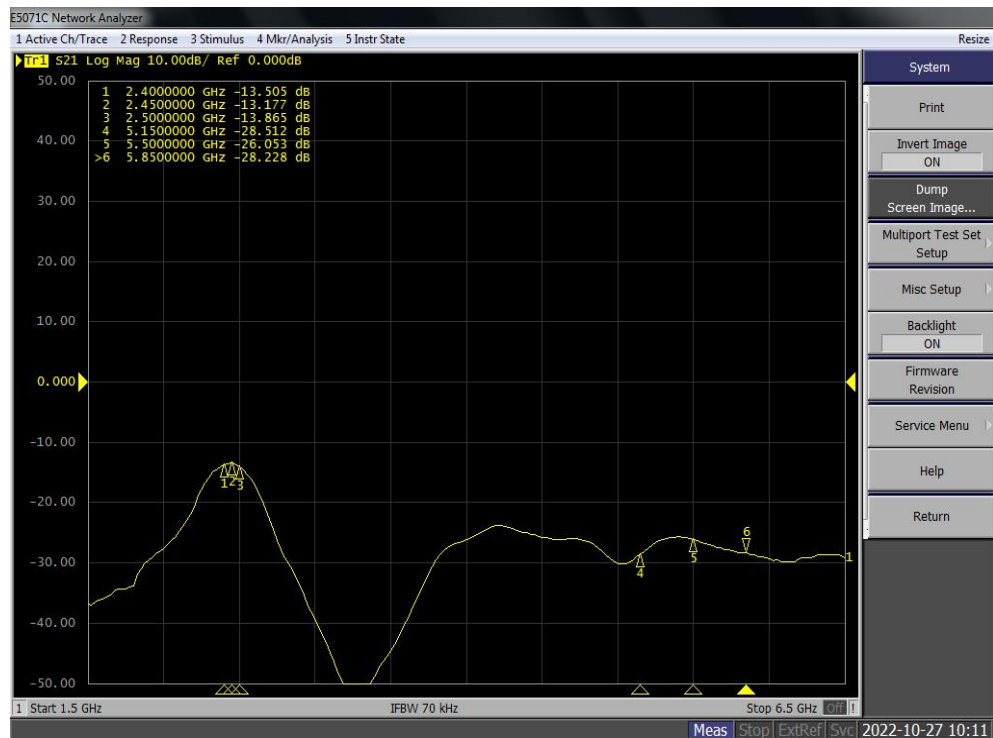
Test tools: network analyzer

Standard: Isolation $\leq$ -20dB

WIFI 2--BT Isolation layer



WIFI 1--BT Isolation layer



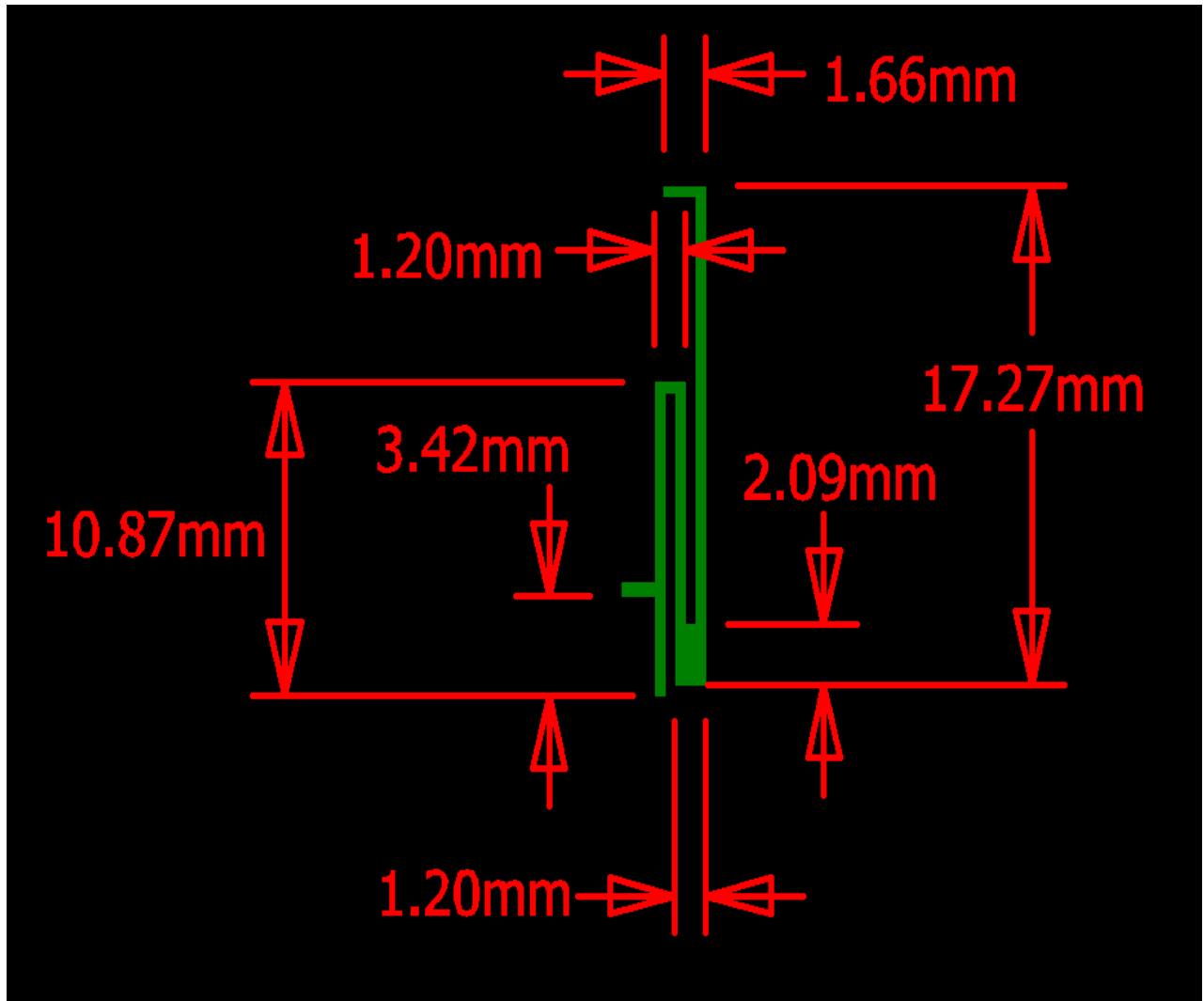
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3.1.4 Drawing 产品结构图(BT Antenna)



4.Throughput Test

4.1 Test Setup

