

Antenna Testing Report

Customer : Shenzhen sangge'er Polytron Technologies Inc

Project Name : DS1-16

Antenna Manufacturer: Sunnyway Technology(CHINA)

Address: The 6th floor, Building 5, Nantaiyun Innovation Valley Center,
Guangming District, Shenzhen City

Report version: 2025/3/14 A0
Research staff: Jie Yang

Version	Report date	Remark
A0	2025.3.14	Antenna test report
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1.Record·····

2.Project Overview ·····

3.Equipment List·····

4. Antenna mounting position·····

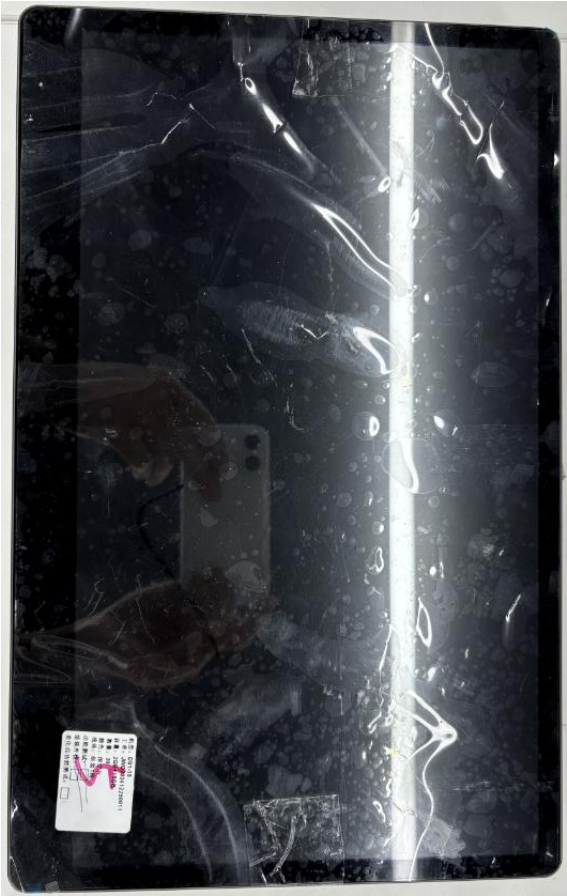
5.Passive parameters ·····

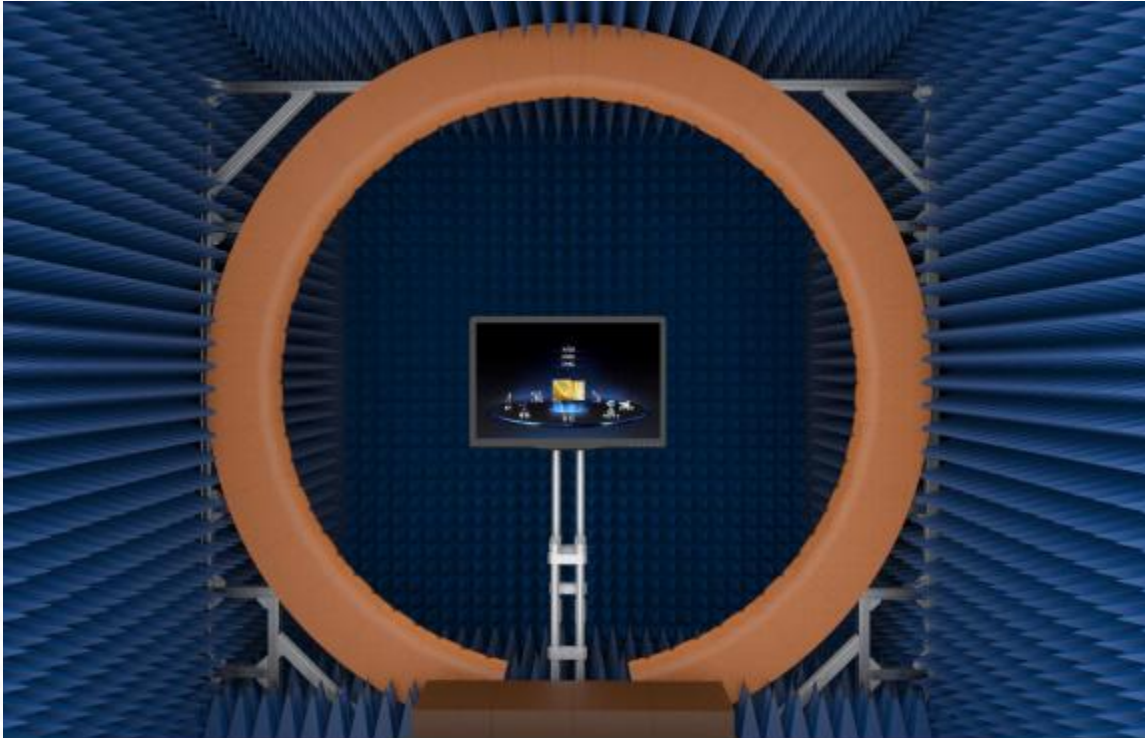
6.Passive efficiency and gain ·····

7.OTA test data ·····

8.Directiona pattern ·····

9.Summary·····

Prototype status	Debugging machine	Project pictures 
Device type		
Number of antennas	WIFI/BT antenna;	
Frequency band	WIFI:2.4/5.8GHZ	
	BT:2.4GHZ	
Structural style	FPC+Cable	
Environment adjustment	NO Change made	
Matching modification	NO Change made	



The industry's top 64 sensors OTA chamber

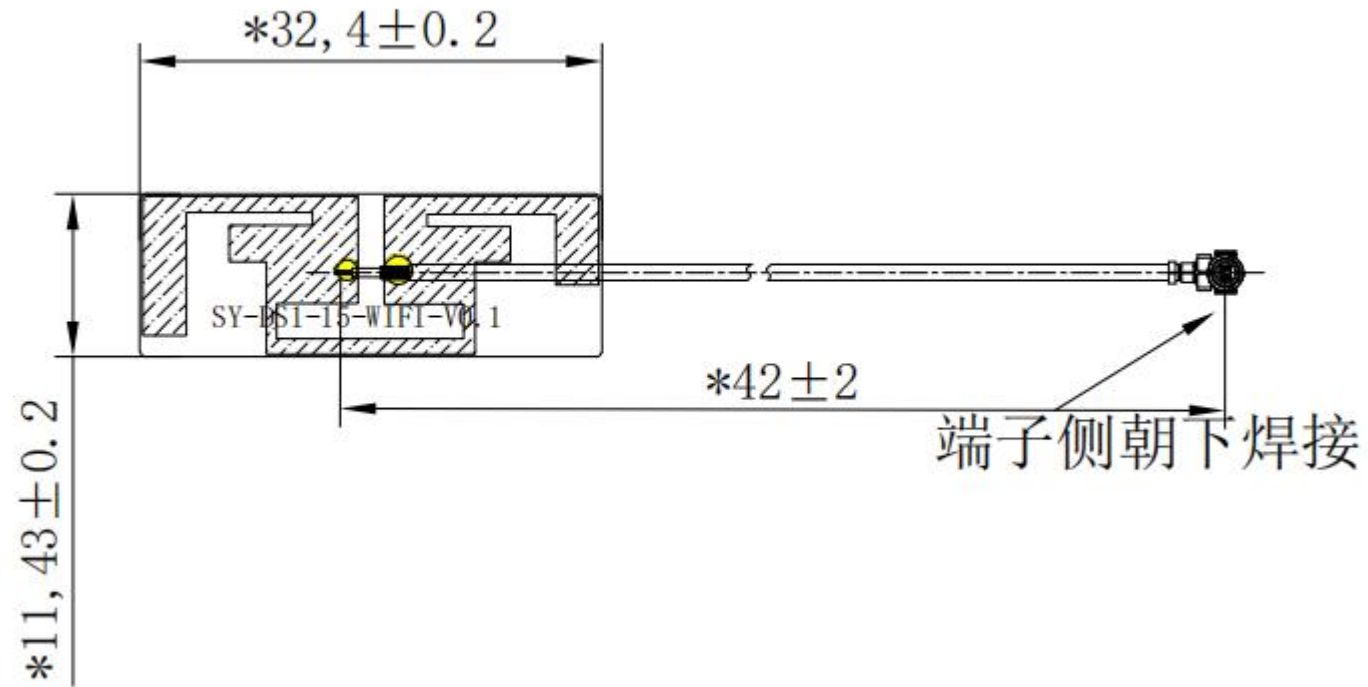
Frequency range: 400MHz-11GHz

Device Llimitation: 2M

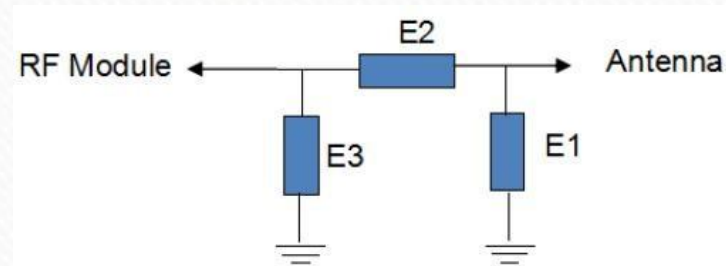
Load-bearing limitation:100KG

Equipments Items	Total Quantity	Quantity for Shanghai R&D	Quantity for Shenzhen R&D	Quantity for ChongQing R&D
OTA chamber	10	4	5	1
5G Tester (SP9500-CTS)	3	1	1	1
R&S Tester (high configuration CMW500)	6	3	2	1
Japan Anritsu Tester (Dual Channel 8820)	4	2	2	--
NB-IoT Tester (SP8315)	3	1	1	1
Agilent Tester (8960)	9	4	4	--
Agilent Network Analyzer (E5062A)	7	3	3	1
Agilent Network Analyzer (E5071C 8.5GHZ)	11	5	5	1
Agilent Network Analyzer (E5071B 8.5GHZ)	7	3	3	1
R & S Network Analyzer (ZND)	9	4	4	1
R & S Network Analyzer (ZVB)	3	1	1	1
OTA head hand / ear hand / arm hand	5	2	2	1
GPS/WIFI active test equipment	5	2	2	1

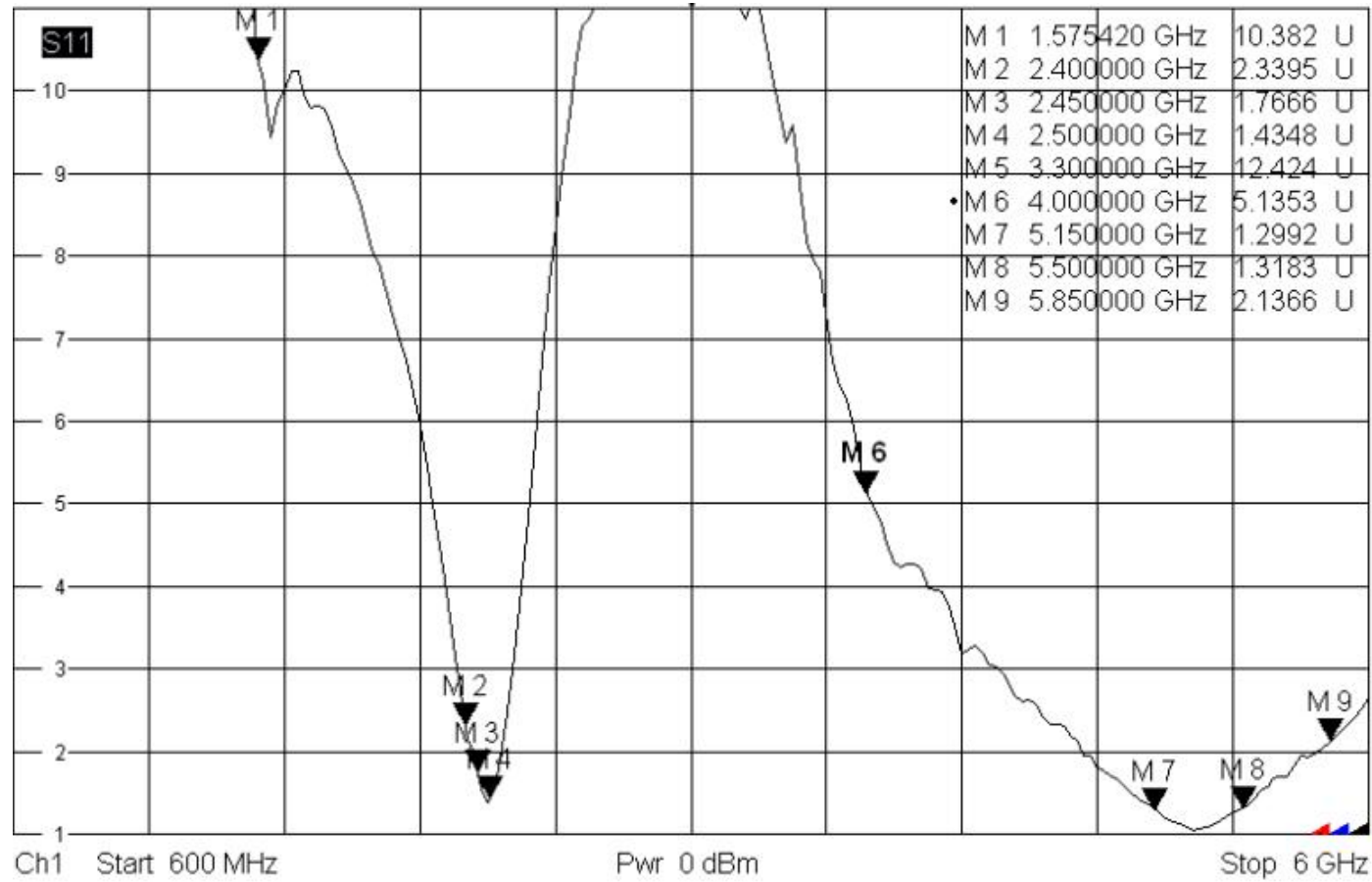
Antenna mounting position



BT/WIFI-ANT

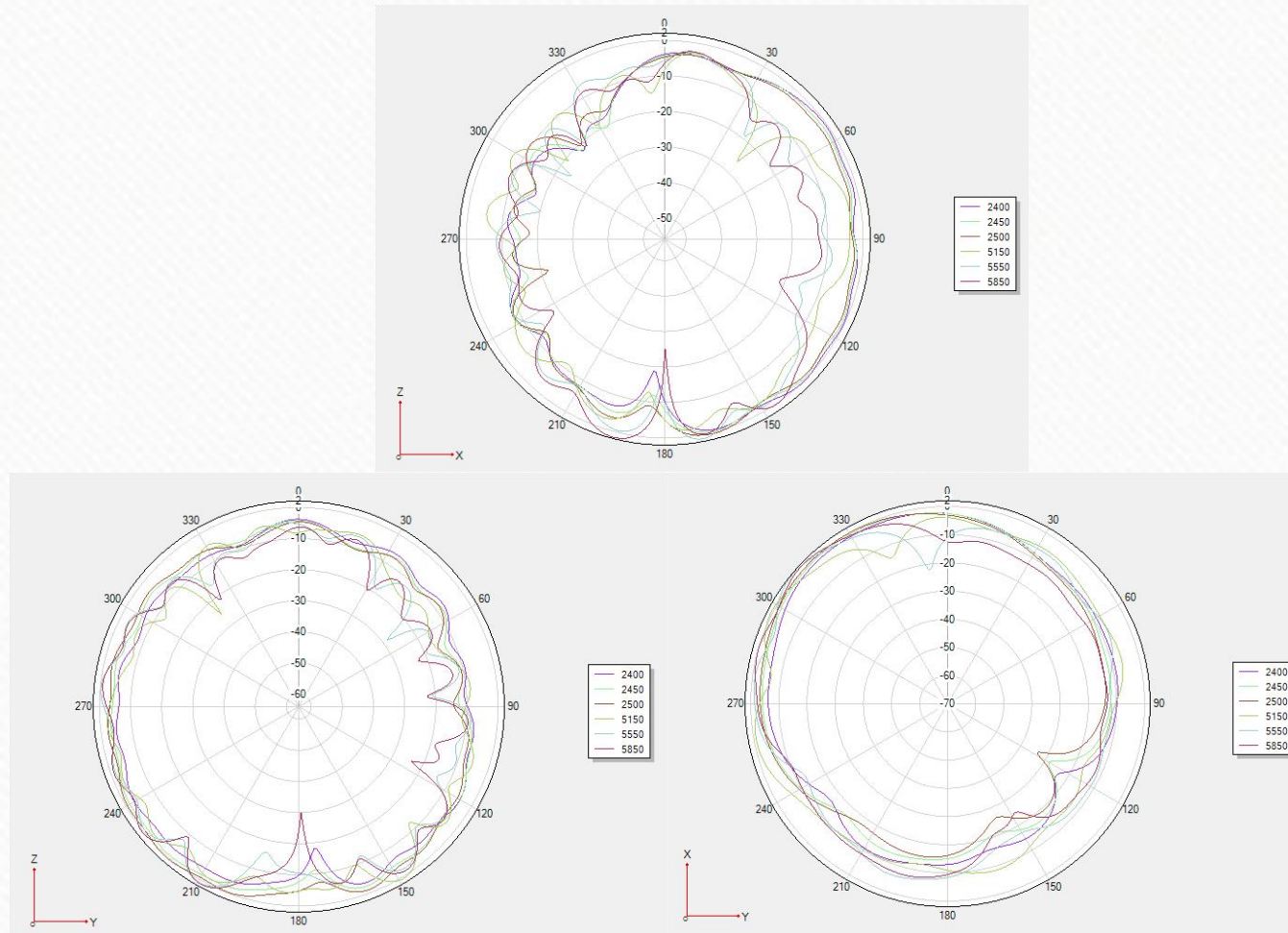


Element	Value
E1	N/A
E2	0 欧姆
E3	N/A

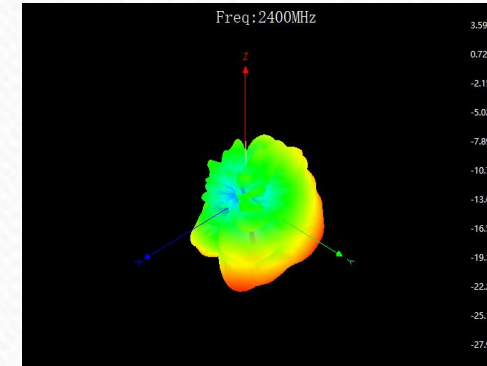
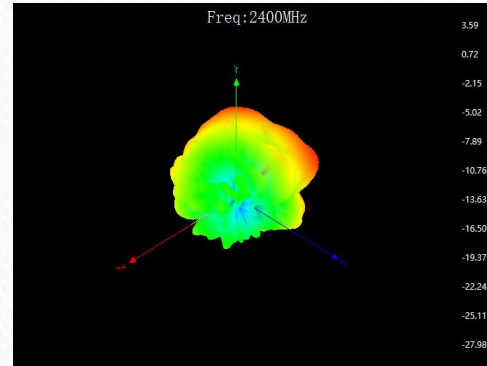
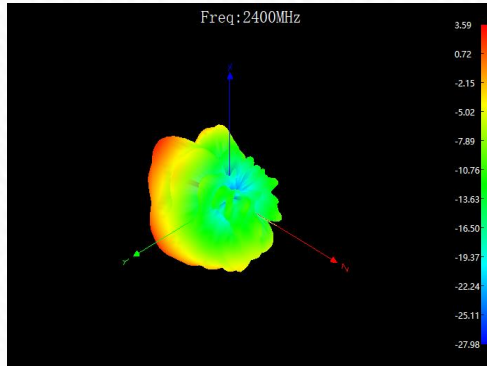


Frequency/Mhz	MaxGain/dBi	Efficiency / %		Frequency/Mhz	MaxGain/dBi	Efficiency / %
2400	3.6	48.53		5250	3.49	44.36
2410	3.36	45.6		5300	4.11	46.13
2420	2.89	41.02		5350	3.91	44.57
2430	2.8	40.74		5400	3.9	44.06
2440	3.09	42.17		5450	3.85	46.03
2450	3.02	43.15		5500	3.75	43.25
2460	2.87	41.02		5550	4.28	46.13
2470	2.97	43.05		5600	4.6	45.71
2480	3.12	41.11		5650	4.86	46.13
2490	3.08	39.36		5700	5.11	46.56
2500	3.74	39.63		5750	5.1	47.86
5150	3.48	44.46		5800	5.01	48.31
5200	2.83	42.46		5850	5.69	48.31

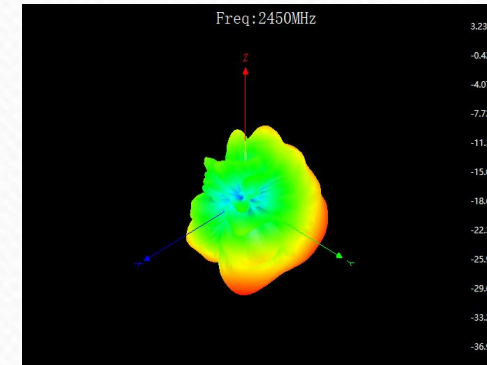
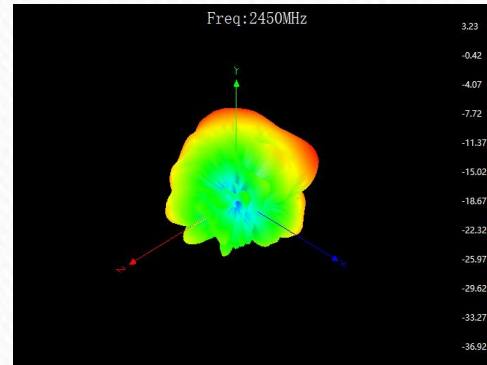
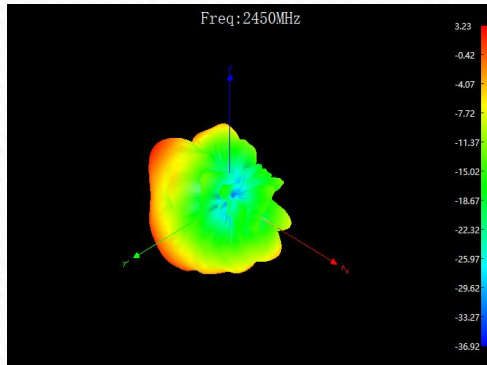
Item	Measurement	Band	Channel	Total
1	TRP	WIFI_B (1M)	1	10.24
2	TRP	WIFI_B (1M)	6	10.71
3	TRP	WIFI_B (1M)	11	10.56
1	TIS(EIRP)	WIFI_B (11M)	11	-80.83
2	TRP	WIFI_G (6M)	1	10.07
3	TRP	WIFI_G (6M)	6	10.64
4	TRP	WIFI_G (6M)	11	10.31
5	TIS(EIRP)	WIFI_G (54M)	11	-70.66
6	TRP	WIFI_N_ISM (6.5M)	1	9.17
7	TRP	WIFI_N_ISM (6.5M)	6	9.56
8	TRP	WIFI_N_ISM (6.5M)	11	8.87
9	TIS(EIRP)	WIFI_N_ISM (65M)	11	-60.24
10	TRP	WIFI_A (6M)	36	8.76
11	TRP	WIFI_A (6M)	149	9.31
12	TRP	WIFI_A (6M)	165	9.16
13	TIS(EIRP)	WIFI_A (54M)	165	-67.26
14	TRP	WIFI_N_UNII (6.5M)	36	8.46
15	TRP	WIFI_N_UNII (6.5M)	149	8.78
16	TRP	WIFI_N_UNII (6.5M)	165	8.01
17	TIS(EIRP)	WIFI_N_UNII (65M)	165	-63.21



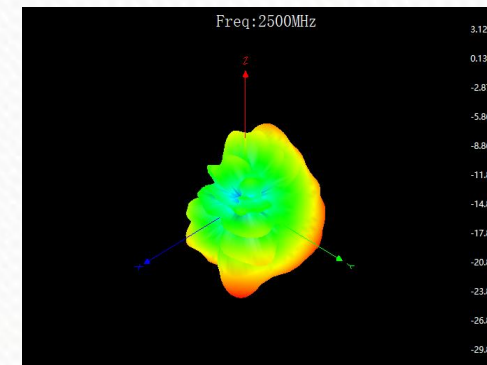
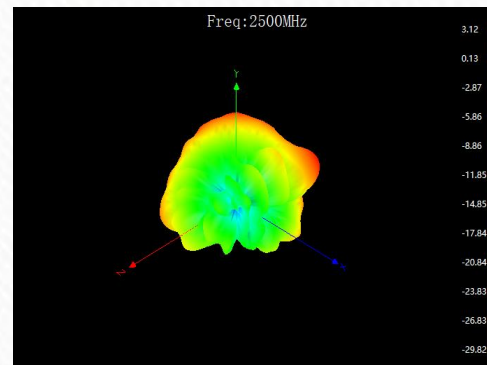
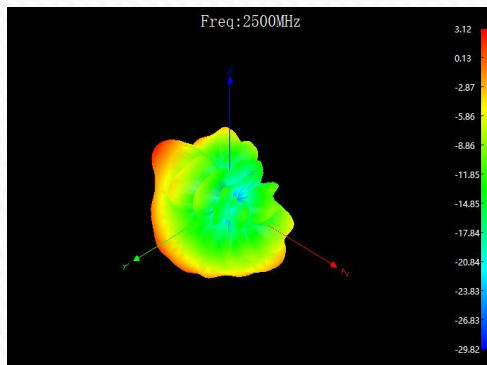
2400Mhz

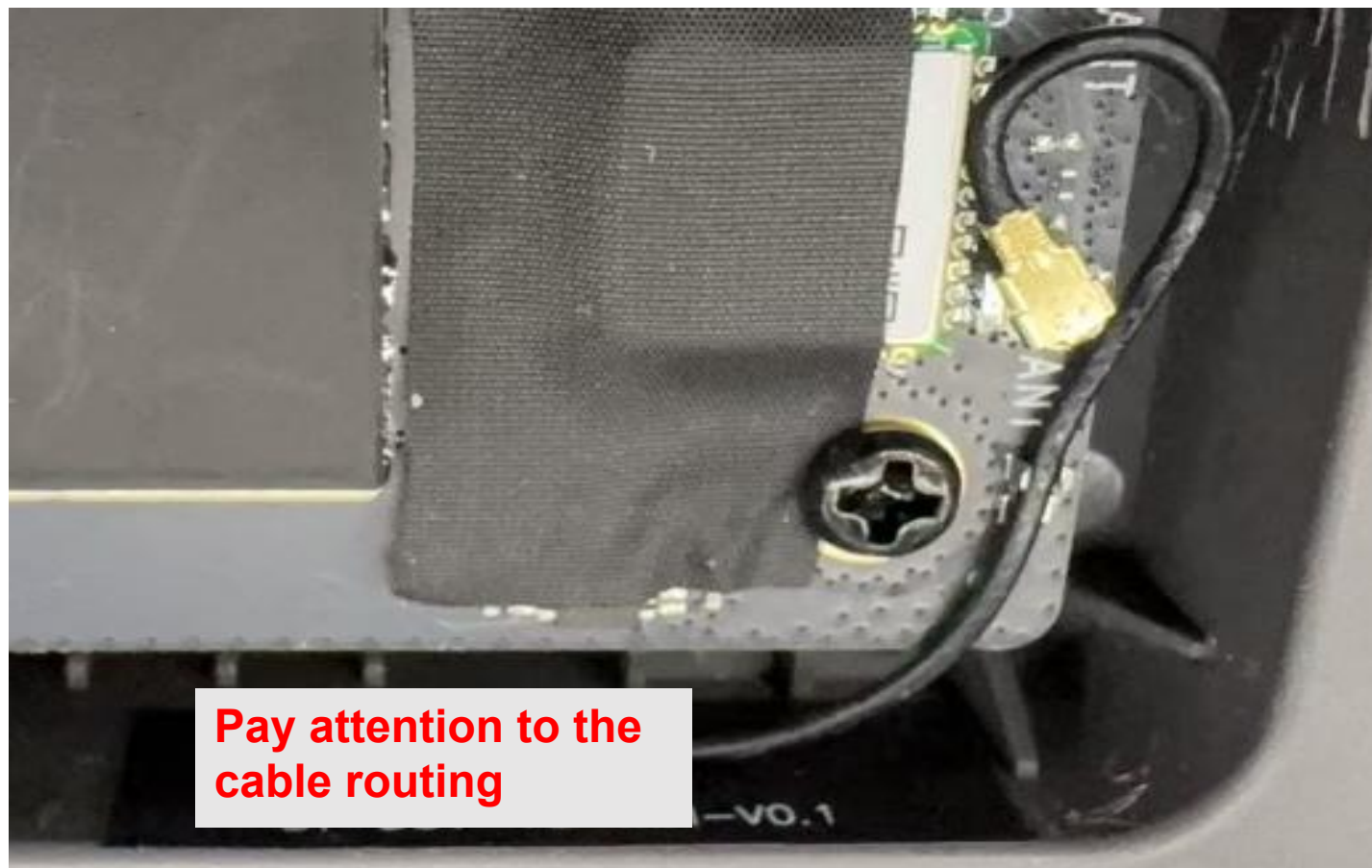


2450MHz

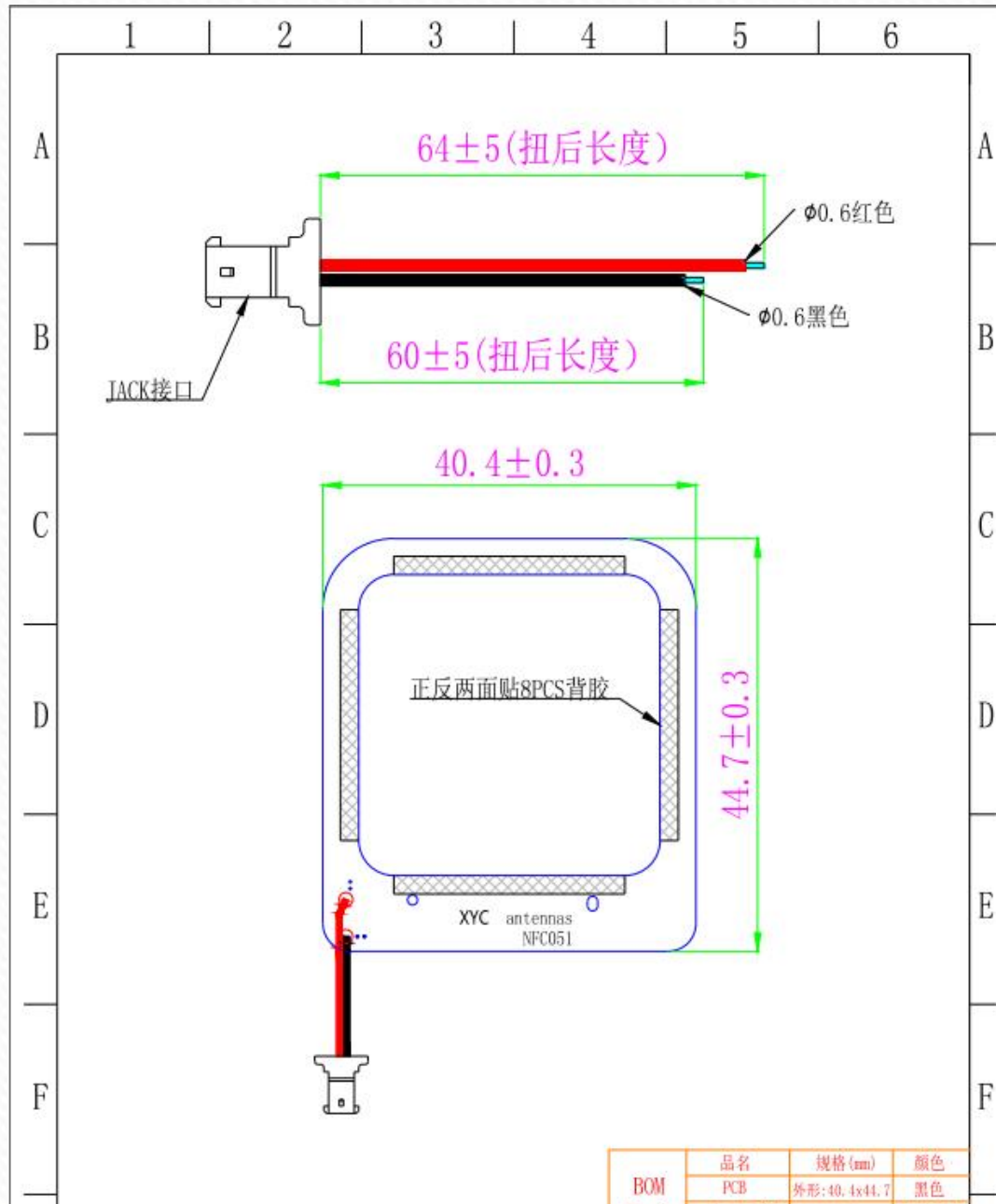


2500Mhz



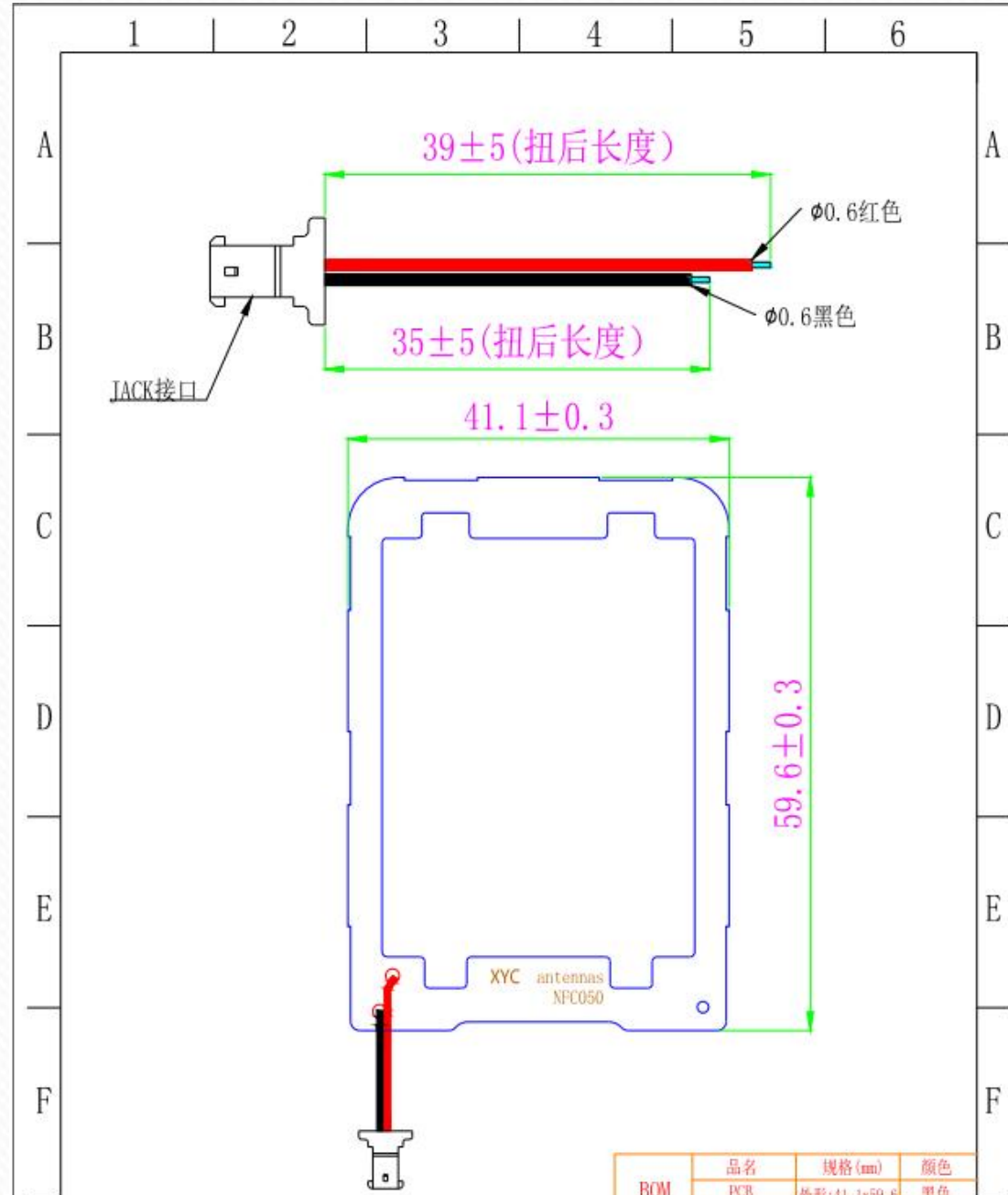


NFC ANT(DS2-51)



We statement that All measurements were performed radiated and therefore additional antenna gain documentation is not required.

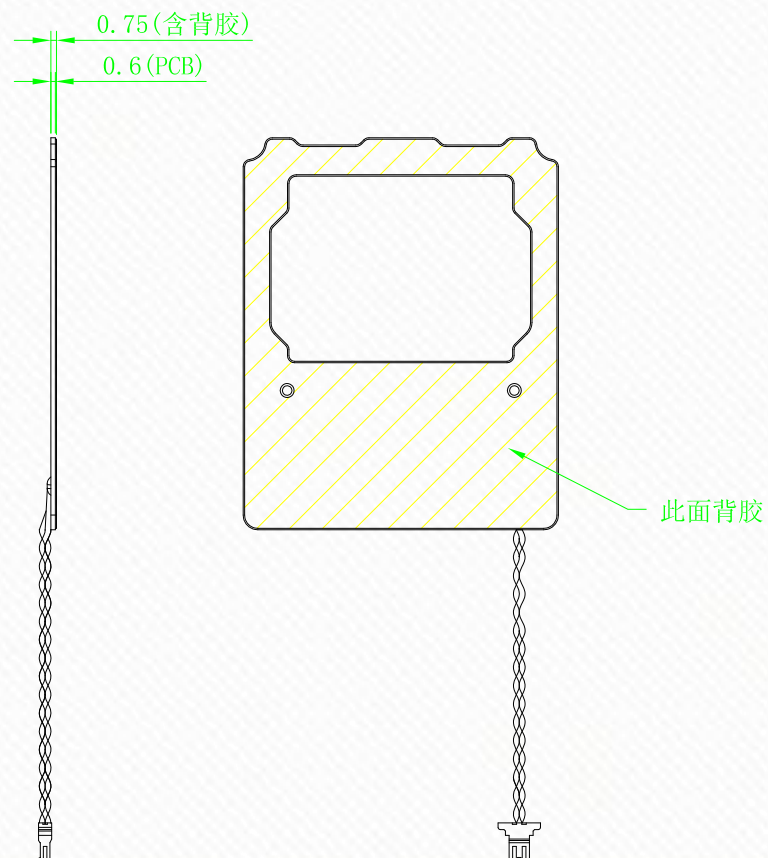
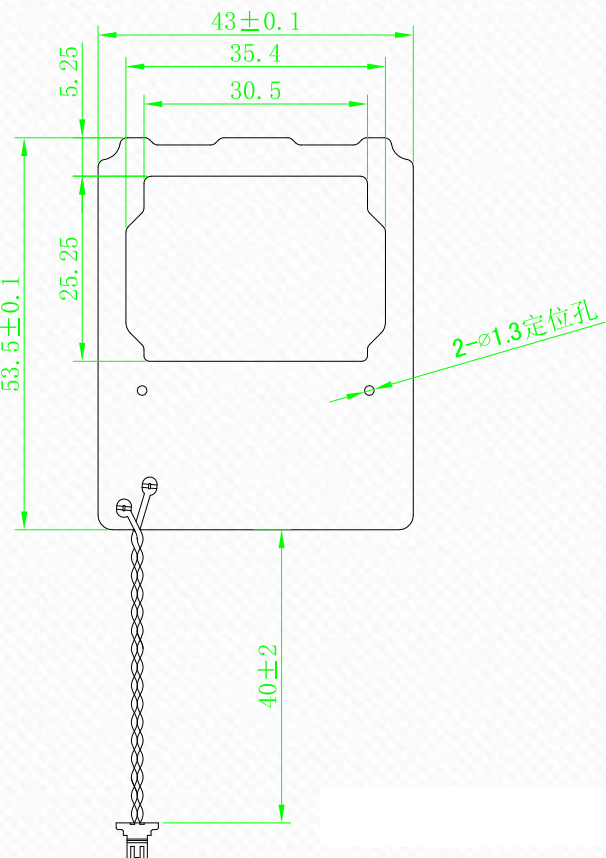
NFC ANT(DS2-52)



We statement that All measurements were performed radiated and therefore additional antenna gain documentation is not required.

NFC ANT(DS2-55)

We statement that All measurements were performed radiated and therefore additional antenna gain documentation is not required.



1. Latest machine test data.
2. Pay attention to the cable routing.

Thank You

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