



深圳市安特通讯科技有限公司

ANT Communication Technology (Shenzhen) Co., LTD.

HUACHUANG TECHNOLOGY LTD

Antenna Test Report

ANT Communication Technology (Shenzhen) Co., LTD.

address : 701, Building A, No. 10, Jiangfu Road, Xinzhuang Community,
MatianStreet, Guangming District, Shenzhen

M/N : LW010-CT

Tester : Hu Lin
Approval : Liu Feng
Date : 2024 / 11/ 25



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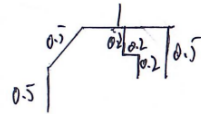
ANT Communication Technology (Shenzhen) Co., LTD.

1. Device Profile

2. LORA Test

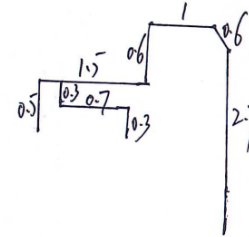
3. BT Test

4. GPS Test



Unit: cm

$$0.5 + 0.5 + 1 + 0.2 + 0.2 + 0.2 + 0.5 = 3.1 \text{ cm}$$



Unit: cm

$$0.5 + 1.5 + 0.3 + 0.7 + 0.3 + 0.6 + 1 + 0.6 + 2.7 = 8.2 \text{ cm}$$



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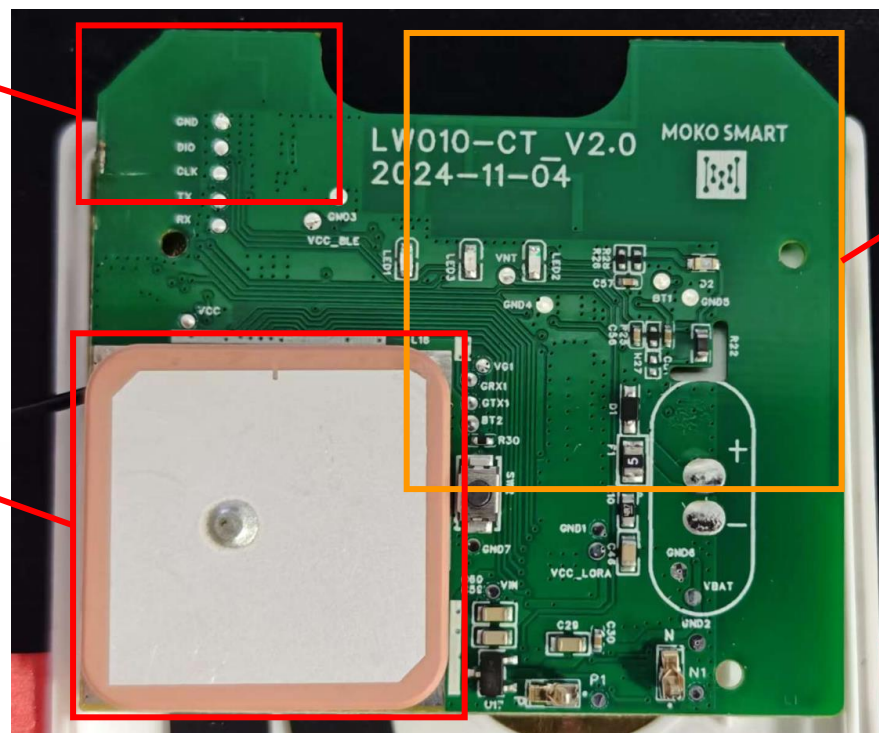
ANT Communication Technology (Shenzhen) Co., LTD.

1. Device Profile

BT Antenna

GPS Antenna

LORA Antenna



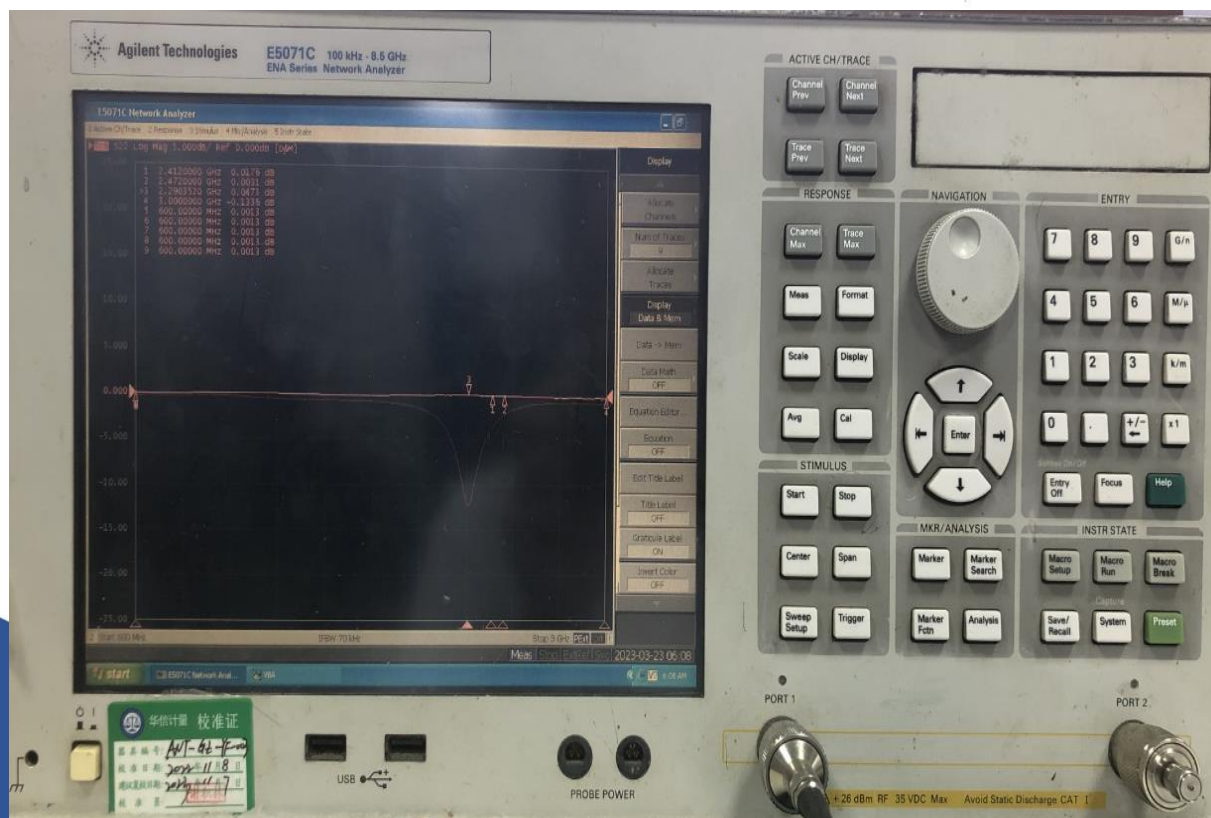


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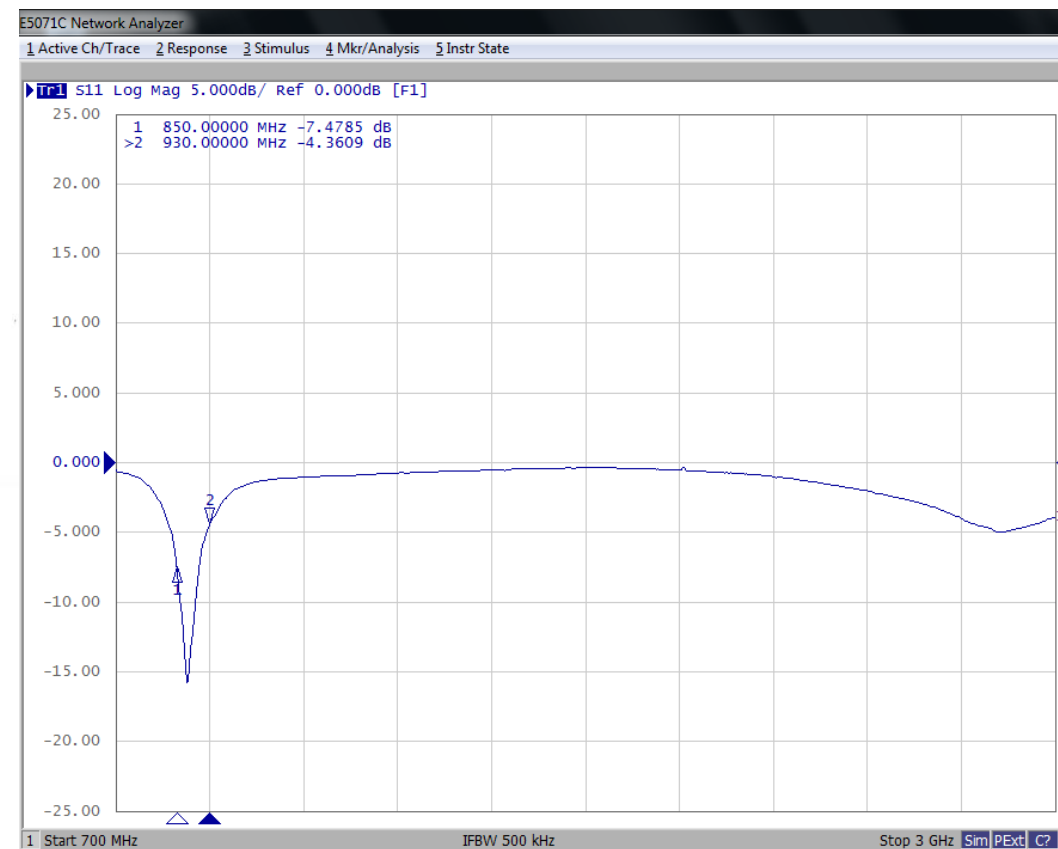
ANT Communication Technology (Shenzhen) Co., LTD.

2. LORA Test

Agilent E5071C



S-Parameter Test

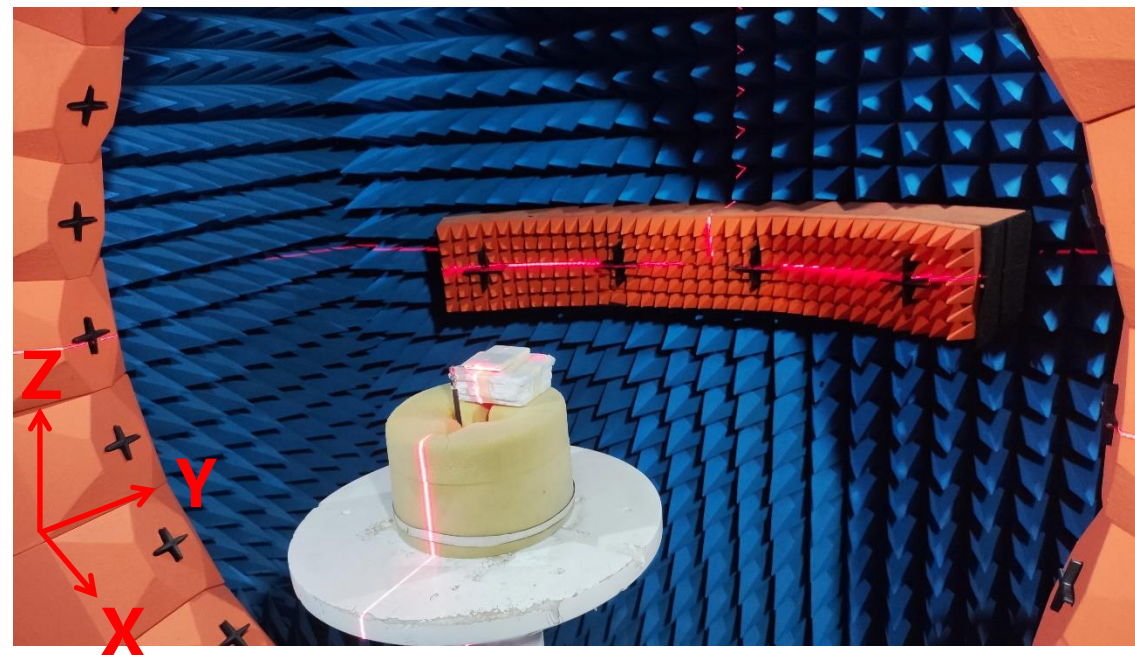
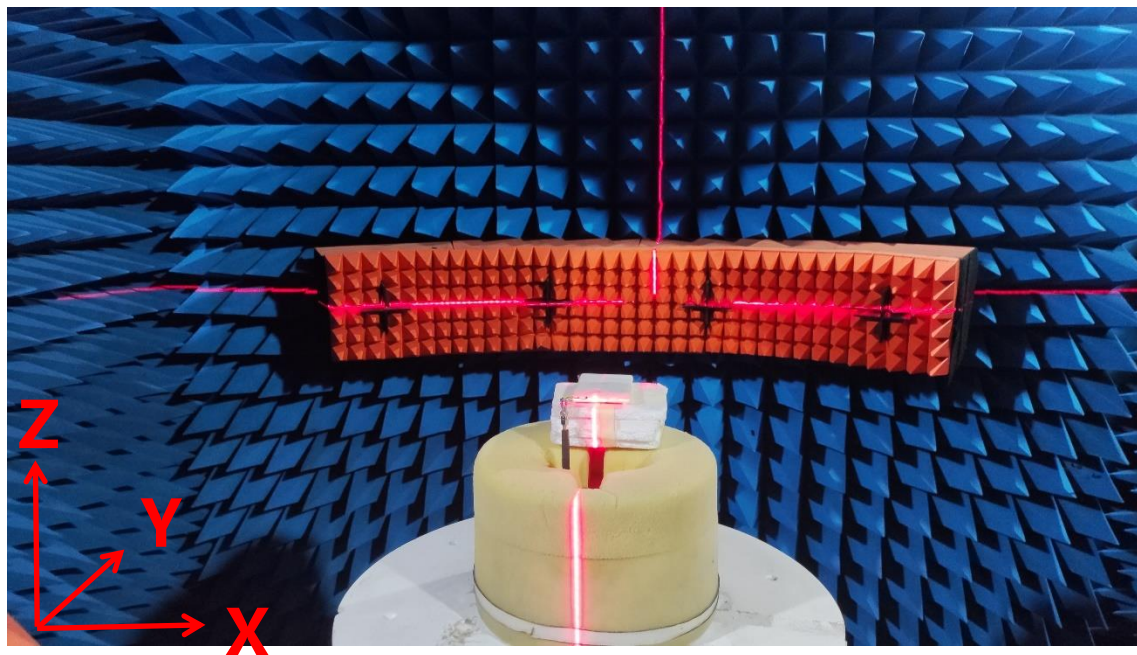




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ANT Communication Technology (Shenzhen) Co., LTD.

Antenna Passive Test





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ANT Communication Technology (Shenzhen) Co., LTD.

Passive Test			
Frequency/Mhz	Efficiency/dB	Efficiency/%	MaxGain/dBi
850	-3.74	42.27	-3.14
860	-3.1	48.98	-2.76
870	-2.75	53.09	-3.24
880	-2.6	54.95	-3.01
890	-2.93	50.93	-3.19
900	-2.99	50.23	-2.26
910	-3.6	43.65	-2.61
920	-4.03	39.54	-2.15
930	-4.79	33.19	-3.11

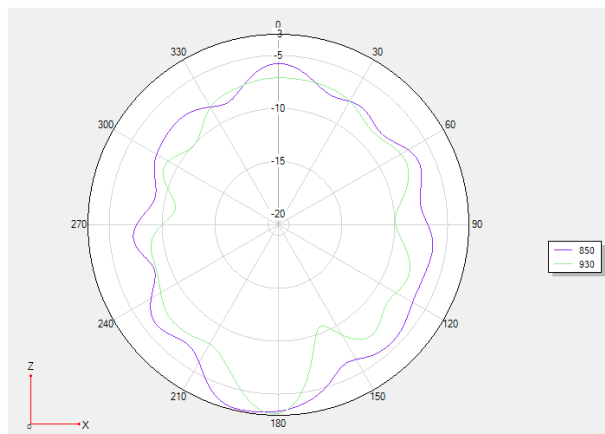


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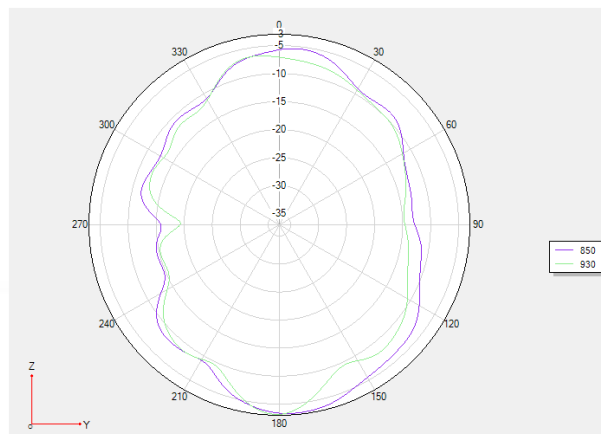
ANT Communication Technology (Shenzhen) Co., LTD.

2D-Etotal (850/930Mhz)

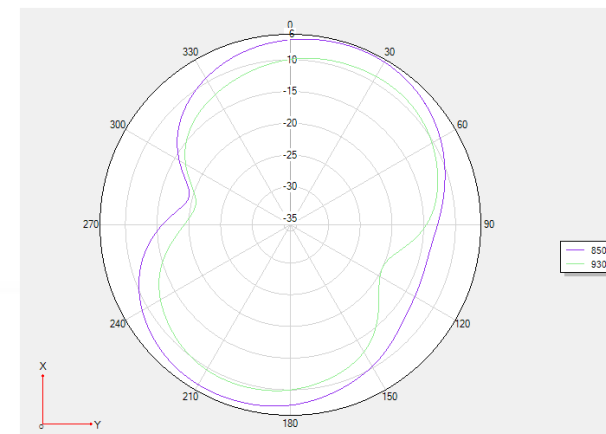
Phi 0 2D



Phi 90 2D



Theta 90 2D

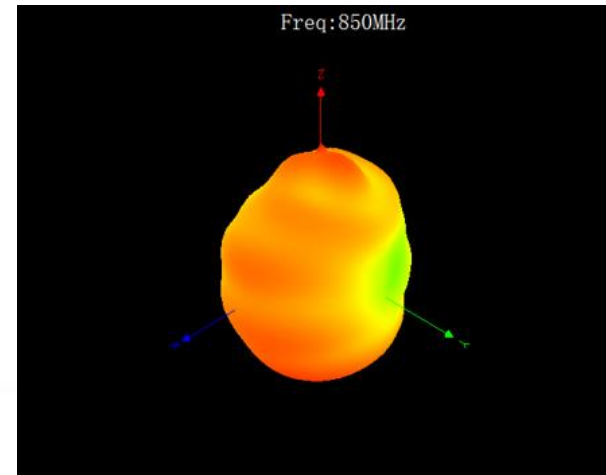
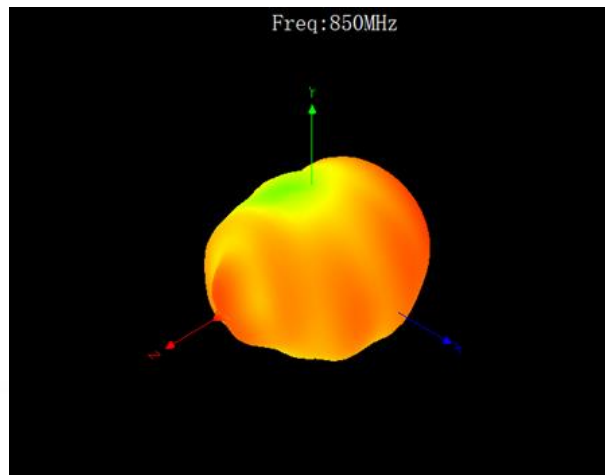
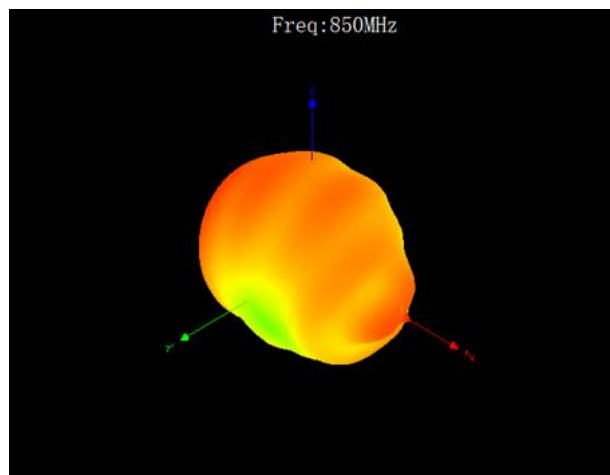




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3D-Etotal (850Mhz)

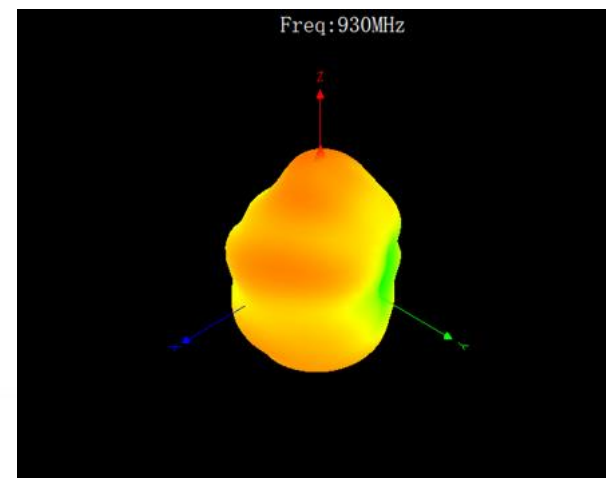
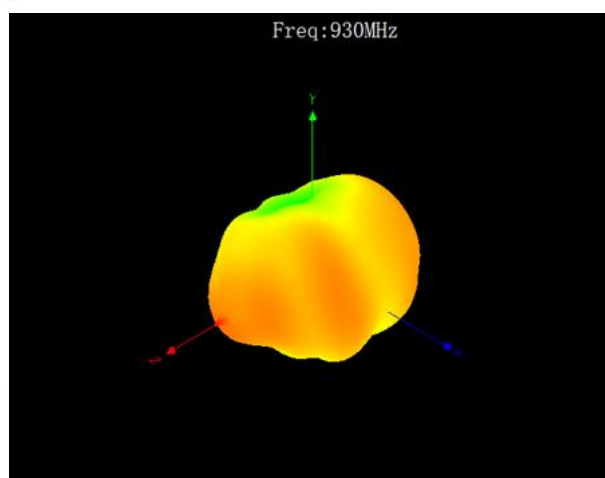
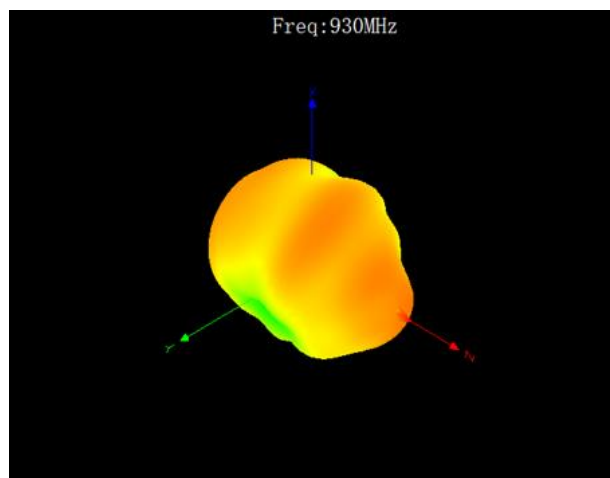




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ANT Communication Technology (Shenzhen) Co., LTD.

3D-Etotal (930Mhz)



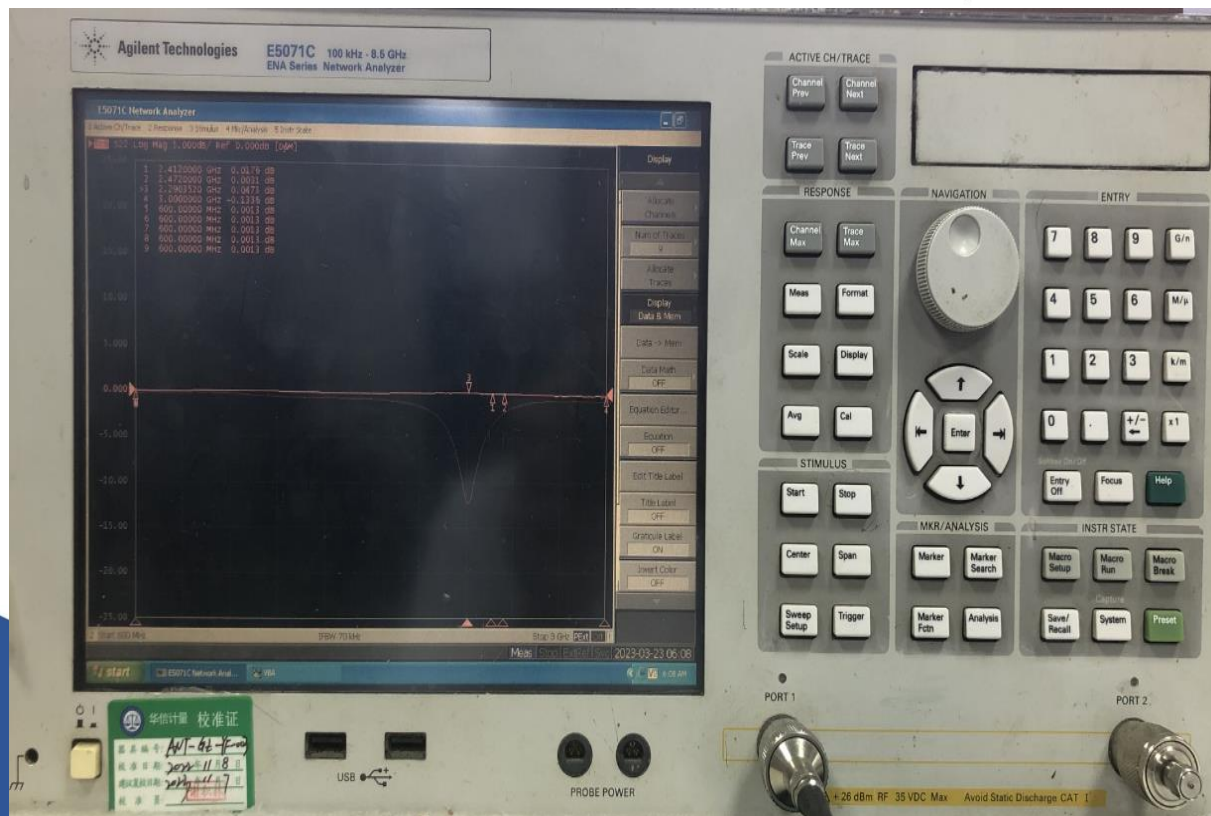


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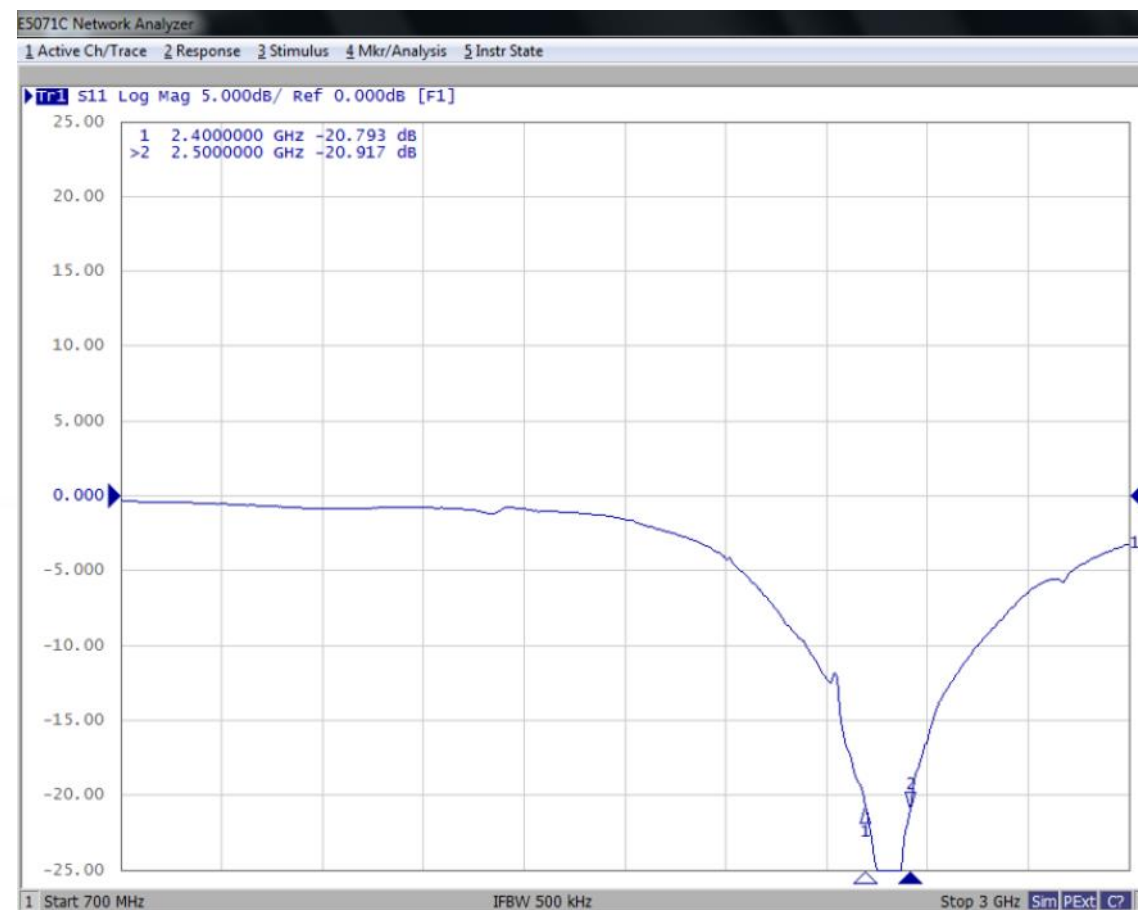
ANT Communication Technology (Shenzhen) Co., LTD.

3. BT Test

Agilent E5071C



S-Parameter Test

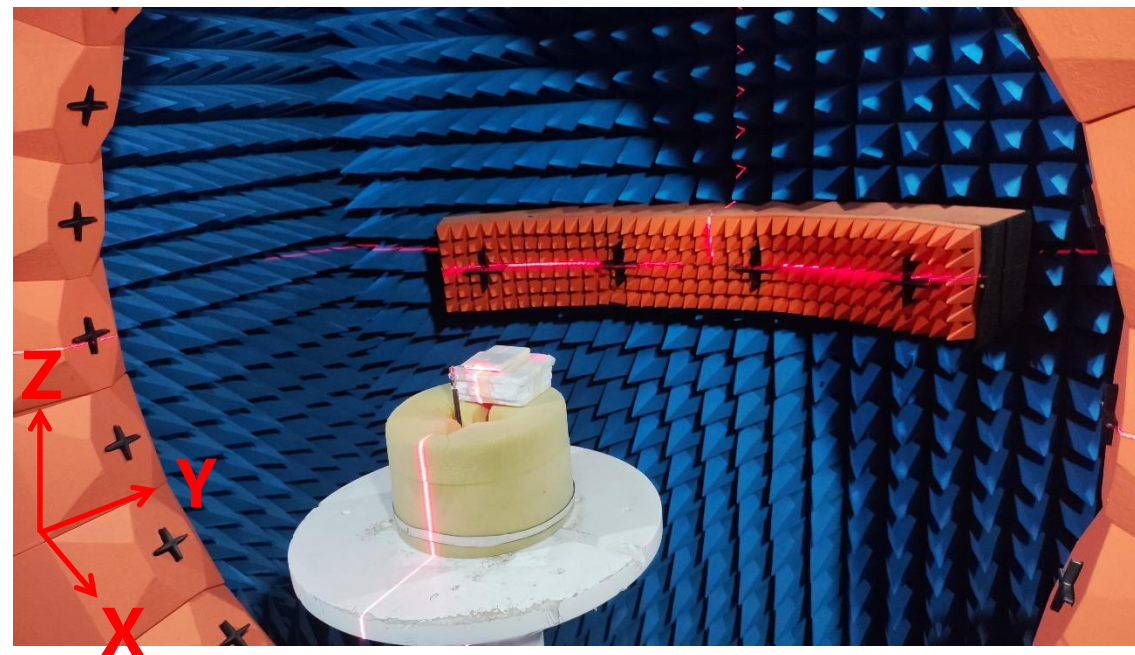
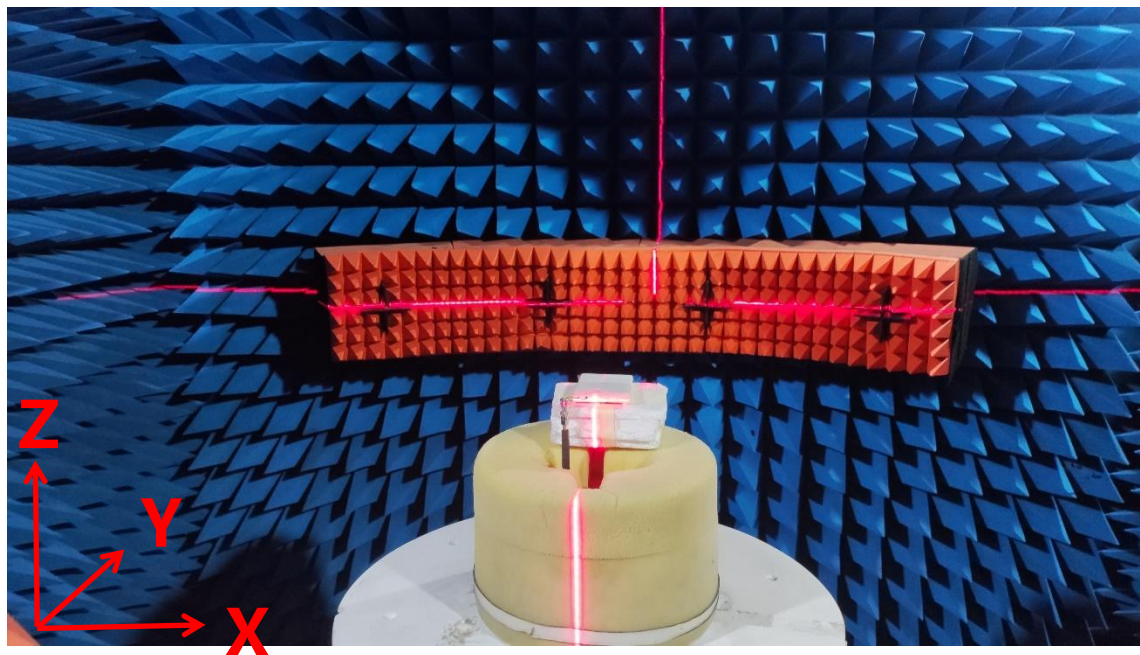




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ANT Communication Technology (Shenzhen) Co., LTD.

Antenna Passive Test





深圳市安特通讯科技有限公司

ANT Communication Technology (Shenzhen) Co., LTD.

Passive Test			
Frequency/Mhz	Efficiency/dB	Efficiency/%	MaxGain/dBi
2400	-2.94	50.82	-0.15
2410	-3.42	45.5	-0.9
2420	-2.94	50.82	0.06
2430	-3.56	44.06	-0.95
2440	-3.28	46.99	-0.29
2450	-3.12	48.75	-0.81
2460	-3.09	49.09	-0.17
2470	-3.36	46.13	-0.67
2480	-3.24	47.42	-0.44
2490	-3.07	49.32	-0.16
2500	-3.26	47.21	-0.59

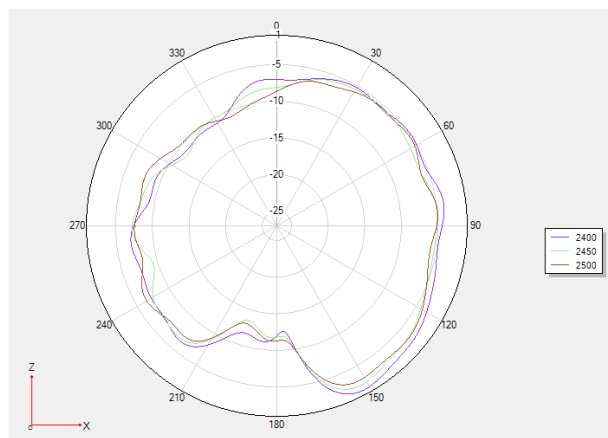


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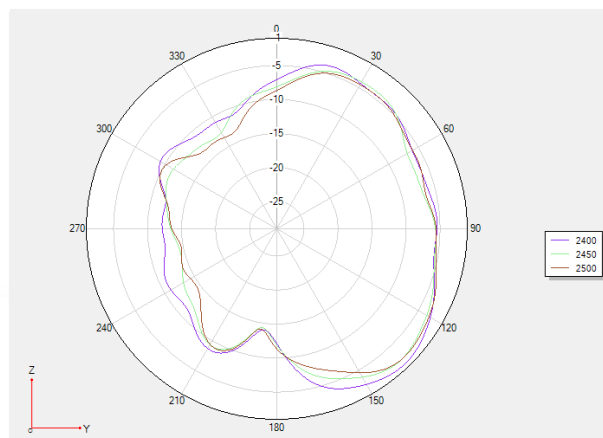
ANT Communication Technology (Shenzhen) Co., LTD.

2D-Etotal (2400/2450/2500Mhz)

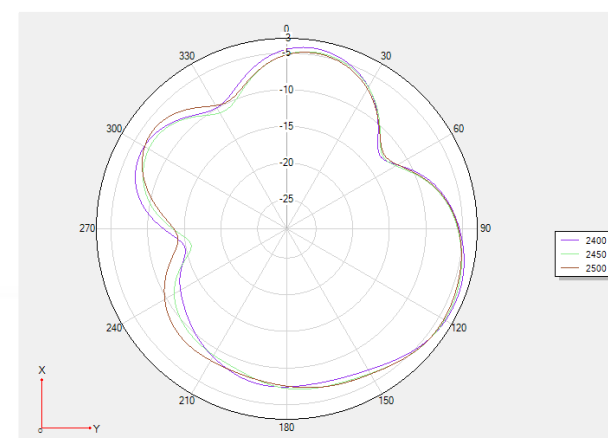
Phi 0 2D



Phi 90 2D



Theta 90 2D

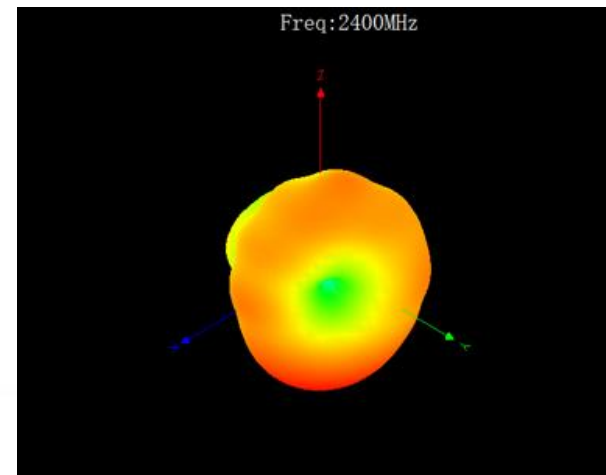
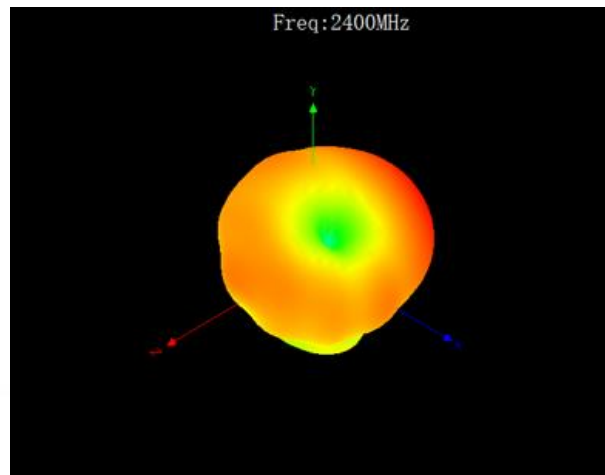
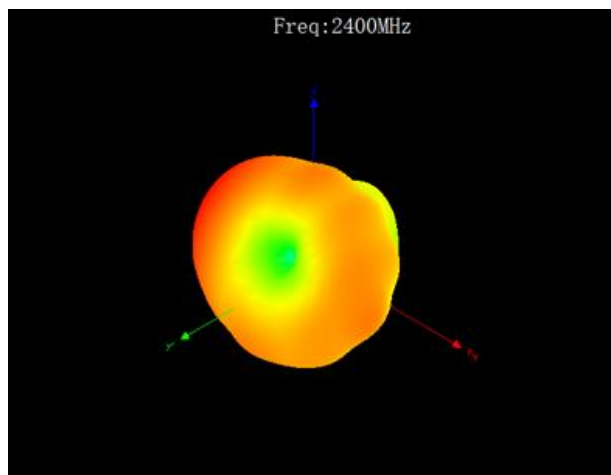




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3D-Etotal (2400Mhz)

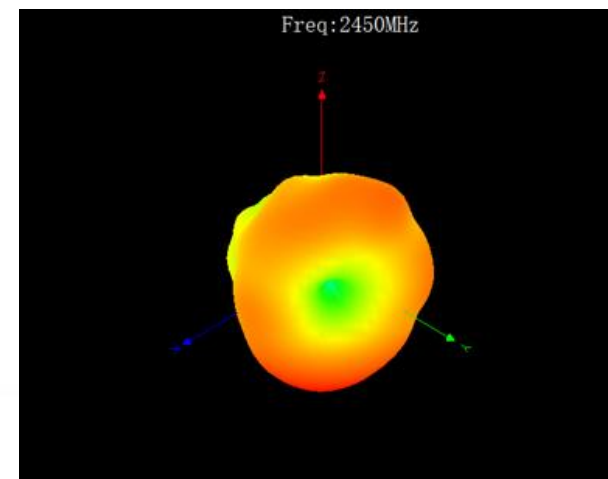
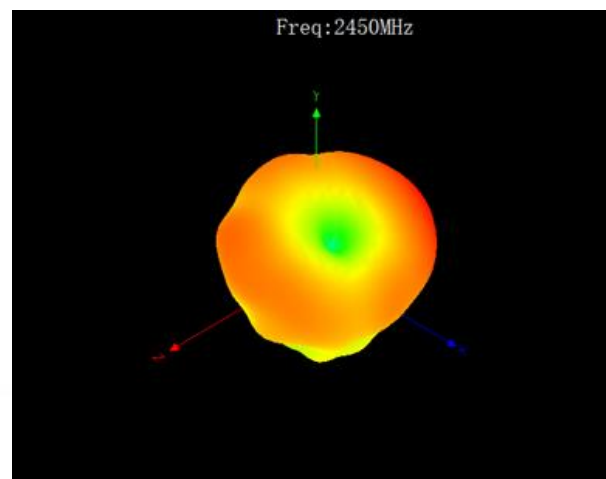
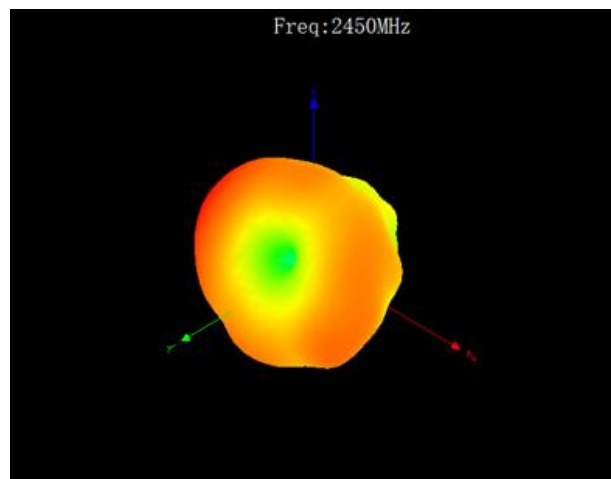




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3D-Etotal (2450Mhz)

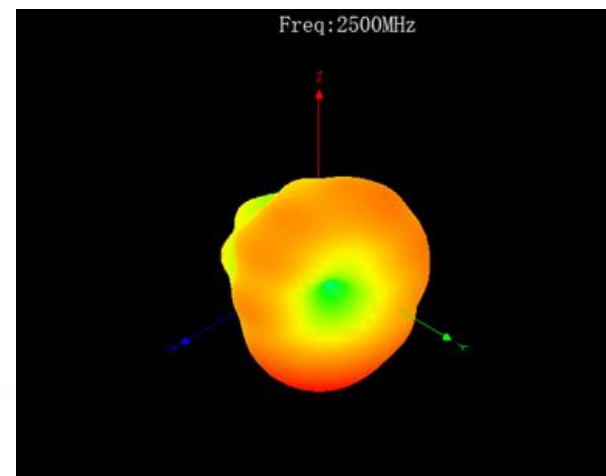
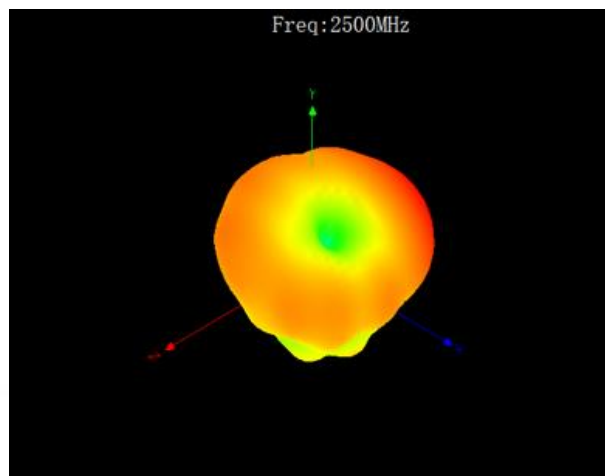
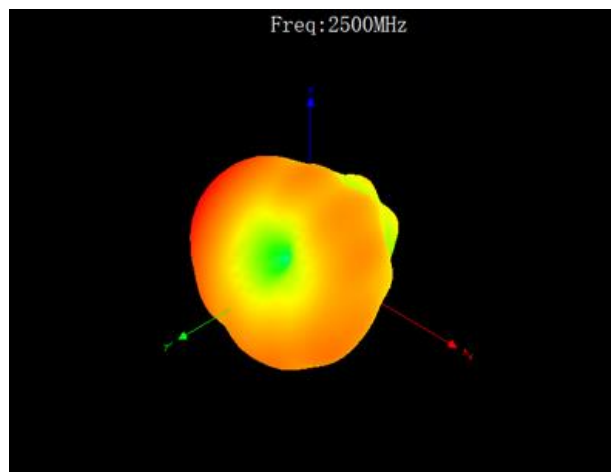




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3D-Etotal (2500Mhz)



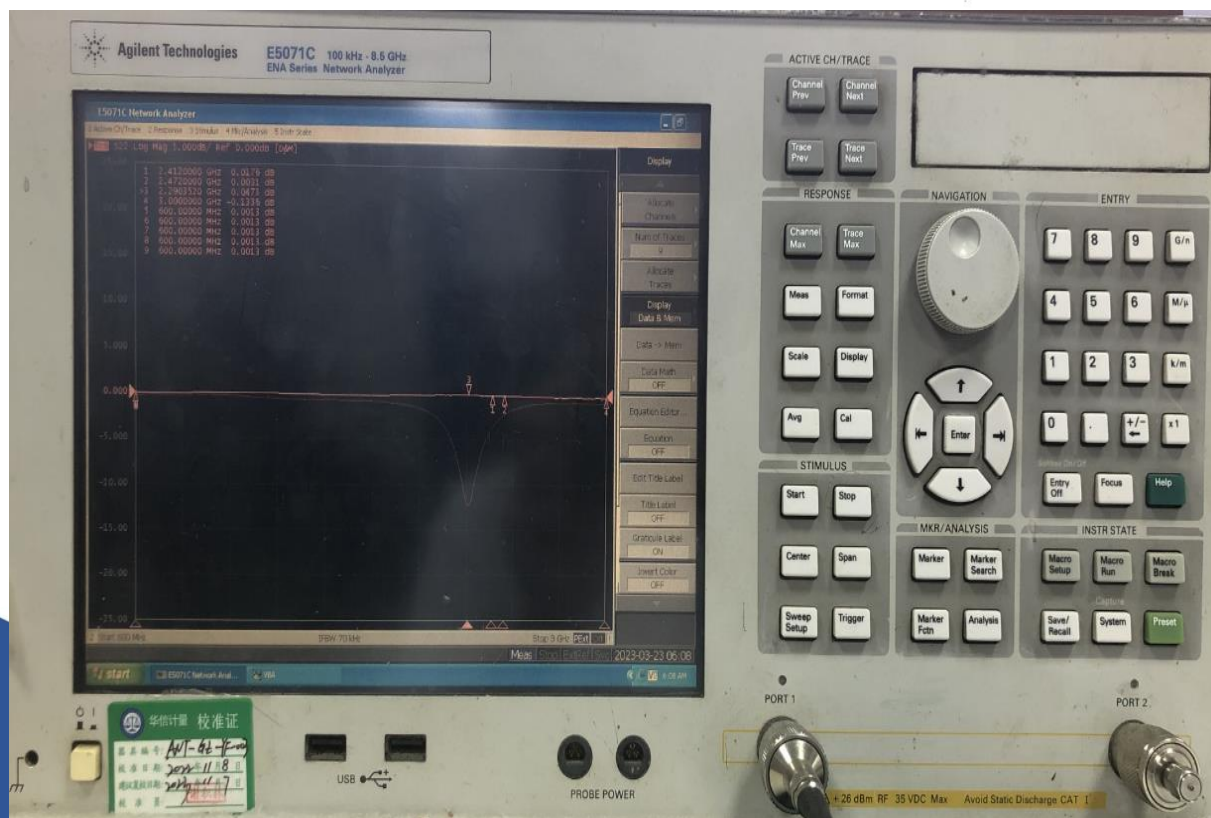


深圳市安特通讯科技有限公司

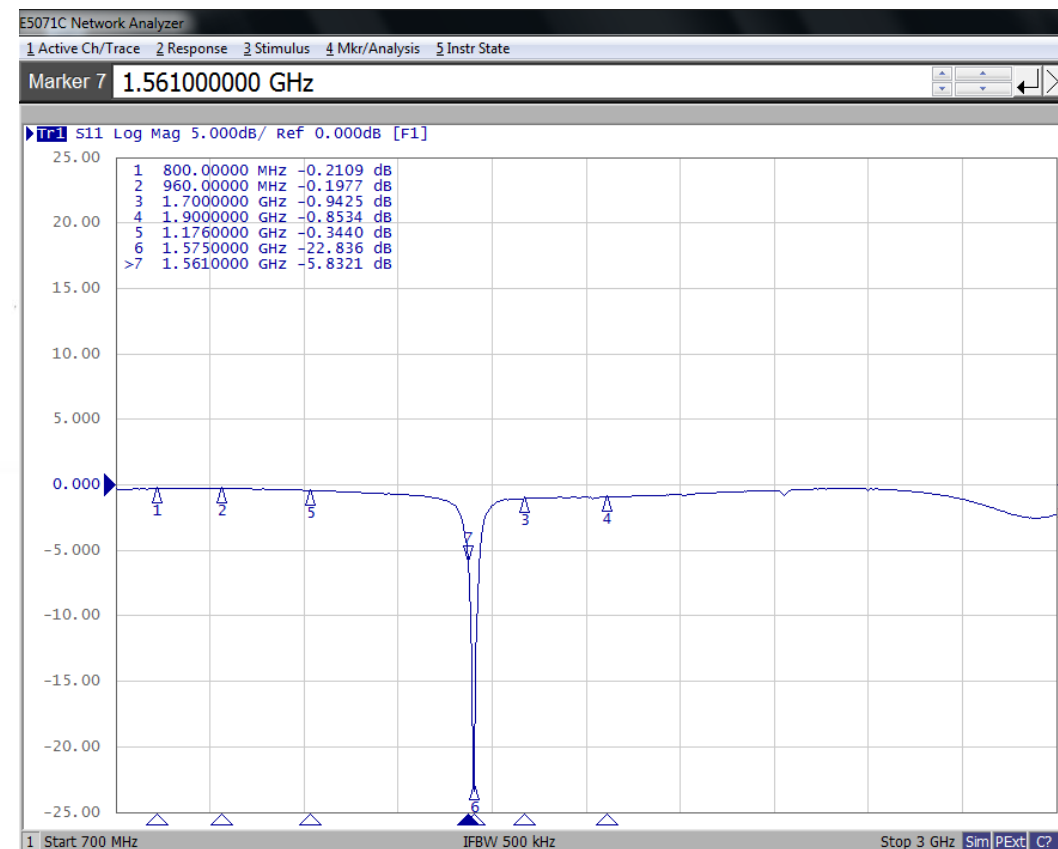
ANT Communication Technology (Shenzhen) Co., LTD.

4. GPS Test

Agilent E5071C



S-Parameter Test

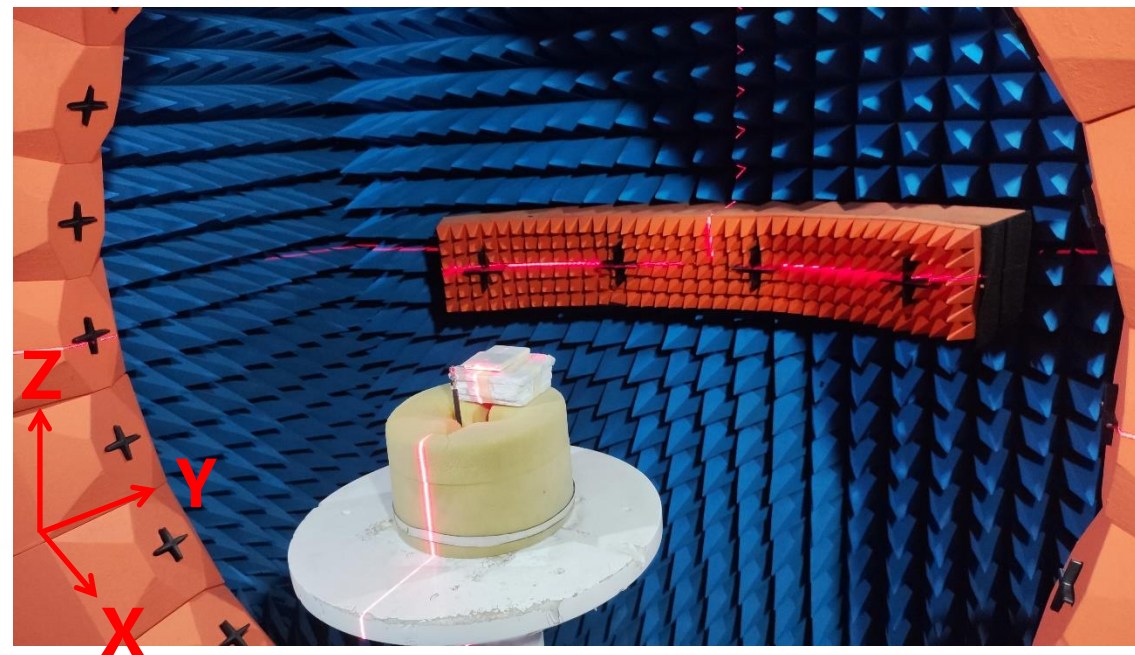
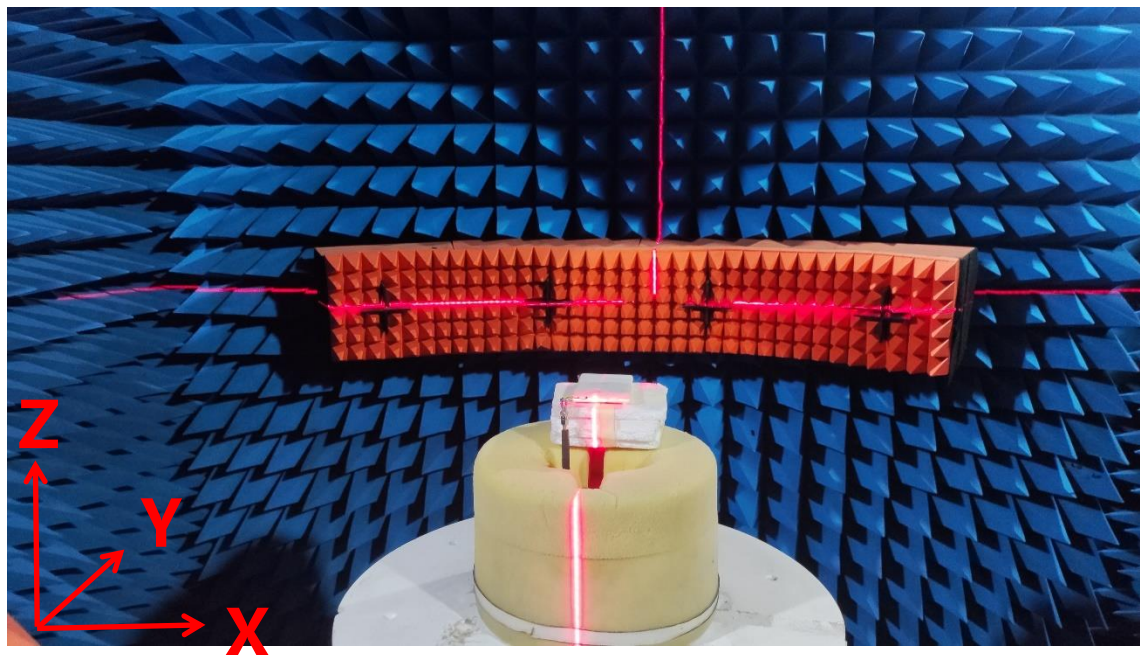




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ANT Communication Technology (Shenzhen) Co., LTD.

Antenna Passive Test





深圳市安特通讯科技有限公司

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Passive Test			
Frequency/Mhz	Efficiency/dB	Efficiency/%	MaxGain/dBi
1550	-8.67	13.58	-7.37
1555	-7.05	19.72	-6.17
1560	-6.07	24.72	-4.61
1565	-5.41	28.77	-4.83
1570	-4.11	38.82	-3.35
1575	-4.39	36.39	-2.53
1580	-3.88	40.93	-2.99
1585	-5.33	29.31	-3.95
1590	-5.68	27.04	-4.36
1595	-6.71	21.33	-4.43
1600	-6.67	21.53	-5.74

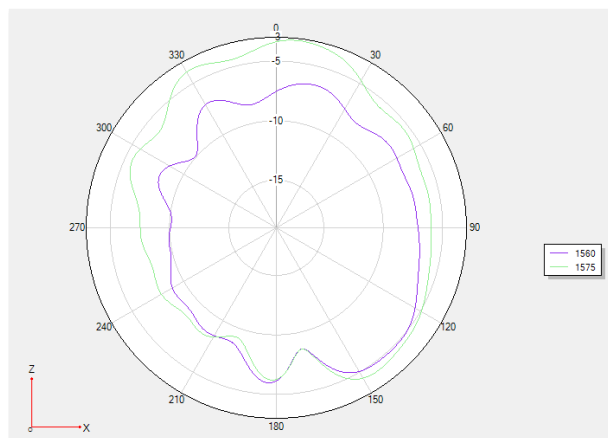


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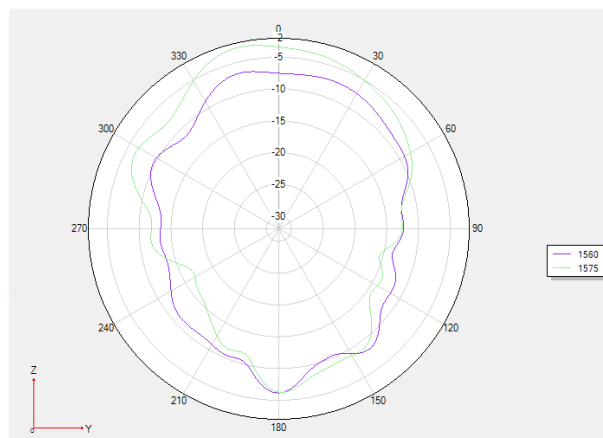
ANT Communication Technology (Shenzhen) Co., LTD.

2D-Etotal (1575Mhz)

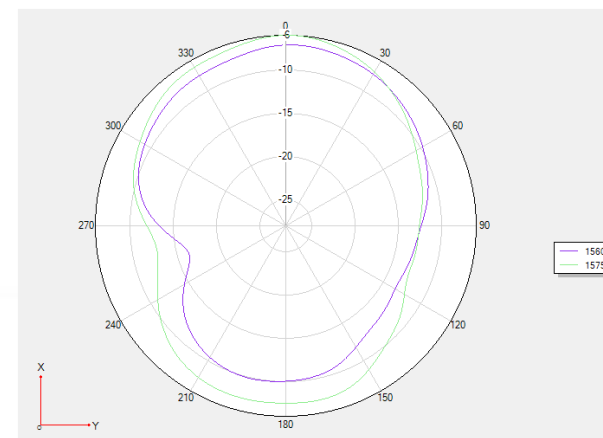
Phi 0 2D



Phi 90 2D



Theta 90 2D

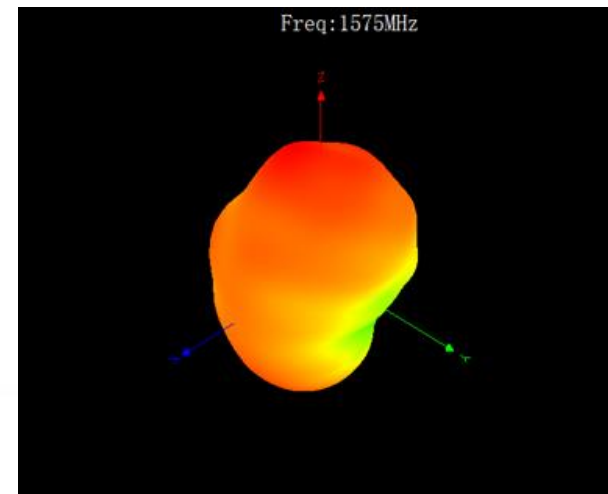
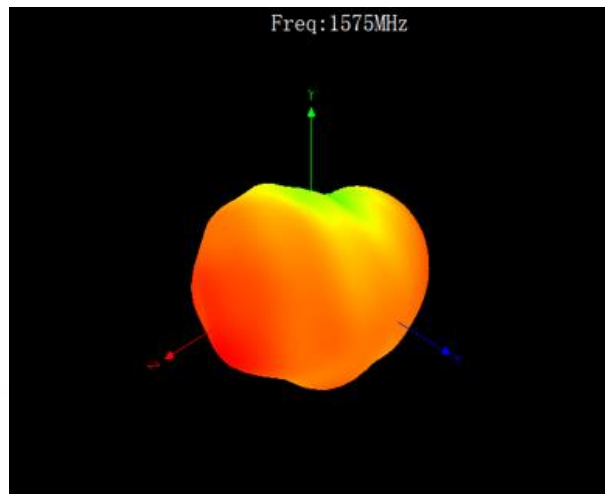
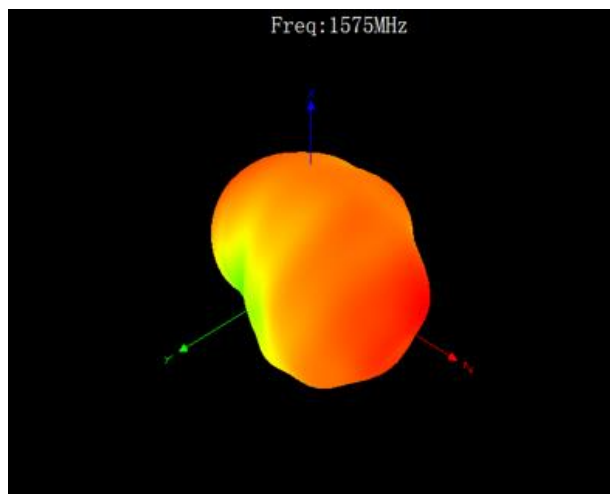




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3D-Etotal (1575Mhz)





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ANT Communication Technology (Shenzhen) Co., LTD.



THANK YOU!