

Shenzhen Shangyuan Technology Co., Ltd.

Antenna Certification Certificate

Customer Name: Tianbo		Project Name: M1T
Operating Frequencies: GSM: 850 /1900; WCDMA: B 2/5; 4G: B 2 /4 /7		
Hardware Version: M1KC_MAIN_V1.2_20240920		
Shangyuan Material Specifications		
Specifications and models	Shangyuan Material Number	Customer Material Number
MAIN antenna	SZ24356IB75-1	3170200345

Change History			
Development/Change Date	Change Details	Değişiklikçi	Edition
2025.02.25	New Version Release	Xiao Kunxiong	A

Shangyuan Co-signature Section				
Research and development	Structure :	Examine and verify :	Quality Engineer:	Ratify :
	Radio frequency :	Examine and verify :		

Customer Signature Field			
Electronic engineer	Project manager	Construction engineer	Quality Engineer

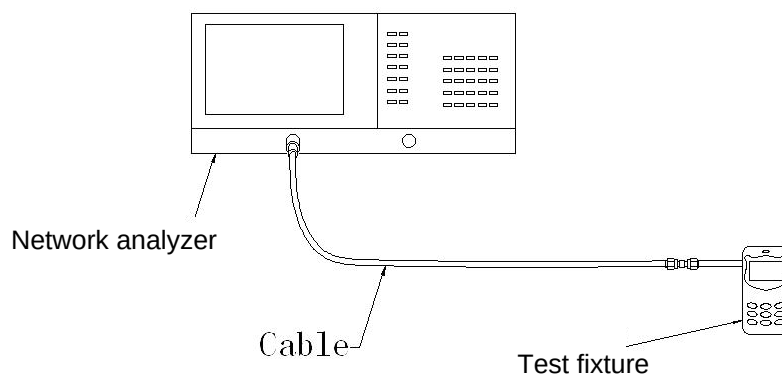
Antenna S11 Parameters

S11 Test Method Description

Testing equipment: Network analyzer (Agilent E5071C)

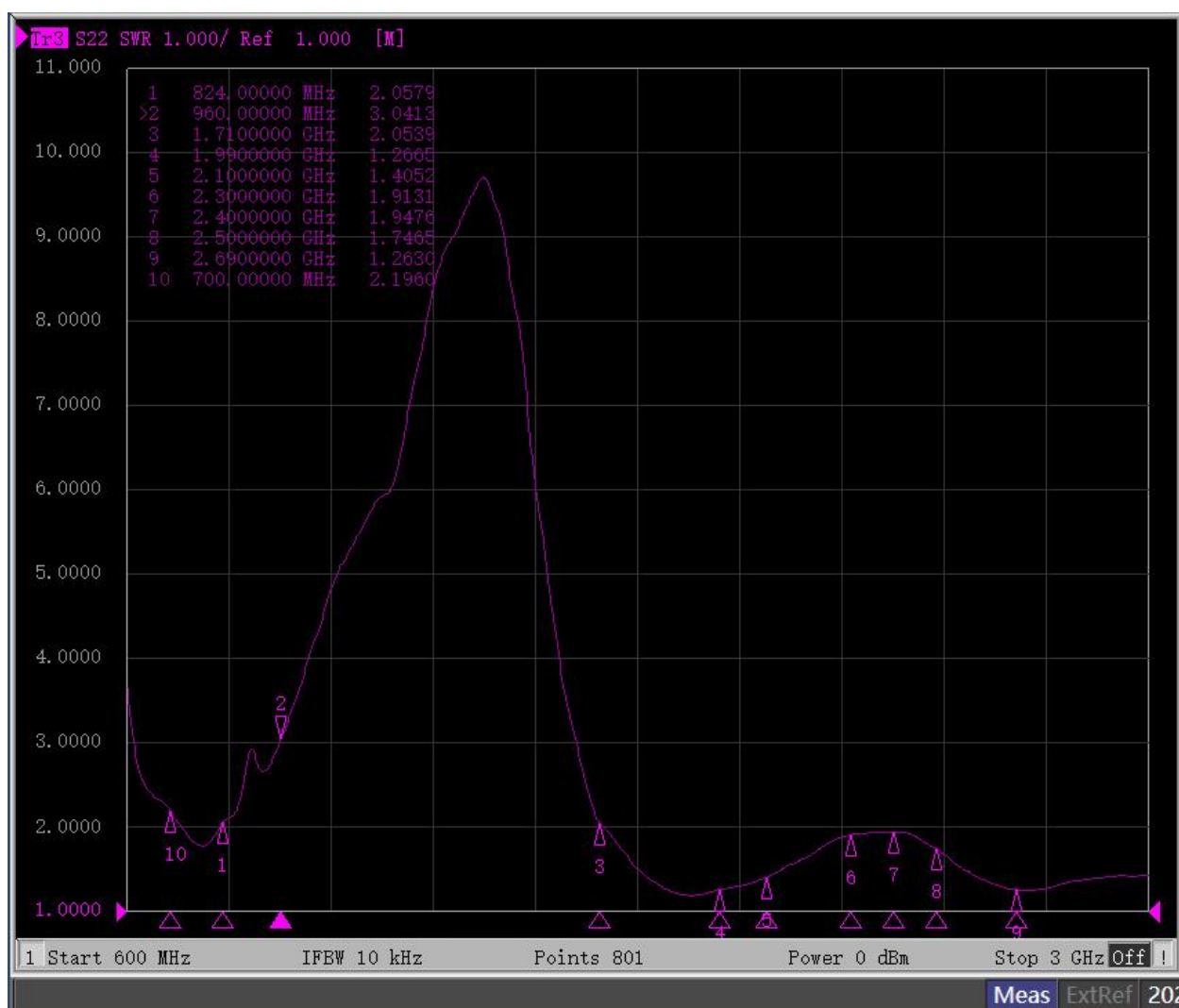
Testing Method: Connect a 50-ohm cable from the instrument's test port, calibrate it using a calibration component, then connect it to the SMA connector of the test fixture. Record the return loss and standing wave ratio at the corresponding frequencies.

The test schematic is as follows:



Test Schematic

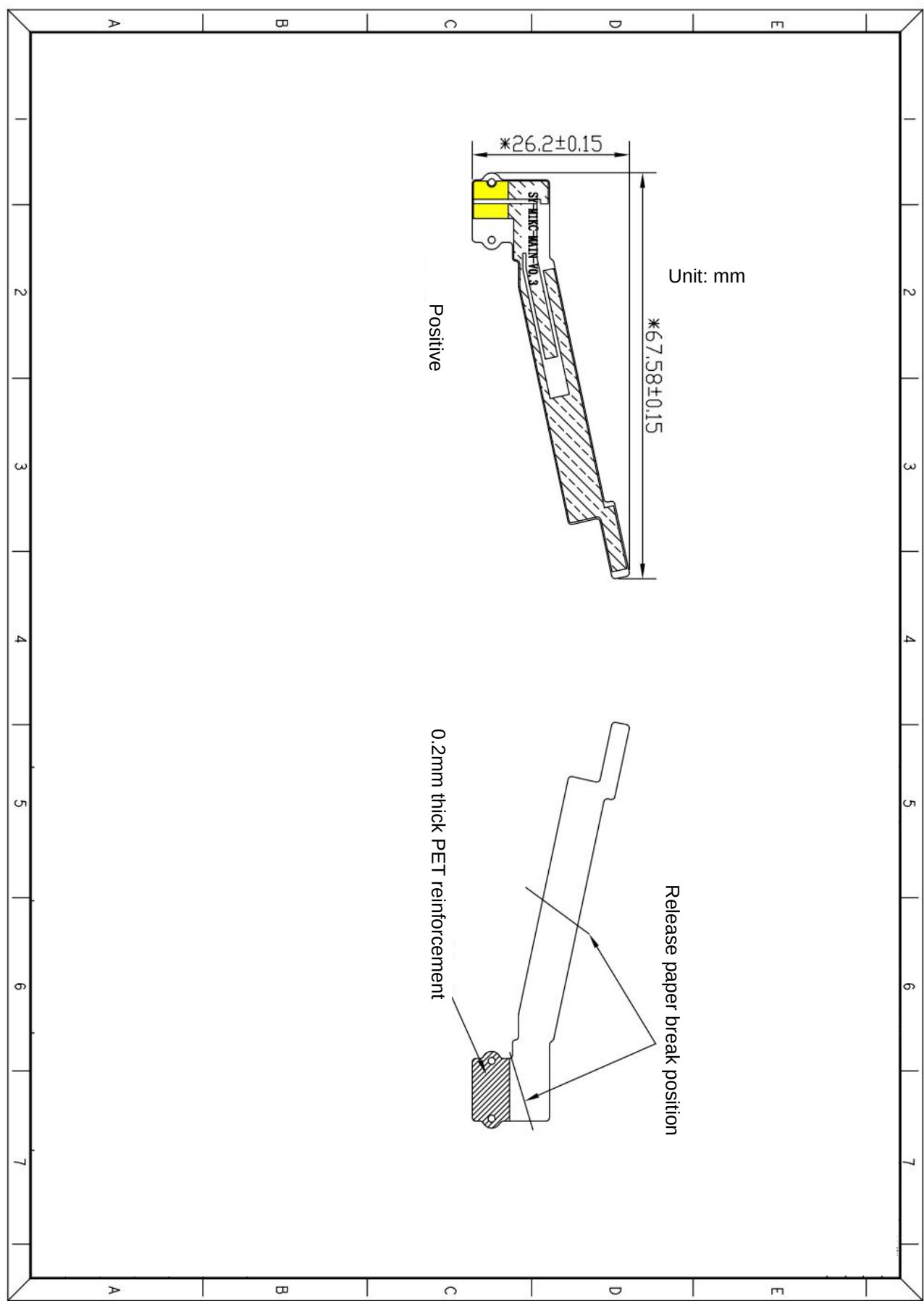
S11 Test Parameters



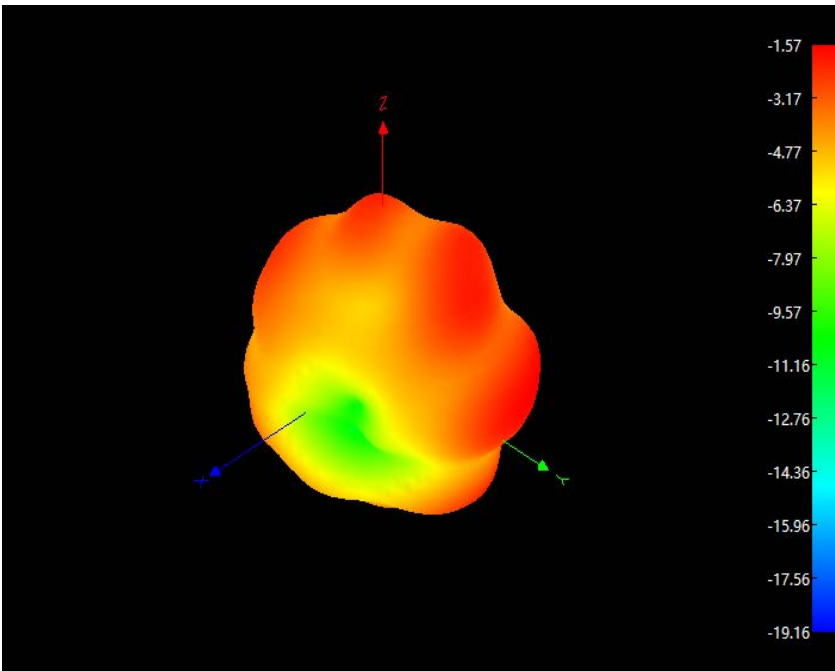
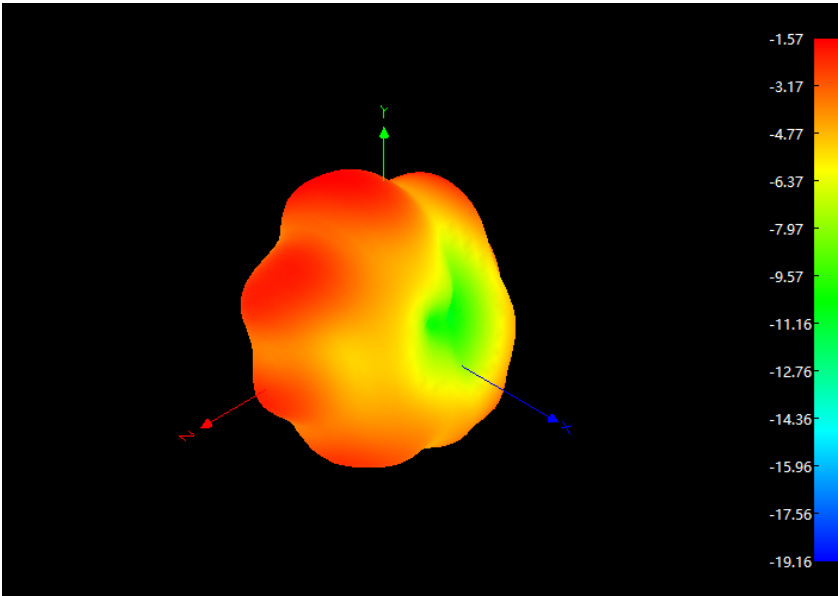
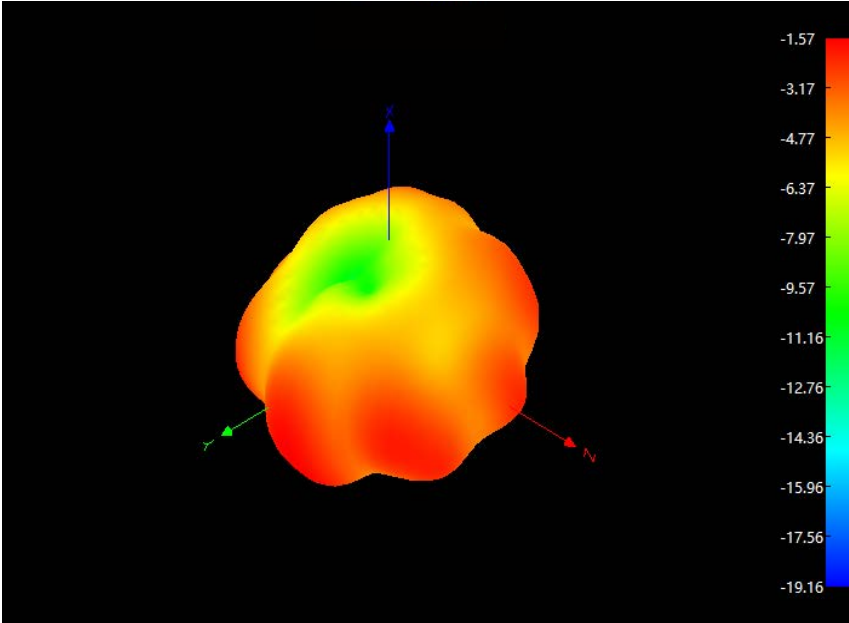
Passive Efficiency Test Data

Frequency/Mhz	MaxGain/dBi	Efficiency/ %	Frequency/Mhz	MaxGain/dBi	Efficiency/ %
700	-1.57	28.51	1710	-1.88	28.12
720	-1.26	27.93	1760	1.02	32.63
740	-1.61	28.38	1810	1.02	35.75
760	0.05	29.36	1860	0.93	32.55
780	-0.25	30.55	1910	0.73	31.24
800	-0.87	28.73	1960	0.8	36.75
820	-1.86	22.14	2010	0.17	30.83
840	-1.36	21.77	2060	1.95	34.87
860	-1.81	20.9	2110	1.73	37.1
880	-1.69	23.57	2160	1.39	38.85
900	-2.03	21.92	2210	1.7	39.57
920	-0.58	22.66	2260	1.3	39.16
940	-0.81	19.11	2310	1.54	38.63
960	-2.3	16.06	2360	1.96	37.23
			2410	1.85	36.7
			2460	1.95	35.4
			2510	1.88	35.95
			2560	1.48	32.76
			2610	1.72	32.05
			2660	1.72	30.32

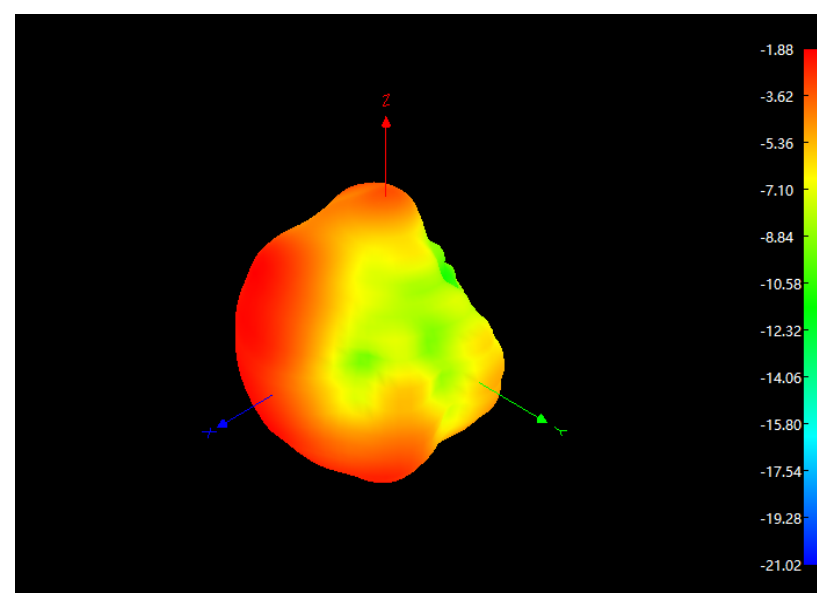
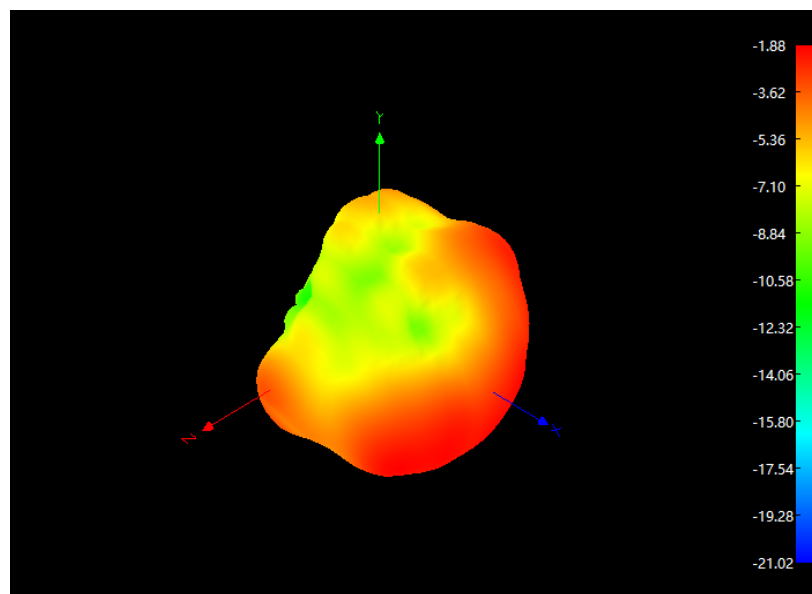
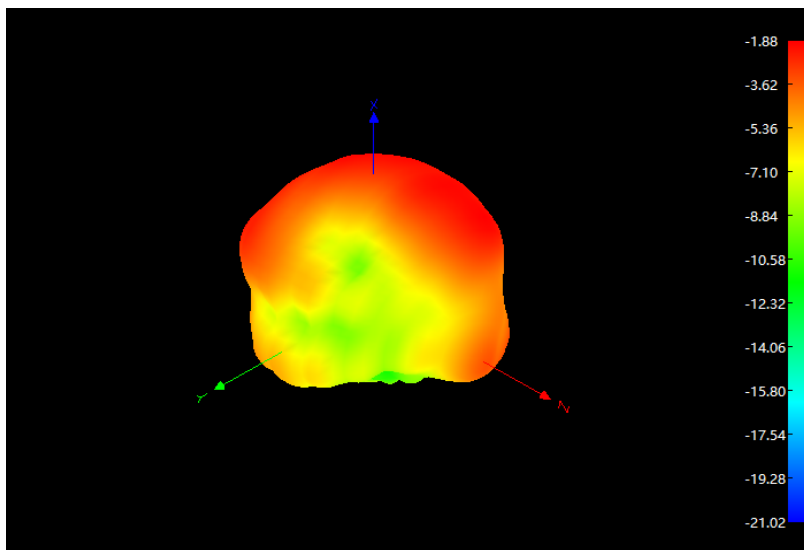
Engineering Drawings



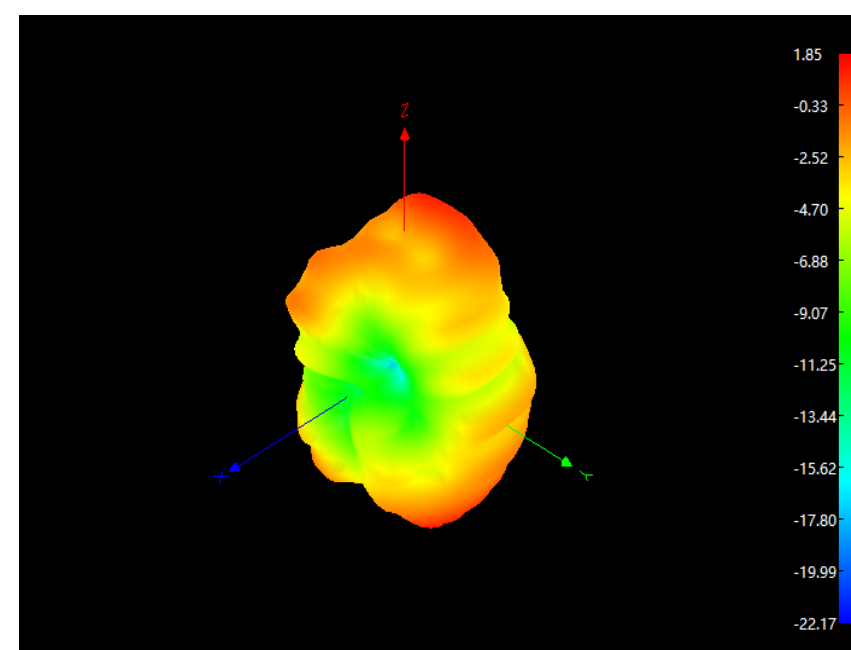
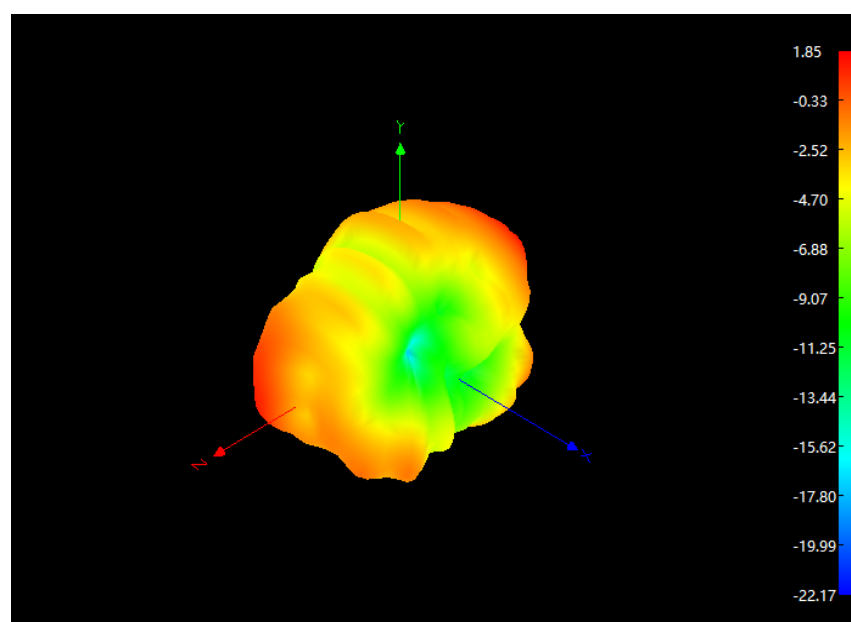
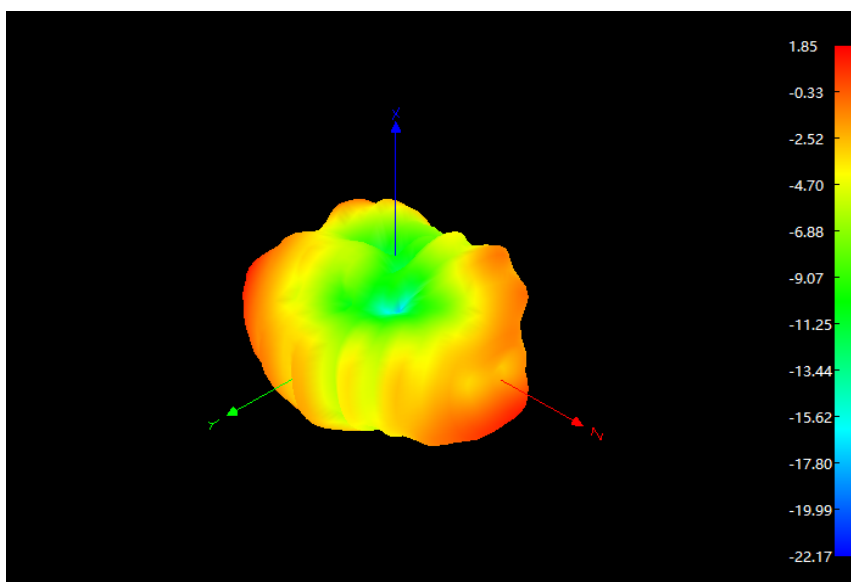
Frequency:850MHz



Frequency:1710MHz



Frequency:1900MHz



Frequency:2500MHz

