

Specifications of Antenna

1. Category and Frequency

1.1 Category: this is a monopole antenna for mobile communication terminals

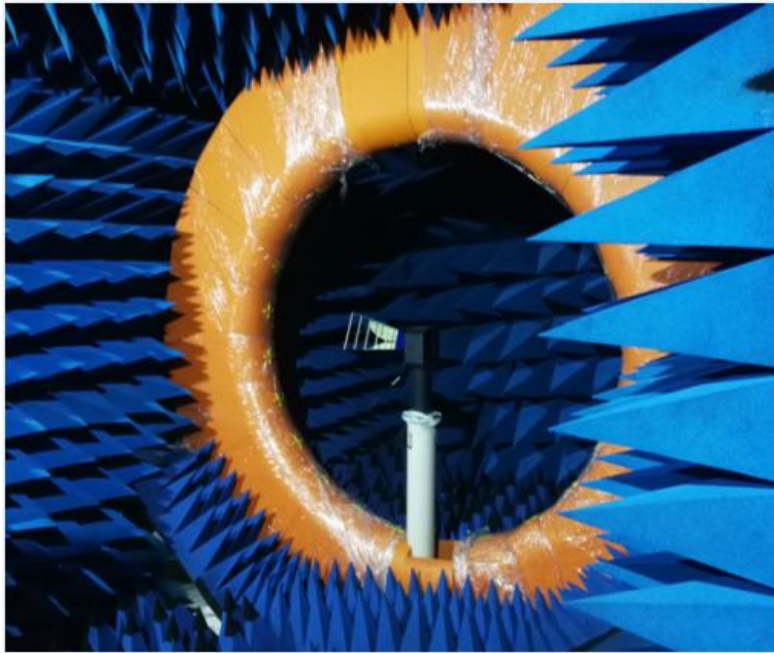
1.2 Frequency: 2400~2500MHZ

2. Technical Parameters and Experimental Equipments

2.1 Technical Parameters:

Frequency	2400~ 2500MHz
Standing-Wave Ratio	<2.0
Antenna Gain	2.63dBi
Radiation Efficiency	>40 %
Impedance	50 ohm
Materials:	
Copper tube+ OD 1.78mm 174MM length with G1 terminal	
Work Conditions	
Work Temperature	- 30°C ~ + 85 °C
Stock Temperature	- 30°C ~ + 85 °C

2.2 Experimental Equipments



24-probe microwave chamber



R&S CMW500



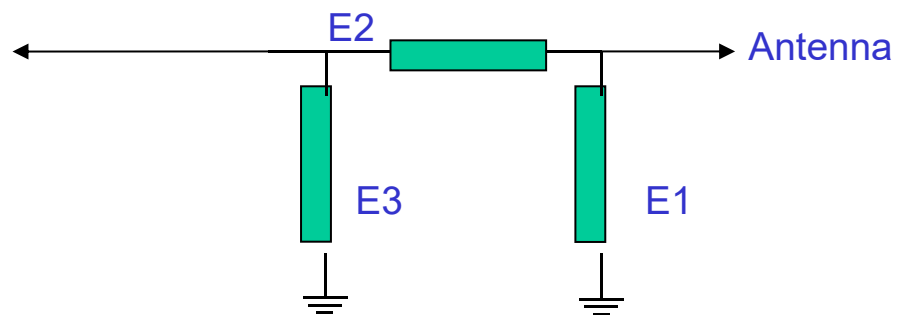
Agilent E4405B 频谱仪



Agilent Technologies E5071B

3. Matching Circuit Description

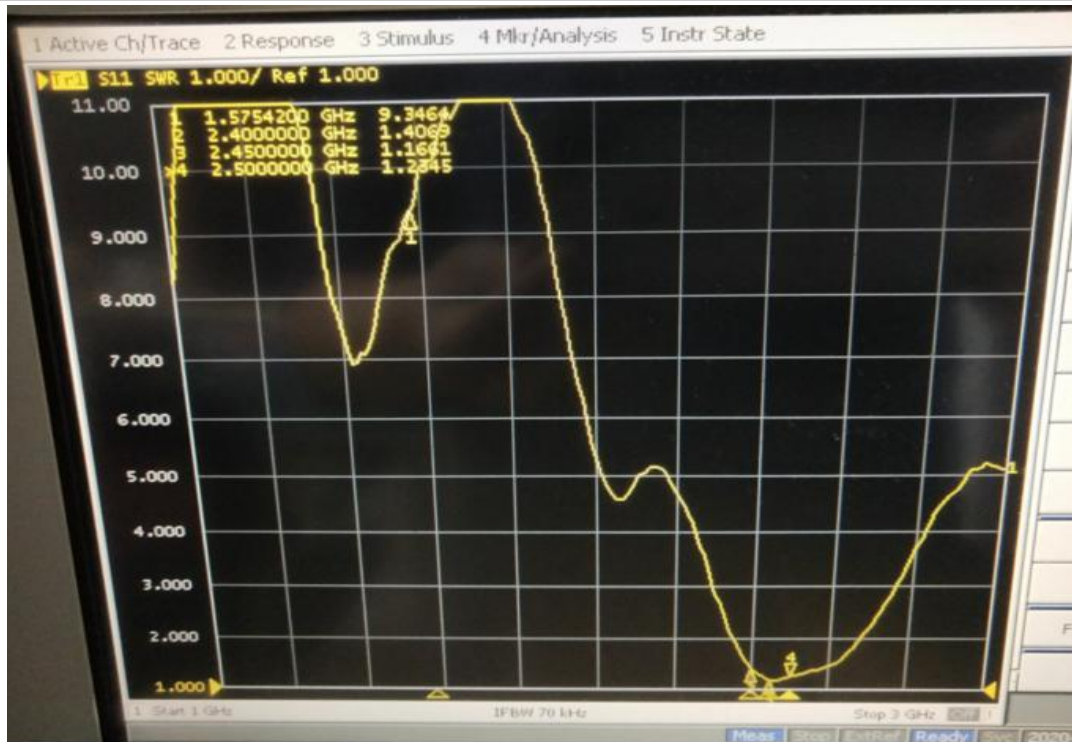
RF Module



Element	Value	Vender
E1(0201)		
E2(0201)		
E3(0201)		

4. Passive Standing Wave Chart & Smith Chart

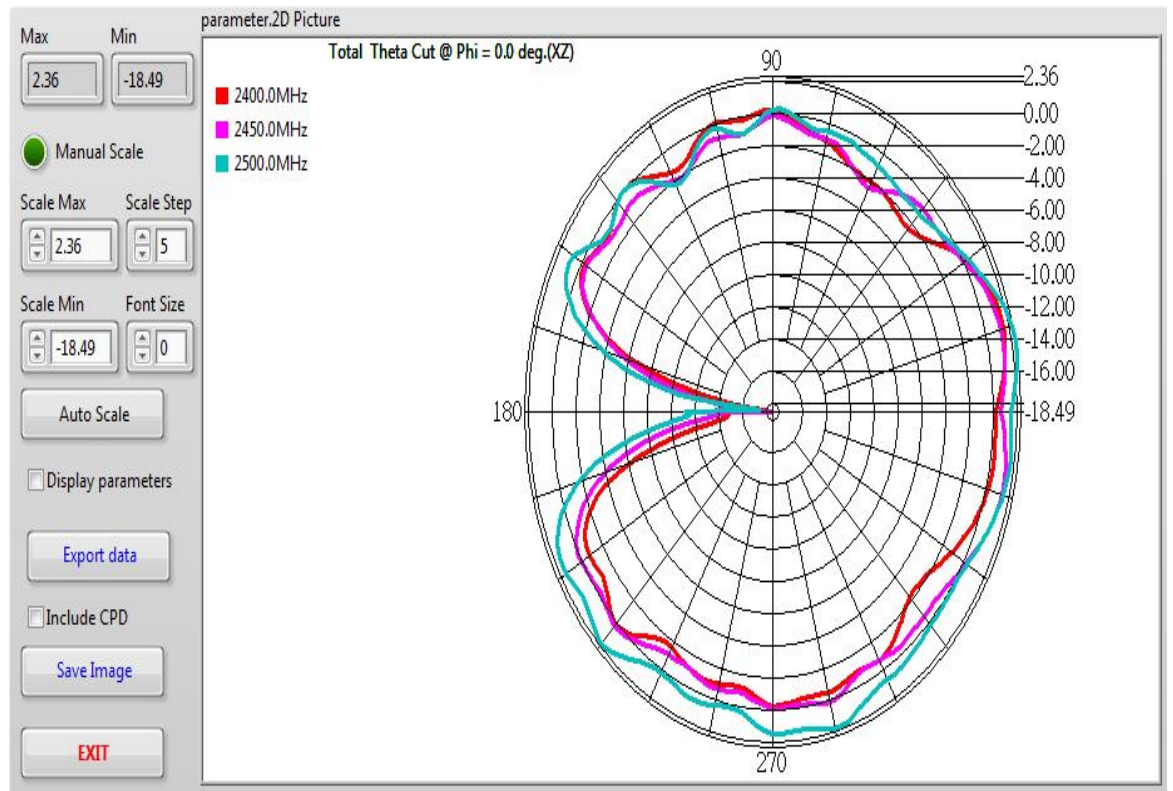
VSWR



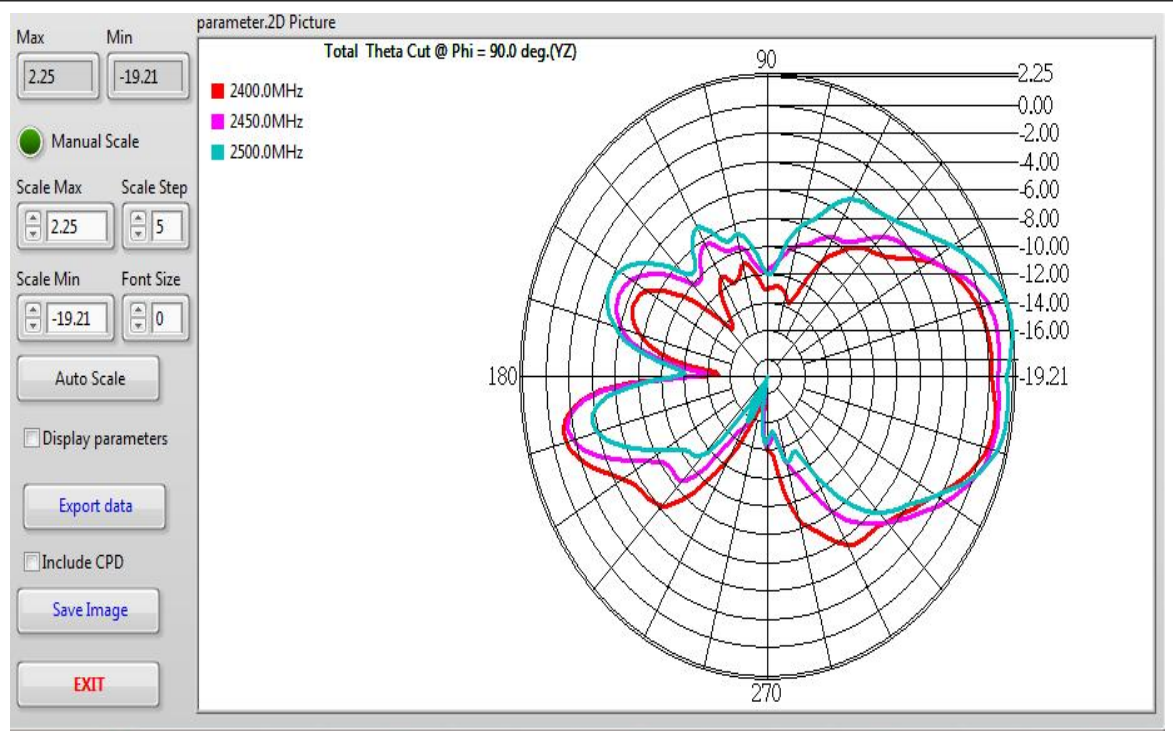
Efficiency
and Gain

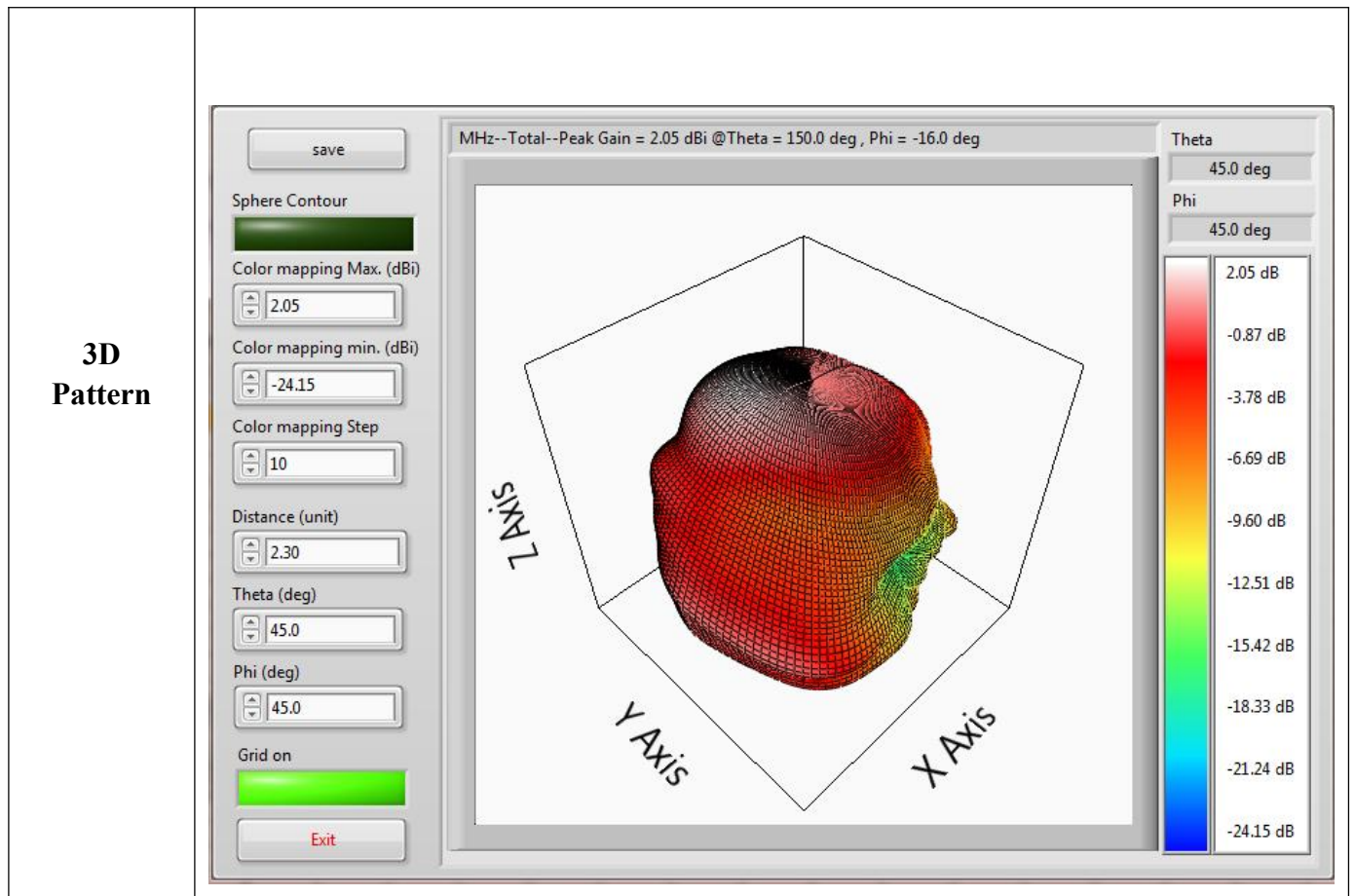
Frequency(MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0	
Peak Gain(dBi)	2.05	2.03	1.83	1.82	1.86	1.52	1.39	1.57	1.64	2.16	2.63	
Directivity(dBi)	5.55	5.63	5.56	5.35	5.17	4.74	4.33	4.49	4.58	4.78	5.01	
Average Gain(dBi)	-3.50	-3.59	-3.73	-3.54	-3.31	-3.22	-2.94	-2.92	-2.93	-2.61	-2.38	
Efficiency(%)	44.66	43.71	42.37	44.28	46.62	47.64	50.76	51.02	50.89	54.77	57.81	
Upper HEM , EIRP(dB)	-5.99	-6.01	-6.05	-5.81	-5.54	-5.46	-5.21	-5.20	-5.25	-4.91	-4.68	
Lower HEM , EIRP(dB)	-7.11	-7.30	-7.56	-7.44	-7.29	-7.17	-6.86	-6.81	-6.77	-6.48	-6.24	
Upper HEM , EIRP(%)	25.19	25.08	24.83	26.23	27.94	28.44	30.14	30.17	29.85	32.27	34.02	
Lower HEM , EIRP(%)	19.47	18.62	17.54	18.05	18.68	19.20	20.62	20.85	21.04	22.49	23.79	
Peak Gain @ Theta(degree)	-16.00	-18.00	-18.00	-18.00	-16.00	-16.00	12.00	12.00	12.00	12.00	-12.00	
Peak Gain @ Phi(degree)	150.00	154.00	156.00	158.00	28.00	32.00	134.00	108.00	106.00	110.00	150.00	
Null @ Phi(degree)	-100.00	-100.00	100.00	100.00	100.00	100.00	100.00	100.00	98.00	98.00	98.00	
Null @ Theta(degree)	104.00	102.00	122.00	122.00	122.00	122.00	122.00	122.00	122.00	120.00	120.00	
Roundness @90degree	17.58	18.85	19.35	18.81	18.55	17.39	18.09	17.88	18.23	19.21	19.91	
Roundness @60degree	9.95	10.66	10.25	9.52	9.17	9.74	10.85	12.19	13.53	15.04	16.55	
Roundness @30degree	4.18	4.62	4.81	4.99	4.59	3.64	2.81	2.35	2.38	2.73	3.13	

E1 Pattern



E2 Pattern





5. Structure

