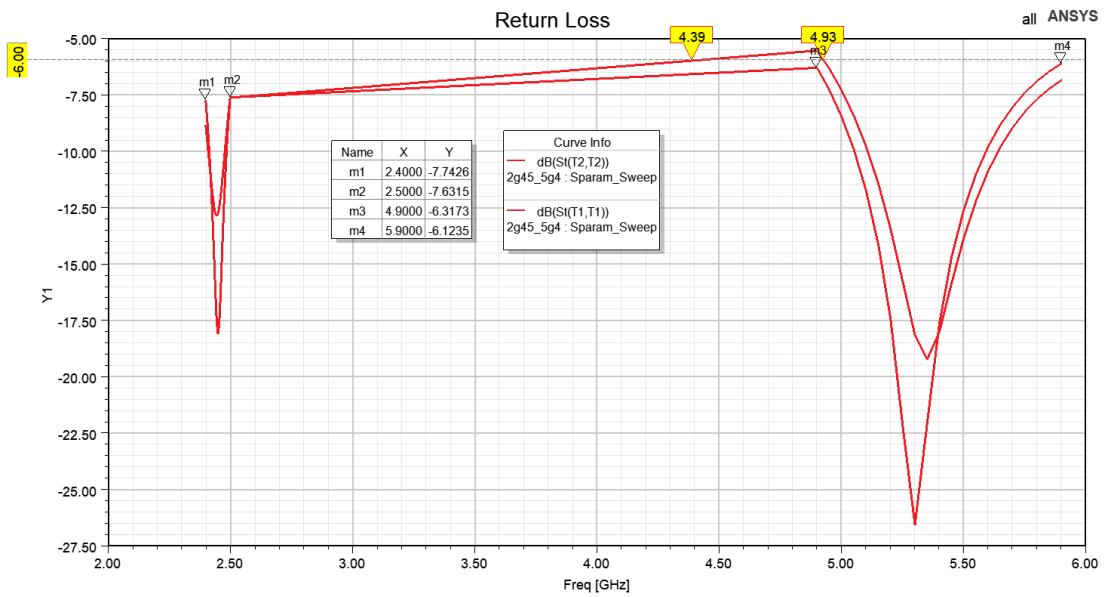


Antenna report

1、 Antenna performance requirements

Name	Operating frequency range	Return loss
Antenna	2.4~2.5GHz、 5.1~5.9GHz	$\leq -6\text{dB}$

2、 Antenna Return loss



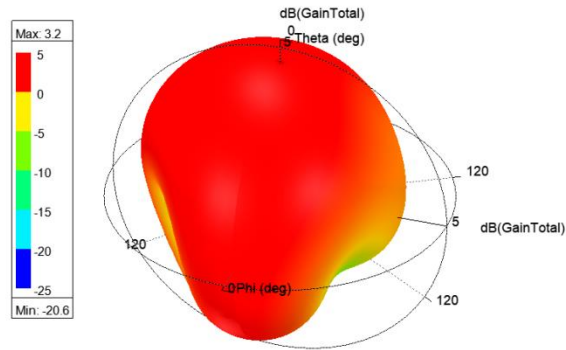
3、 Antenna isolation



4、 2.4GHz Antenna gain, direction chart:

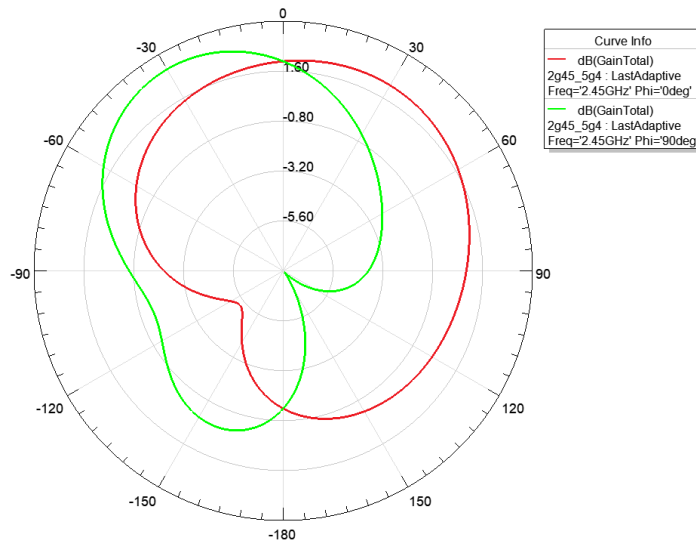
ff_3D_GainTotal

ANSYS



ff_2D_GainTotal

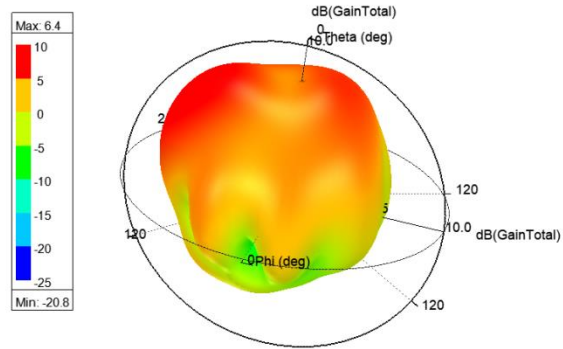
all ANSYS



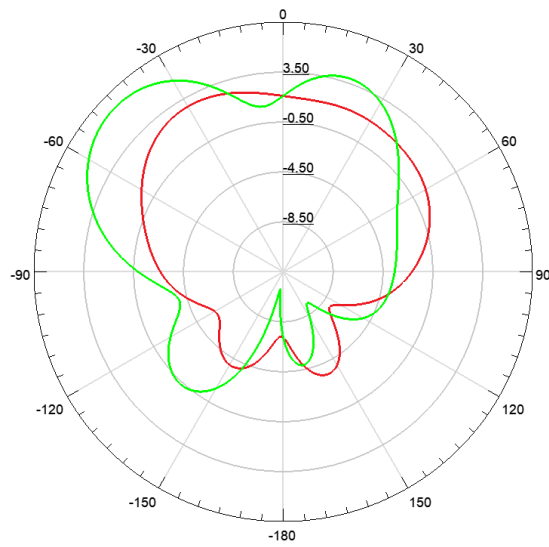
5、5GHz antenna gain and pattern:

ff_3D_GainTotal

ANSYS



Gain Plot 1



all ANSYS

Curve Info	
—	dB(GainTotal)
—	2g45_5g4 : LastAdaptive
—	Freq=5.4GHz' Phi=0deg'
—	dB(GainTotal)
—	2g45_5g4 : LastAdaptive
—	Freq=5.4GHz' Phi=90deg'

6、Antenna gain data

2.4G											
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Point Values											
Ant. Port Input Pwr.(dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-6.36	-6.20	-6.32	-6.21	-6.02	-5.72	-5.83	-5.19	-5.91	-5.70	-5.64
Peak EIRP(dBm)	0.10	-0.12	-0.33	-0.16	0.05	0.33	0.31	0.33	0.52	0.99	1.24
Directivity (dBi)	6.47	6.28	5.99	5.96	6.12	6.1	6.15	6.32	6.5	6.69	6.88
Efficiency (dB)	-6.36	-6.40	-6.33	-6.11	-6.07	-5.78	-5.83	-5.99	-5.97	-5.7	-5.64
Efficiency (%)	50	52.3	51.2	53.1	49.0	52.3	53.2	55.3	52.3	53.2	50.2
Gain (dBi)	2.21	2.23	1.95	2.32	2.12	2.33	1.88	1.72	1.80	1.93	1.99
NHPRP \pm pi/4 (dBm)	-8.24	-8.30	-8.26	-8.08	-8.09	-7.82	-7.88	-8.02	-7.90	-7.66	-7.58
NHPRP \pm pi/6 (dBm)	-9.73	-9.82	-9.79	-9.63	-9.66	-9.40	-9.47	-9.62	-9.52	-9.28	-9.21
NHPRP \pm pi/8 (dBm)	-10.88	-10.99	-10.99	-10.83	-10.87	-10.62	-10.71	-10.87	-10.79	-10.56	-10.50
Upper Hem. PRP (dBm)	-9.30	-9.28	-9.21	-9.05	-9.06	-8.83	-8.94	-9.12	-9.04	-8.87	-8.83
Lower Hem. PRP (dBm)	-9.45	-9.55	-9.46	-9.2	-9.11	-8.74	-8.75	-8.89	-8.79	-8.55	-8.48
Upper Hem. PRP (%)	11.74	11.8	11.99	12.45	12.42	13.08	12.77	12.24	12.47	12.99	13.10
Lower Hem. PRP (%)	11.36	11.30	11.31	12.02	12.58	13.38	13.53	2.98	13.25	13.97	14.8

5G															
Frequency ID	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Frequency (MHz)	5150.0	5200.0	5250.0	5300.0	5350.0	5400.0	5450.0	5500.0	5550.0	5600.0	5650.0	5700.0	5750.0	5800.0	5850.0
Point Values															
Ant. Port Input Pwr.(dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-5.87	-5.51	-5.70	-6.27	-6.17	-5.42	-6.25	-7.18	-7.29	-6.18	-5.95	-6.49	-6.07	-5.51	-5.12
Peak EIRP(dBm)	0.23	0.86	0.78	-0.10	-0.16	1.02	0.22	-0.87	-1.05	-0.38	-0.02	-0.01	0.90	2.08	2.10
Directivity (dBi)	6.07	6.38	6.48	6.12	5.28	6.44	6.44	6.33	6.24	5.80	5.93	6.48	6.97	7.59	7.21
Efficiency (dB)	-5.87	-5.51	-5.70	-6.21	-6.14	-5.42	-6.25	-7.18	-7.29	-6.18	-5.95	-6.49	-6.07	-5.51	-5.12
Efficiency (%)	48.3	47.2	47.5	48.3	48.5	46.2	48.5	47.2	48.2	46.8	48.2	46.3	48.0	47.6	46.7
Gain (dBi)	2.52	2.51	2.31	2.44	3.01	2.94	2.53	2.33	2.44	2.43	2.37	2.41	2.35	2.08	2.10
NHPRP \pm pi/4 (dBm)	-7.19	-6.90	-4.12	-7.54	-7.53	-6.89	-7.61	-8.52	-8.64	-7.48	-7.34	-7.95	-7.56	-7.09	-6.72
NHPRP \pm pi/6 (dBm)	-8.77	-8.55	-8.84	-9.23	-9.27	-8.73	-9.35	-10.28	-10.41	-9.14	-9.01	-9.58	-9.17	-8.78	-8.44
NHPRP \pm pi/8 (dBm)	-10.02	-9.92	-10.28	-10.64	-10.73	-10.24	-10.76	-11.69	-11.83	-10.49	-10.36	-10.87	-10.43	-10.09	-9.77
Upper Hem. PRP (dBm)	-8.23	-7.78	-8.06	-8.78	-8.58	-7.87	-8.96	-9.88	-10.03	-8.92	-8.37	-8.77	-8.25	-7.48	-7.06
Lower Hem. PRP (dBm)	-9.64	-9.42	-9.47	-9.73	-9.81	-9.08	-9.59	-10.53	-10.59	-9.49	-9.64	-10.38	-10.12	-9.91	-9.55
Upper Hem. PRP (%)	15.55	16.67	15.64	13.22	13.86	16.22	12.75	10.58	9.92	12.82	14.54	13.28	14.97	17.88	19.70
Lower Hem. PRP (%)	10.87	11.42	11.20	10.65	10.45	12.37	10.98	8.85	8.73	11.25	10.87	9.17	9.72	10.22	11.09