

Dual Band WIFI PCB Antenna Datasheet

Technical features:

- Compact, small size design
- FR4 pcb material
- No cover (solder mask)

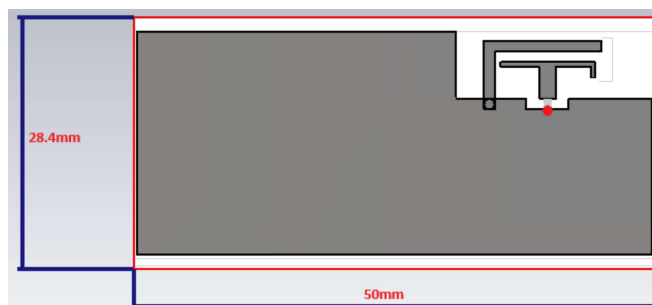


Figure 1: Antenna design

Frequency range	MHz	2400-2500, 5000-6000
Polarization		Linear
Antenna Gain	dBi	4
Axial ratio	dB	>40
VSWR		<2
Impedance	Ohm	50
Front-to-back ratio (max)	dB	12 dB
Max input power	dBm	30
Connection		Direct pcb
Dimensions (L x W x H)	mm	49.5 x 23.9 x 0.909
Packing	mm	No

Antenna gain

Channel	1	2	3	4	5	6	7	8	9	10	11
Frequency [MHz]	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Realized Gain [dBi]	1.082	1.28	1.47	1.65	1.81	1.97	2.12	2.26	2.39	2.5	2.6
Radiation efficiency [dB]	-2.46	-2.37	-2.28	-2.18	-2.09	-2	-1.9	-1.8	-1.72	-1.63	-1.56
Total efficiency [dB]	-4.54	-4.35	-4.17	-4.01	-3.86	-3.72	-3.59	-3.46	-3.33	-3.2	-3.09

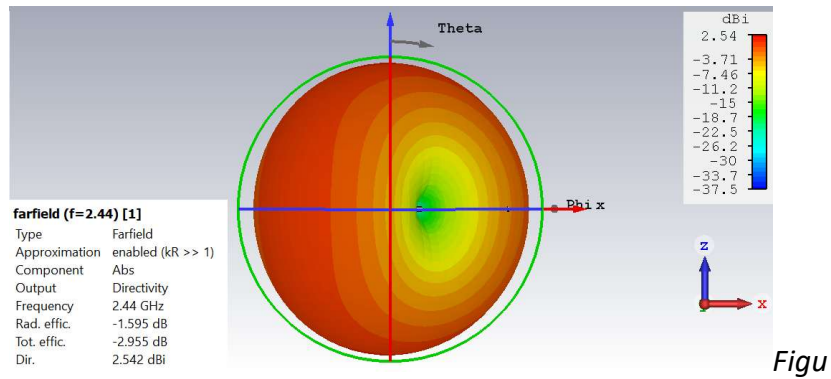
Figure 2: Antenna gain vs. channel 2.4GHz band

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Frequency [MHz]	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Realized Gain [dBi]	2.52	2.47	2.44	2.39	2.37	2.4	2.49	2.57	2.64	2.69	2.73	2.75	2.75	2.74	2.72
Radiation efficiency [dB]	-0.57	-0.52	-0.46	-0.44	-0.41	-0.38	-0.37	-0.37	-0.36	-0.35	-0.35	-0.35	-0.34	-0.34	-0.34
Total efficiency [dB]	-1.38	-1.27	-1.2	-1.17	-1.14	-1.11	-1.01	-1.1	-1.09	-1.08	-1.08	-1.08	-1.09	-1.09	-1.1

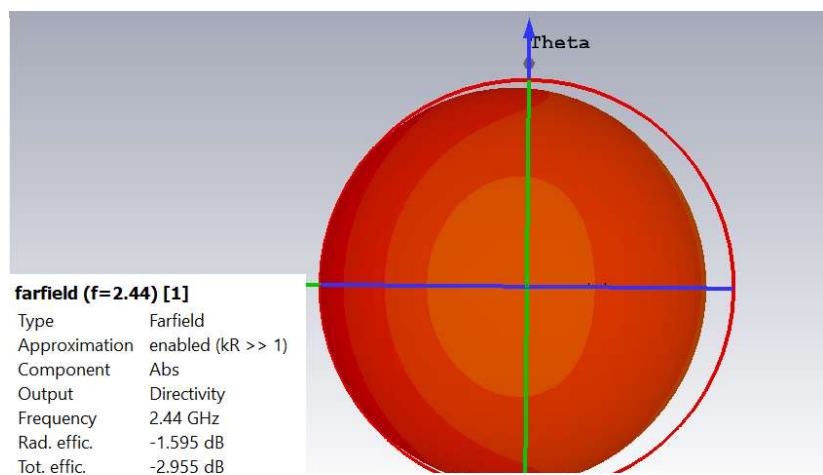
Figure 3: Antenna gain vs. channel 5GHz band

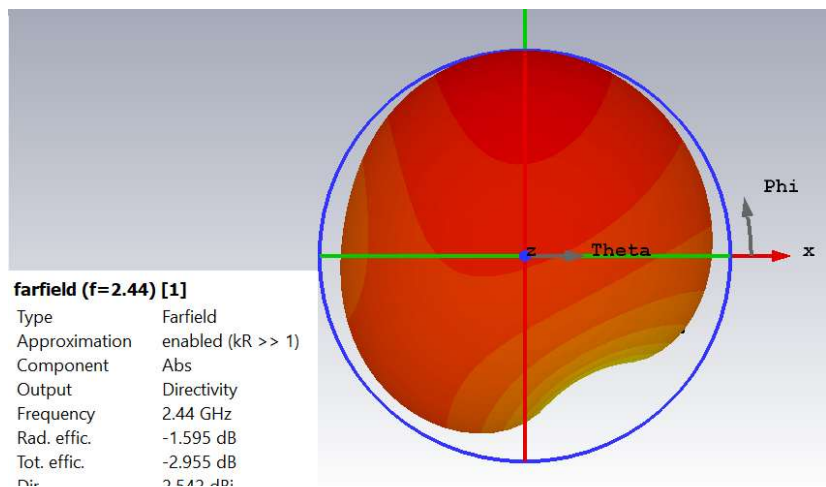
Radiation patterns 3D – 2.4GHz

See figure 1 for X,Y&Z reference.



re 4:Front view – 2.4GHz





Radiation patterns 3D – 5.5GHz

See figure 1 for X,Y&Z reference.

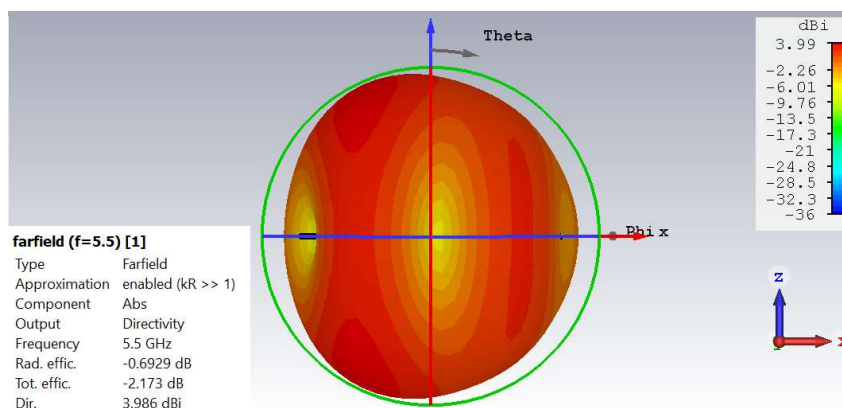


Figure 7: Front view – 5.5GHz

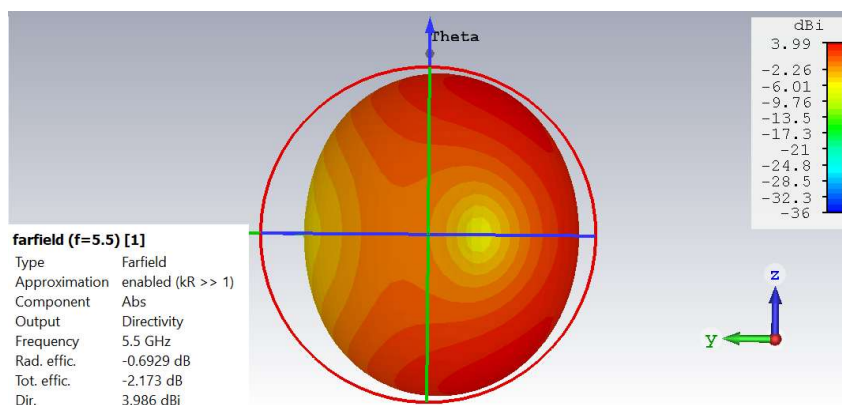


Figure 8: Left view - 5.5GHz

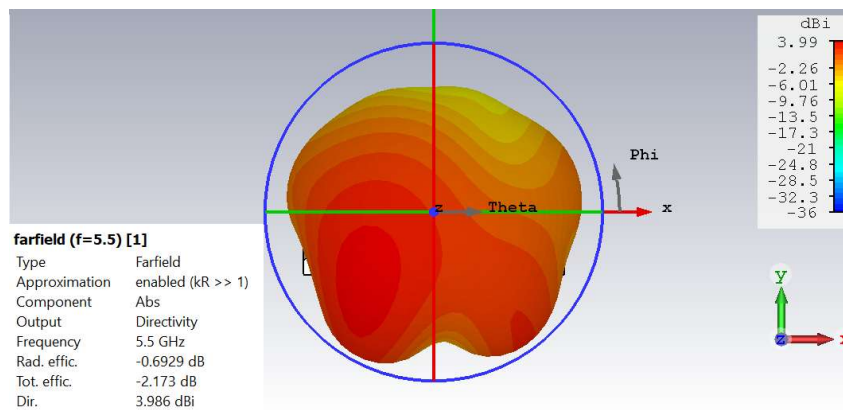


Figure 9: Top view - 5.5GHz

Radiation patterns 2D

