

Antenna Specifications

Design Specifications	Typical	Units
Antenna type	FPC+Leadwire	
working Frequency	【2400~2500】 & 【5100~5800】	MHz
Gain	【1.75】 & 【1.79】	dBi
Antenna efficiency	【51.00~53.70】 & 【35.00~46.10】	%
VSWR	<3.5	
Ploriaztion	Linear polarization	
Axial Ratio	When the antenna is circular polarization, note the axial ratio in the working bandwidth	N/A
Radiation pattern	omnidirectional	
impedance	50 ohm	
Power handling	33	dBm
Interface	IPEX	
Overall dimensions	See drawing section	
Weight	no requirement	
Operatin Temp	-30 ----- 70	°
Storing Temp	-30 ----- 70	°

Professional handheld WiFi Antenna Specification

1、 Indication

The report mainly provides the test status of various electrical performance parameters of the Professional handheld WiFi Antenna. (As shown in Figure 1 below)



Figure 1 Professional handheld WiFi Antenna

2、 Electrical Performance

2.1 Specification standard

Professional handheld WiFi Antenna working band is at 2400-2500 & 5100-5800MHz.

2.2 Antenna matching circuit

Professional handheld WiFi Antenna matches the original matching circuit.

2.3 VSWR Test

A. Test setup

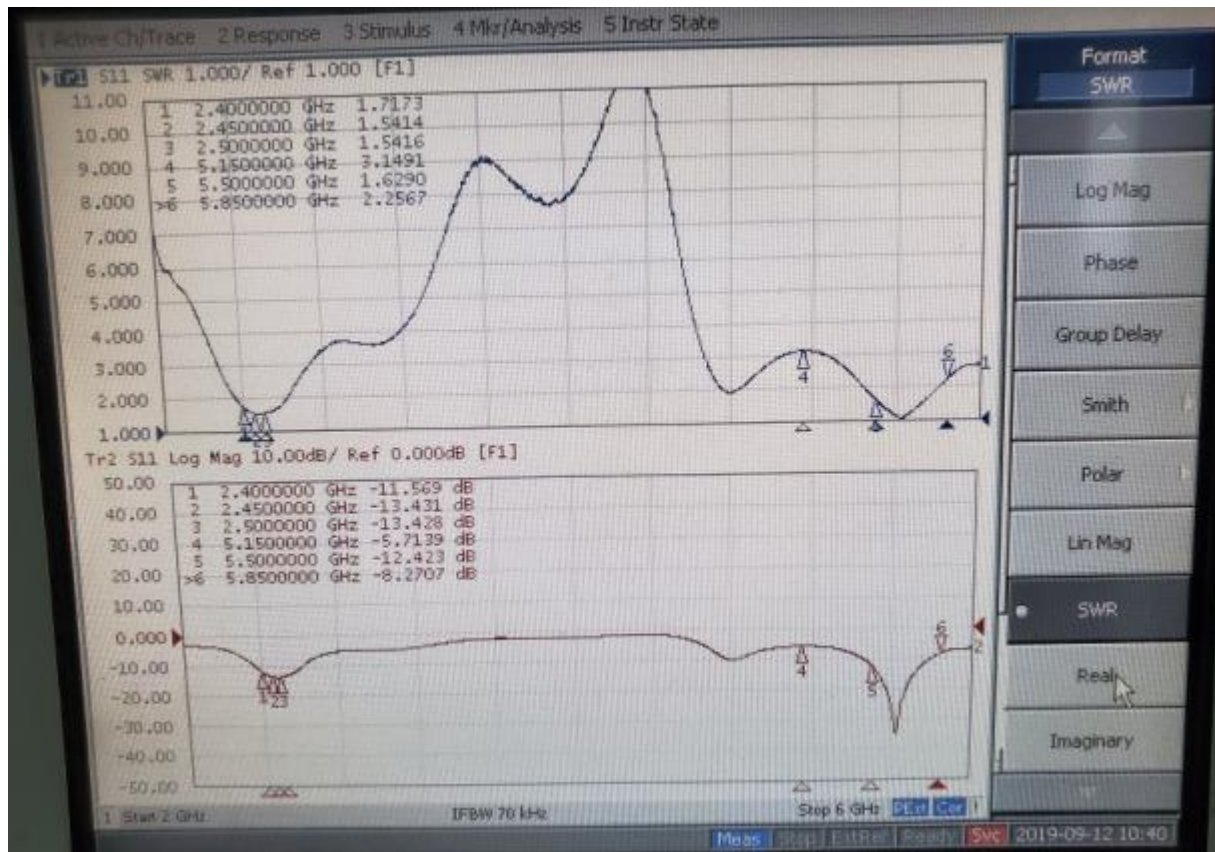
VSWR measurements (S11) were performed using Agilent E5071B Network Analyzer and the previously described test fixture. A ferrite-loaded coaxial cable was used to mitigate surface currents on the outside of the cabling. The testing was performed in free space ETS AMP8500S chamber.

B. VSWR

The table below shows the standing wave ratio value of the edge frequency of the working band of Professional handheld WiFi Antenna matches the original matching circuit.

Frequency band	frequency (MHz)	VSWR
2400-2500	2400	1.71
	2500	1.54
5100-5800	5150	3.14
	5500	1.62
	5800	2.25

2.3.1 S11 parameter



2.3.2 Antenna Passive Efficiency

2.4G:

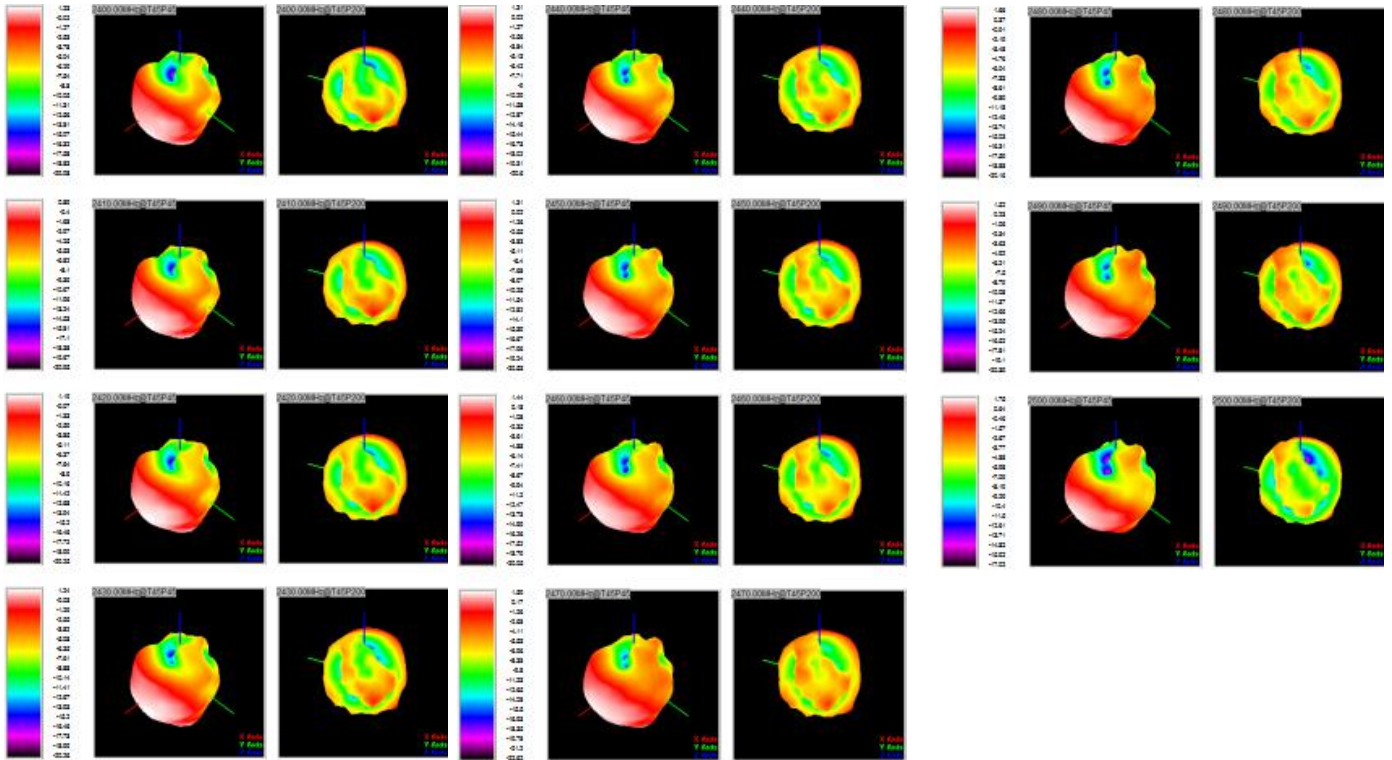
FEITUKEJI											
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-2.76	-2.91	-2.70	-2.72	-2.78	-2.84	-2.91	-2.85	-2.89	-2.89	-2.92
Peak EIRP (dBm)	1.23	0.89	1.19	1.24	1.31	1.31	1.44	1.59	1.66	1.52	1.75
Directivity (dBi)	4.00	3.80	3.89	3.96	4.09	4.15	4.36	4.44	4.55	4.41	4.67
Efficiency (dB)	-2.76	-2.91	-2.70	-2.72	-2.78	-2.84	-2.91	-2.85	-2.89	-2.89	-2.92
Efficiency (%)	52.90	51.20	53.70	53.50	52.70	52.00	51.10	51.80	51.40	51.50	51.00
Gain (dBi)	1.23	0.89	1.19	1.24	1.31	1.31	1.44	1.59	1.66	1.52	1.75
NHPRP $\pm$ Pi/ 4 (dBm)	-4.69	-4.93	-4.63	-4.63	-4.67	-4.70	-4.67	-4.66	-4.51	-4.54	-4.63
NHPRP $\pm$ Pi/ 6 (dBm)	-6.01	-6.24	-5.94	-5.92	-5.94	-5.96	-5.92	-5.89	-5.72	-5.73	-5.80
NHPRP $\pm$ Pi/ 8 (dBm)	-7.12	-7.33	-7.02	-7.00	-7.01	-7.02	-6.96	-6.90	-6.71	-6.70	-6.73
Upper Hem. PRP (dBm)	-6.79	-6.84	-6.52	-6.48	-6.49	-6.50	-6.53	-6.40	-6.36	-6.31	-6.29
Lower Hem. PRP (dBm)	-4.95	-5.16	-5.03	-5.09	-5.19	-5.29	-5.39	-5.39	-5.48	-5.52	-5.60
Upper Hem. PRP (%)	20.95	20.69	22.29	22.48	22.41	22.36	22.25	22.92	23.11	23.40	23.48
Lower Hem. PRP (%)	31.97	30.47	31.40	30.98	30.27	29.59	28.89	28.91	28.31	28.06	27.51

5.8G:

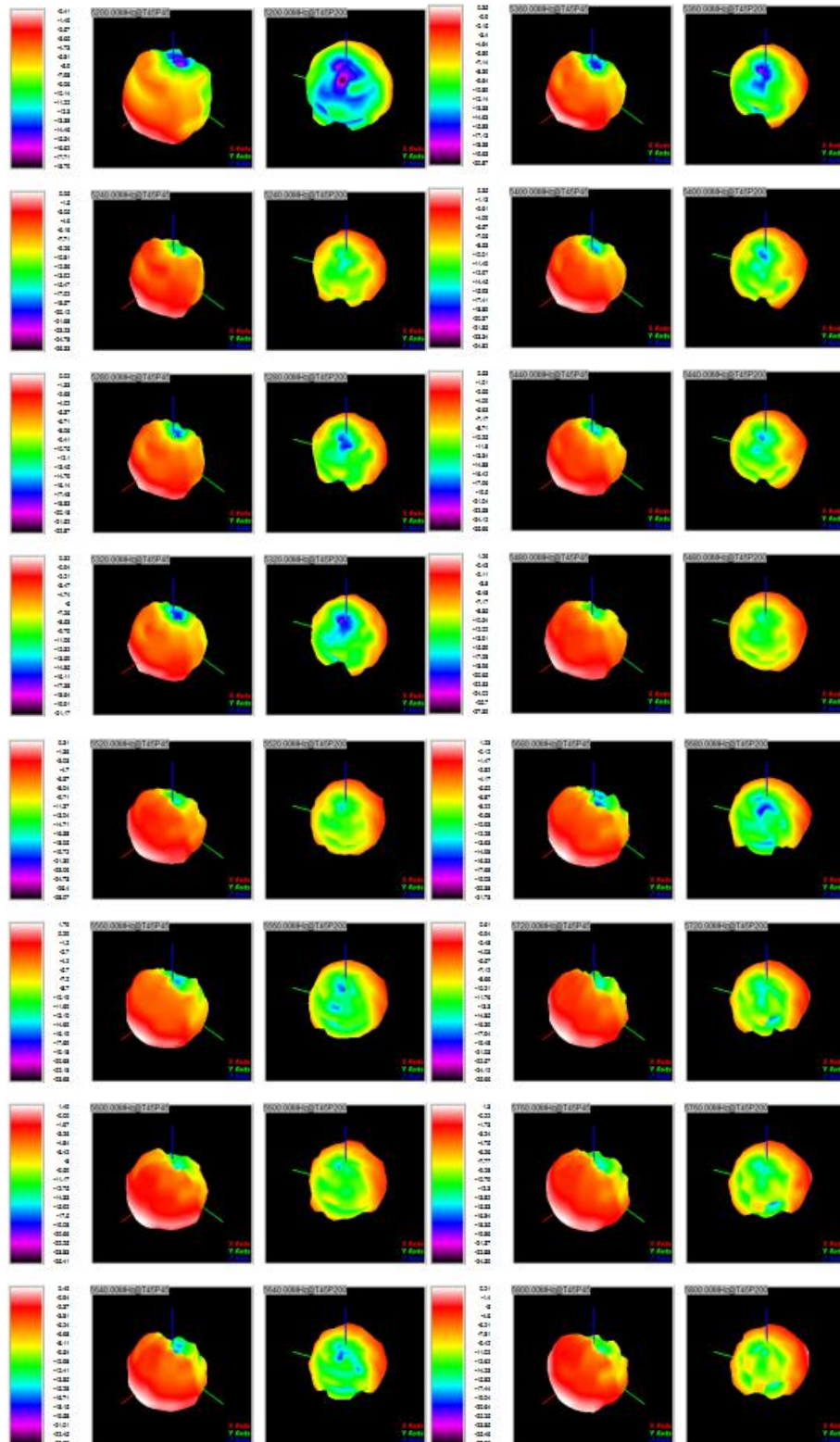
FEITUKEJI																
Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Frequency (MHz)	5200.0	5240.0	5280.0	5320.0	5360.0	5400.0	5440.0	5480.0	5520.0	5560.0	5600.0	5640.0	5680.0	5720.0	5760.0	5800.0
Point Values																
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-4.56	-4.08	-4.07	-3.74	-3.24	-3.76	-3.91	-3.67	-4.04	-3.40	-3.71	-3.46	-3.37	-3.79	-3.58	-3.96
Peak EIRP (dBm)	-0.41	0.05	0.02	0.32	0.35	0.35	0.53	1.26	0.31	1.79	1.49	0.49	1.23	0.61	1.30	0.21
Directivity (dBi)	4.15	4.13	4.09	4.06	3.59	4.11	4.45	4.93	4.35	5.19	5.20	3.95	4.60	4.40	4.88	4.17
Efficiency (dB)	-4.56	-4.08	-4.07	-3.74	-3.24	-3.76	-3.91	-3.67	-4.04	-3.40	-3.71	-3.46	-3.37	-3.79	-3.58	-3.96
Efficiency (%)	35.00	39.10	39.10	42.30	47.40	42.00	40.60	42.90	39.50	45.70	42.60	45.10	46.10	41.70	43.90	40.10
Gain (dBi)	-0.41	0.05	0.02	0.32	0.35	0.35	0.53	1.26	0.31	1.79	1.49	0.49	1.23	0.61	1.30	0.21
NHPRP $\pm$ Pi/ 4 (dBm)	-7.33	-6.89	-6.71	-6.43	-6.23	-6.36	-6.58	-6.00	-6.83	-5.60	-5.48	-6.39	-5.48	-6.24	-5.41	-6.59
NHPRP $\pm$ Pi/ 6 (dBm)	-8.65	-8.15	-7.94	-7.63	-7.41	-7.51	-7.70	-7.10	-7.91	-6.64	-6.50	-7.36	-6.46	-7.18	-6.34	-7.51
NHPRP $\pm$ Pi/ 8 (dBm)	-9.65	-9.12	-8.89	-8.57	-8.35	-8.46	-8.58	-7.96	-8.74	-7.47	-7.30	-8.11	-7.23	-7.93	-7.09	-8.23
Upper Hem. PRP (dBm)	-8.51	-7.88	-7.73	-7.31	-6.72	-7.27	-7.25	-6.97	-7.27	-6.60	-6.86	-6.49	-6.38	-6.76	-6.56	-6.81
Lower Hem. PRP (dBm)	-6.81	-6.43	-6.52	-6.26	-5.83	-6.32	-6.62	-6.41	-6.83	-6.22	-6.57	-6.44	-6.38	-6.84	-6.62	-7.14
Upper Hem. PRP (%)	14.11	16.29	16.85	18.60	21.30	18.73	18.82	20.09	18.74	21.88	20.59	22.42	23.02	21.06	22.08	20.83
Lower Hem. PRP (%)	20.86	22.77	22.28	23.69	26.13	23.31	21.78	22.85	20.74	23.86	22.01	22.70	23.03	20.68	21.77	19.31

2.3.3 Pattern

2.4G:



5.8G:



3、 Suggestion And Solution

This report is according to the customer provide Professional handheld WiFi Antenna the final version of the electrical performance of antenna.

As can be seen from the above test data, this antenna provides better electrical performance.

We are looking forward to your confirmation. Thank you for your cooperation!

4、 Appearance Drawing

