

SPECIFICATION



ShenZhen TianDa Communication Co,LTD

V8S Base Station 2.4G Antenna

Product Specification

Customer	Zhi Ling	Frequency band	2400-2500MHz
Project name	V8S Base Station	Edition	A
Item number	ZL-V8-S0-WI-A	Colour	White
R Fdesign	Wangxinchuang	Structural design	Hesenlin
Date	2022.01.19		

Customer confirmation:

Whether the assembly meets your requirements: ☐OK ☐NG

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一、2.4G Antenna

1、Specifications

The specification mainly provides the test status of electrical and structural performance parameters of 2.4GHz antenna in V8S Base Station project。The picture below shows the 2.4GHz antenna designed by Tianda.



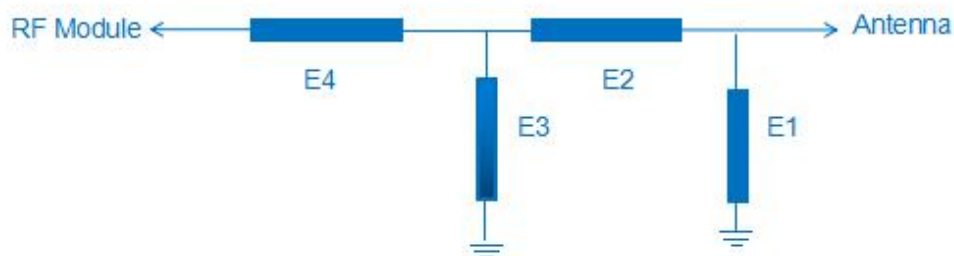
1.1、Electrical specifications

1.1.1、Electrical performance index

The operating frequency band of the antenna 2400MHz—2500MHz, The following is the electrical performance index of the antenna designed and produced by Tianda.

WIFI		
频段	频率（MHz）	VSWR
2.4G	2400~2500	≤ 2.0

1.1.2、Matching circuit diagram



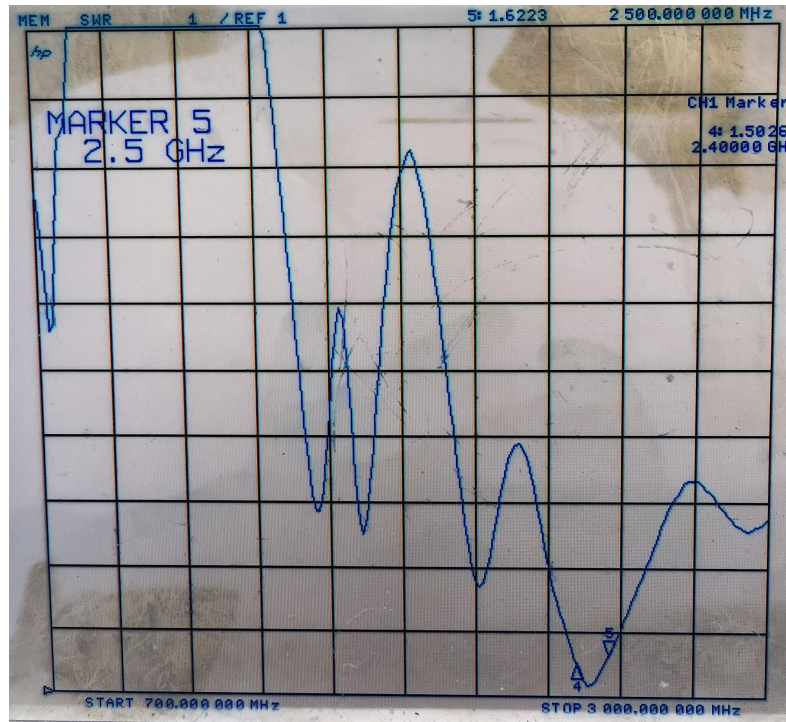
The matching circuit of 2.4GHz antenna is a series 0 ohm resistor.

1.2、Testing

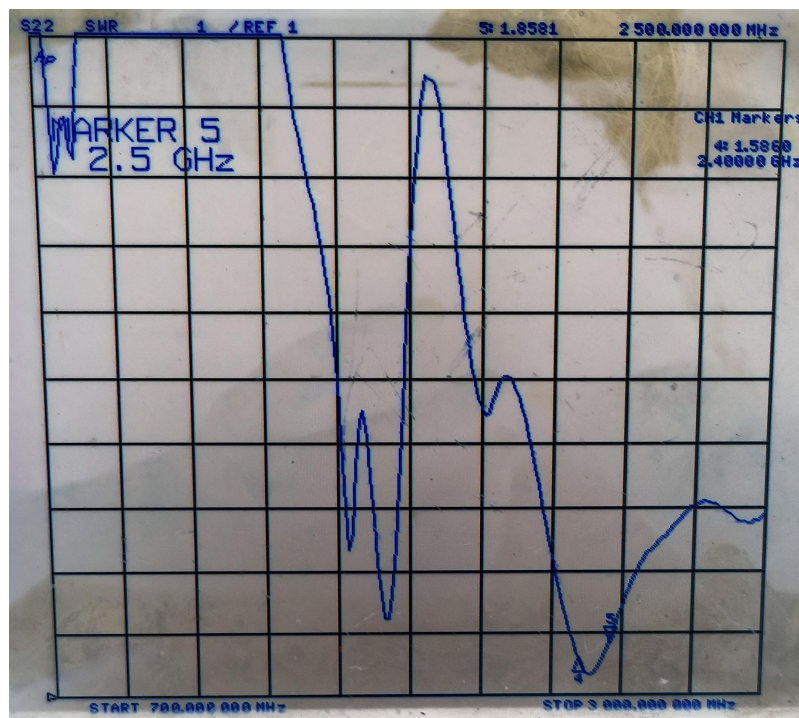
1.2.1、Passive test

1.2.1.1、VSWR

Left Antenna



Right Antenna



1.2.1.2、Antenna Gain and Efficiency

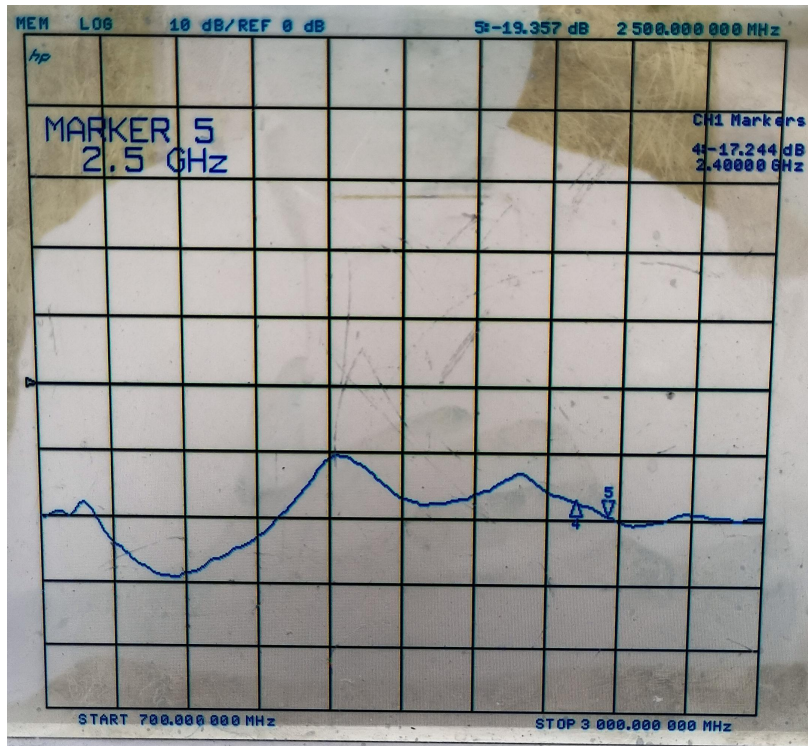
Left Antenna

Passive Test For WIFI2.4									
Freq (MHz)	Effi (%)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	56.19	2.13	-0.02	26.608	29.584	2.13	-13.82	48.01	47.88
2410	56.2	2.16	0.01	26.977	29.224	2.16	-13.93	48.11	47.97
2420	57.07	2.17	0.02	27.338	29.729	2.17	-14.25	48.04	47.91
2430	59.11	2.24	0.09	27.236	30.879	2.24	-14.53	48.2	48.01
2440	60	2.33	0.18	28.209	31.787	2.33	-14.95	48.33	48.11
2450	60.36	2.49	0.34	29.15	31.205	2.49	-14.71	48.55	48.3
2460	60.31	2.55	0.4	28.559	31.752	2.55	-14.43	48.43	48.22
2470	58.84	3.01	0.86	27.326	31.51	3.01	-14	48.62	48.36
2480	56.98	2.96	0.81	26.698	30.277	2.96	-13.1	48.46	48.2
2490	55.94	2.84	0.69	25.965	29.972	2.84	-12.32	48.67	48.36
2500	55.63	2.96	0.81	25.741	29.887	2.96	-11.49	48.73	48.47

Right Antenna

Passive Test For WIFI2.4									
Freq (MHz)	Effi (%)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	53.79	1.08	-1.07	29.514	24.28	1.08	-14.64	48.01	47.88
2410	56.08	1.6	-0.55	30.83	25.25	1.6	-14.14	48.11	47.97
2420	59.24	1.91	-0.24	32.601	26.641	1.91	-13.64	48.04	47.91
2430	60.56	2.14	-0.01	33.394	27.162	2.14	-13.54	48.2	48.01
2440	61.6	2.21	0.06	33.612	27.993	2.21	-13.03	48.33	48.11
2450	60.78	2.36	0.21	33.751	27.033	2.36	-13.7	48.55	48.3
2460	60.25	2.77	0.62	33.534	26.713	2.77	-12.95	48.43	48.22
2470	58.74	2.84	0.69	32.114	26.624	2.84	-12.81	48.62	48.36
2480	56.84	3.24	1.09	30.309	26.53	3.24	-12.08	48.46	48.2
2490	54.73	3.58	1.43	29.414	25.313	3.58	-11.38	48.67	48.36
2500	52.93	3.87	1.72	28.191	24.739	3.87	-10.9	48.73	48.47

1.2.1.3、Antenna Isolation

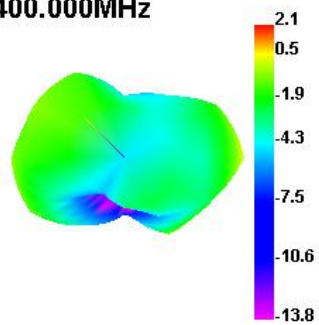


The isolation between antennas is - 17dB - 19dB.

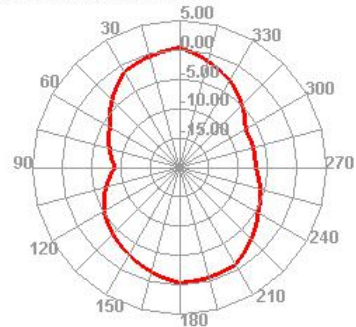
1.2.1.4、Antenna pattern

Left Ant

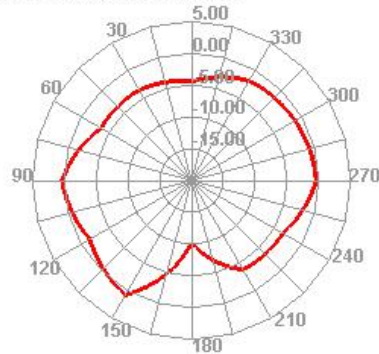
2400.000MHz



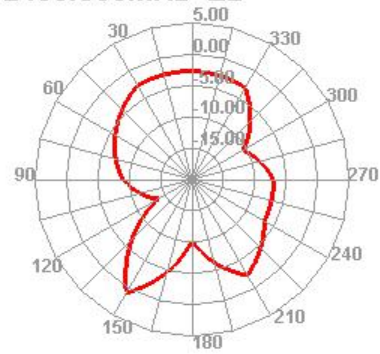
2400.000MHz H



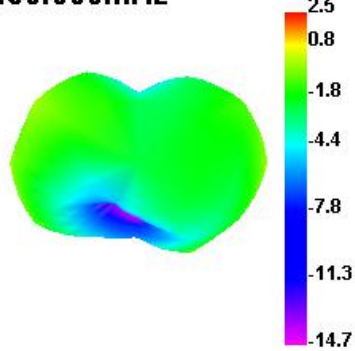
2400.000MHz E1



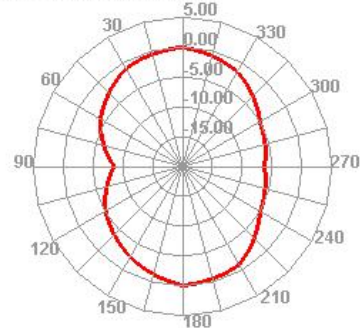
2400.000MHz E2



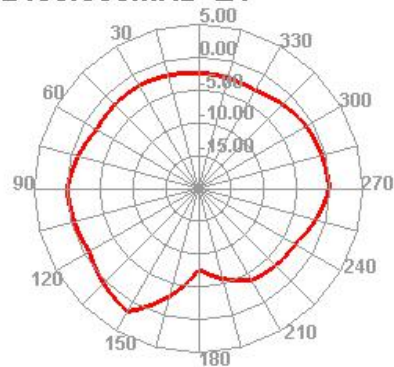
2450.000MHz



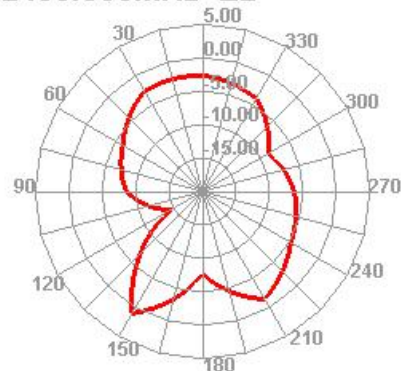
2450.000MHz H



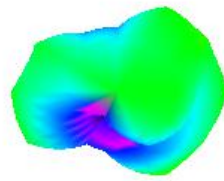
2450.000MHz E1



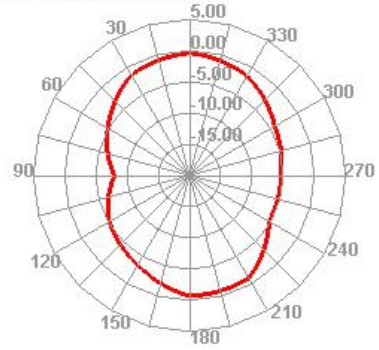
2450.000MHz E2



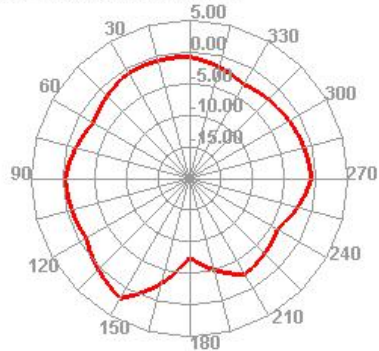
2500.000MHz



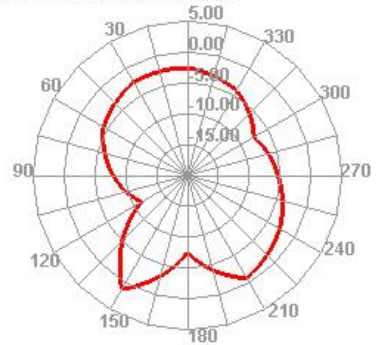
2500.000MHz H



2500.000MHz E1

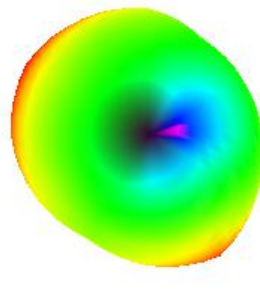


2500.000MHz E2

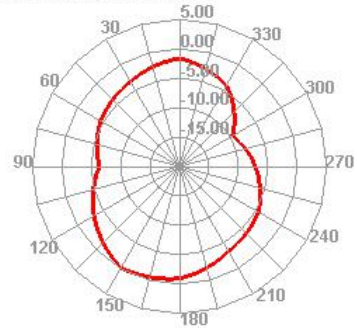


Right Ant

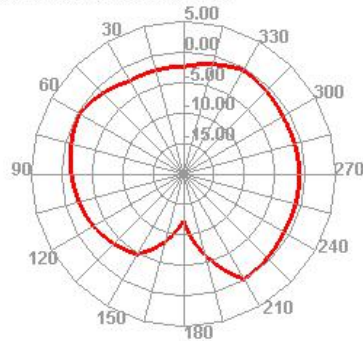
2400.000MHz



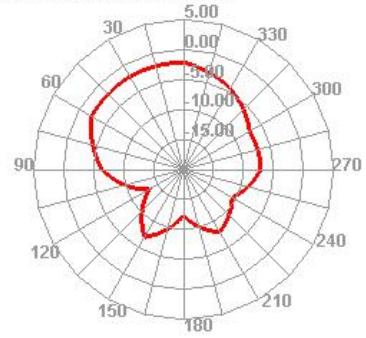
2400.000MHz H



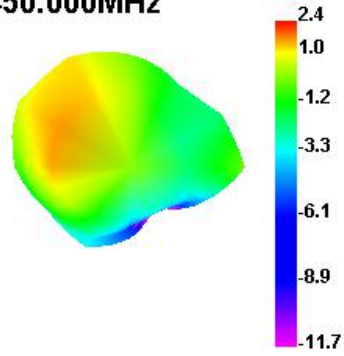
2400.000MHz E1



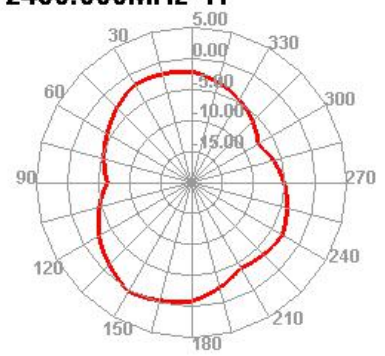
2400.000MHz E2



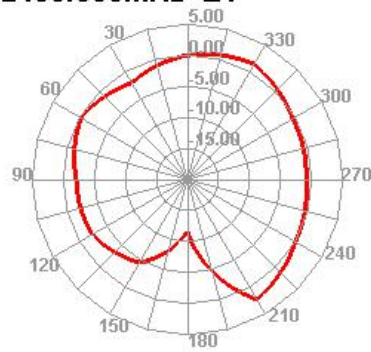
2450.000MHz



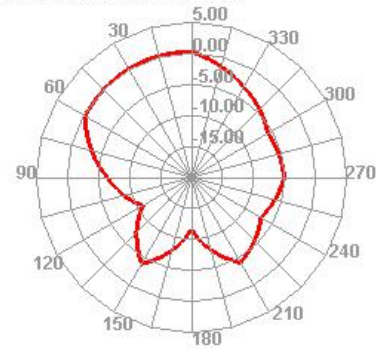
2450.000MHz H



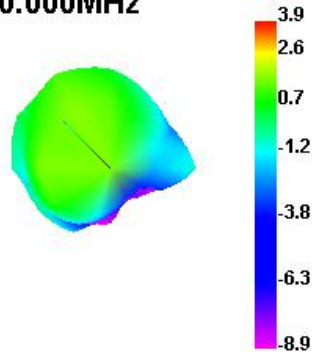
2450.000MHz E1



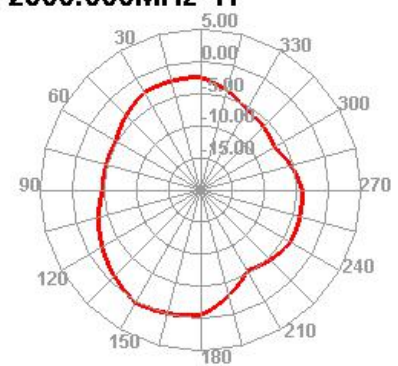
2450.000MHz E2



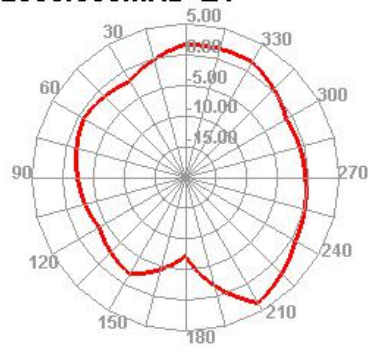
2500.000MHz



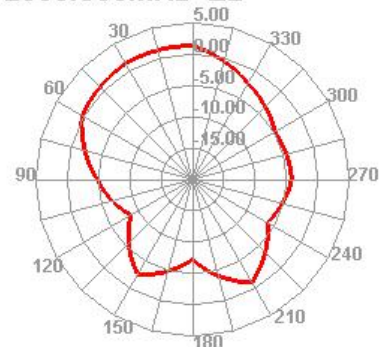
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



二、Structural specifications

2.1、Antenna composition

2.4G Antenna is mainly composed of Plastic shell+PCB+Cable line.

2.2、Drawings

