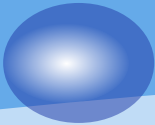




Xin Qi electronic -EM8E project commissioning report -A

2023年07月06日

上海赫达电子有限公司
Shanghai HEDA Electronics. Co., Ltd



项目信息



Project name: EM8E

Antenna band

information:

WIFI:2400-2500MHz

天线环境图片

Antenna position



No shell test status

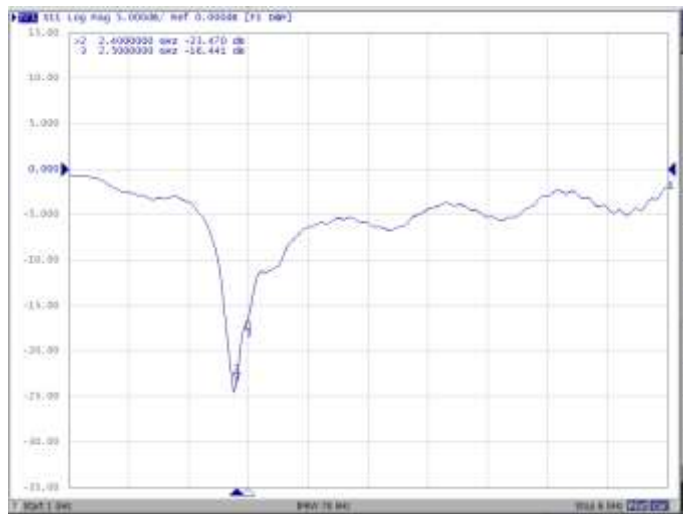


housing is 15mm
from the top



Full shell test status

天线测试数据-（无外壳状态）



Fre (MHz)	Gain(dBi)	Eff(%)
2400	-3.3	46.3
2410	-3.2	47.3
2420	-3.3	47.1
2430	-3.3	46.7
2440	-3.4	45.9
2450	-3.2	48.0
2460	-3.3	46.5
2470	-3.3	47.2
2480	-3.3	47.1
2490	-3.3	47.2
2500	-3.3	46.8

OTA		
信道	TRP	TIS
1	17.5	-82.32
7	17.38	-82.00
13	17.54	-82.84

天线测试数据-（外壳距离顶部15MM状态）



Fre (MHz)	Gain(dBi)	Eff(%)
2400	-3.4	45.4
2410	-3.4	45.2
2420	-3.5	45.1
2430	-3.4	45.6
2440	-3.4	45.3
2450	-3.4	45.7
2460	-3.4	46.0
2470	-3.4	45.6
2480	-3.3	46.8
2490	-3.3	46.3
2500	-3.3	46.6

OTA		
信道	TRP	TIS
1	17.22	-82.35
7	17.22	-82.09
13	17.34	-82.21

天线测试数据-（外壳距离顶部10MM状态）



Fre (MHz)	Gain(dBi)	Eff(%)
2400	-4.2	37.7
2410	-4.0	39.7
2420	-4.0	40.0
2430	-3.9	40.4
2440	-4.0	39.6
2450	-3.8	41.9
2460	-3.9	40.5
2470	-3.9	40.8
2480	-4.0	40.3
2490	-4.1	39.0
2500	-4.0	39.7

OTA		
信道	TRP	TIS
1	16.88	-81.25
7	16.7	-81.37
13	16.34	-81.36

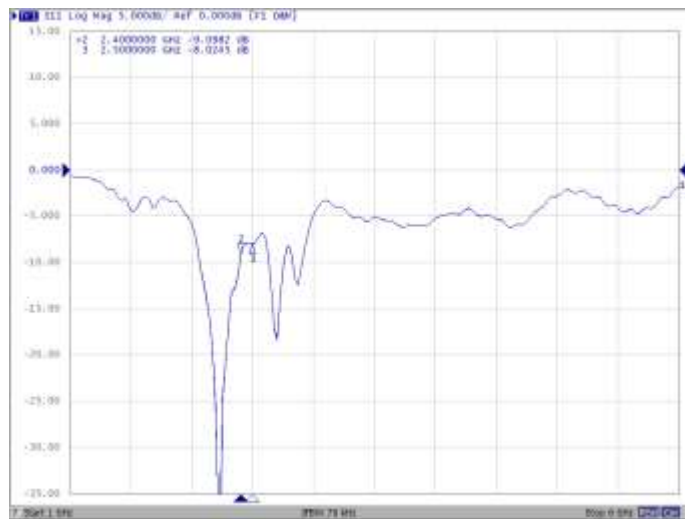
天线测试数据-（外壳距离顶部7MM状态）



Fre (MHz)	Gain(dBi)	Eff(%)
2400	-4.1	38.8
2410	-4.3	37.5
2420	-4.4	36.5
2430	-4.6	34.3
2440	-4.8	33.5
2450	-4.8	33.0
2460	-4.9	32.6
2470	-4.8	32.9
2480	-4.7	34.0
2490	-4.6	34.4
2500	-4.7	33.9

OTA		
信道	TRP	TIS
1	16.62	-80.53
7	14.11	-80.58
13	14.13	-80.53

天线测试数据-（外壳距离顶部5MM状态）



Fre (MHz)	Gain(dBi)	Eff(%)
2400	-4.8	33.4
2410	-4.6	34.8
2420	-4.6	34.4
2430	-4.7	34.2
2440	-4.9	32.4
2450	-4.8	33.4
2460	-5.1	30.7
2470	-5.3	29.2
2480	-5.6	27.3
2490	-5.9	25.5
2500	-5.6	27.7

OTA		
信道	TRP	TIS
1	13.35	-79.52
7	11	-79.3
13	11.92	-79.53

天线测试数据-（全部外壳状态）



Fre (MHz)	Gain(dBi)	Eff(%)
2410	-7.4	18.2
2420	-7.2	19.0
2430	-7.0	20.0
2440	-7.0	20.0
2450	-7.0	19.9
2460	-6.7	21.4
2470	-6.7	21.4
2480	-6.4	23.1
2490	-6.4	22.8
2500	-6.4	23.0

OTA		
信道	TRP	TIS
1	8.6	-77.6
7	7.91	-77.18
13	10.4	-77.53

结论与建议

1. Because of interference, the antenna waveform is adjusted correctly, but the efficiency is low. Current antenna waveform, deflection status
2. Test several groups of comparative data. The top of the metal shell is cut 15mm short, which is basically similar to without the shell
3. Test TIS reported an error, the test can not run



Thank you !