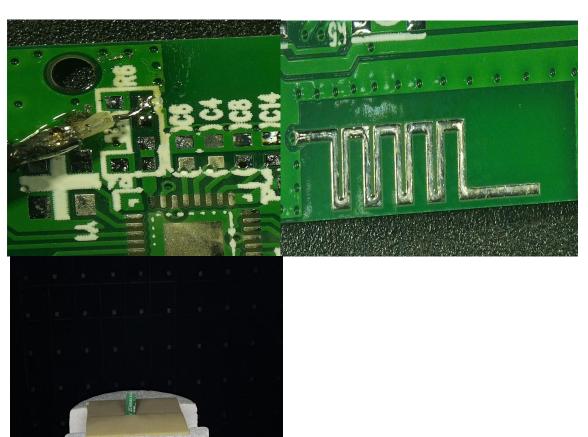
Antenna report

Hoco technology development (SHENZHEN) co.,Ltd Rm 408, Block A, Weidonglong Business Building, 2125 Meilong Road, Tsinghua Community, Longhua Street, Longhua District, Shenzhen, P. R. China

1. Hardware testing

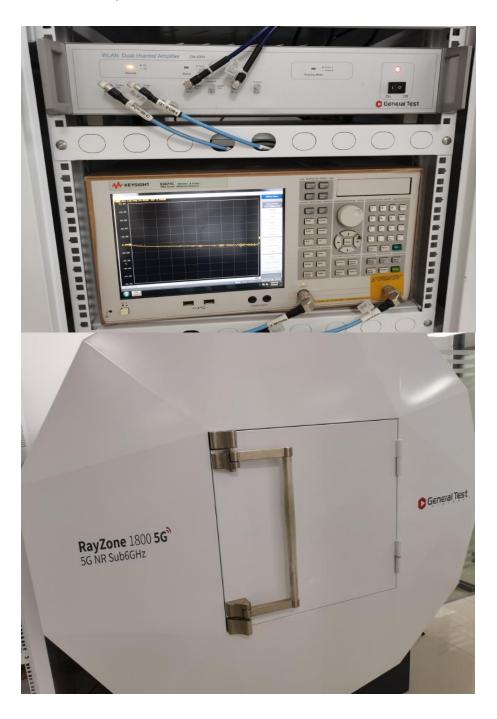
1.1 , PCB bare board test

Solder the RF cable to the bare board and connect it to the OTA device. The following figure shows the connection between the RF cable and the bare board:

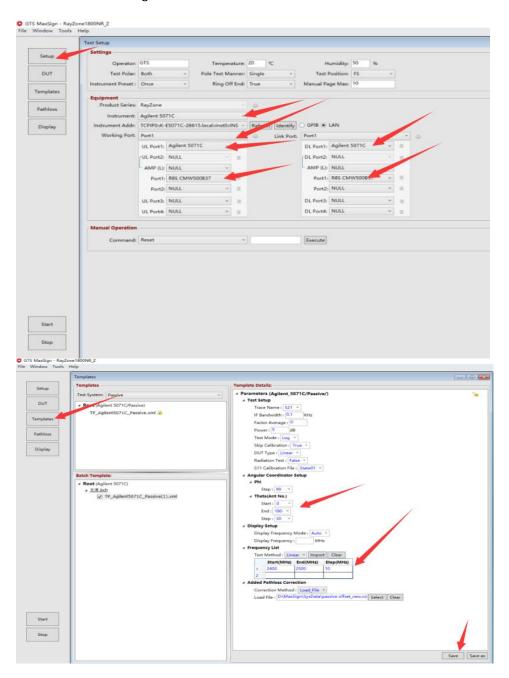


1.2 , equipment environment

The equipment required for this test includes computer, spectrometer, amplifier and darkroom, as shown below:

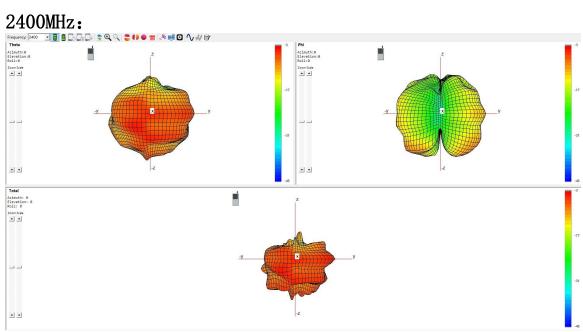


2. Software testing

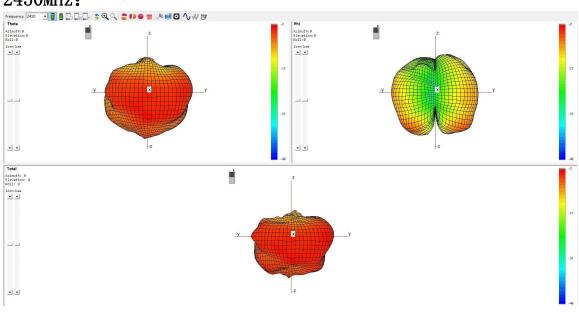


3. Data read

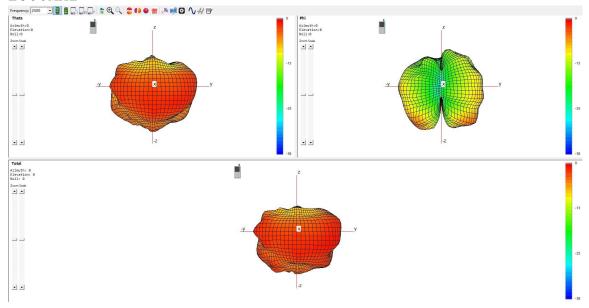
3.1. Scan the antenna for 3D radiation



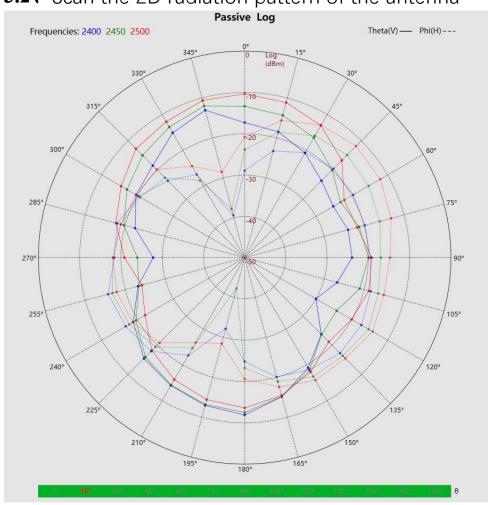
2450MHz:



2500MHz



3.2 Scan the 2D radiation pattern of the antenna



3.3. detailed scan output data results

Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
2400	-3. 70	-9. 21	12.01
2410	-3. 31	-8.63	13. 71
2420	-3. 03	-8.08	15. 57
2430	-3. 12	-7.64	17. 22
2440	-2.81	-7.32	18. 54
2450	-2.44	-6.72	21. 28
2460	-2. 15	-6. 23	23. 85
2470	-1.72	-5. 98	25. 22
2480	-1. 10	-5 . 60	27. 54
2490	-0.81	-5. 35	29. 14
2500	-0.63	-5. 01	31. 57

Summary

_~					
ITEM	ANT SPEC				
Model Name	2.4G ANT				
Antenna plate	PCB antenna				
Contan Engaviorary	2400MHz	2450MHz	2500MHz		
Center Frequency	-3.70dBi	-2.44dBi	-0.63dBi		
MAX. Gain	-0.63dBi				
Polarization	Horizontal and Vertical				
Impedance	50Ohm				
Manufacture					

AntennaPhoto&Length(mm)

