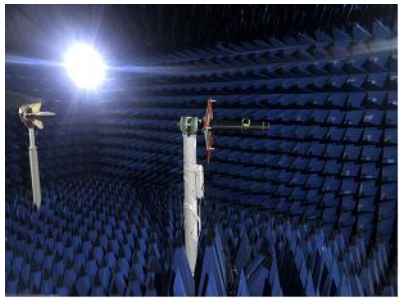
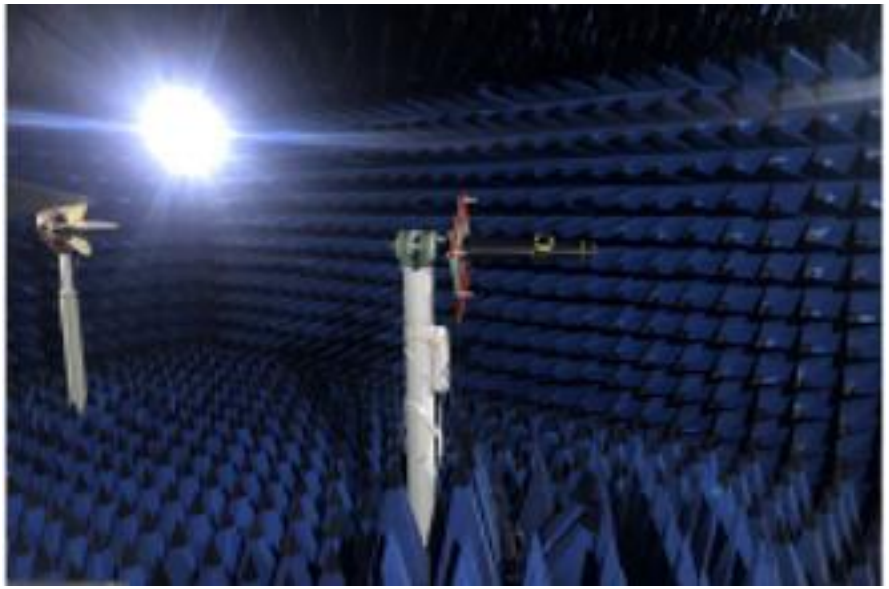
Ouduli Fang U1380 Antenna Test Report

Radio Frequency: He Shiyin
Date: 2025-12-11
Contact: 13823351625



Project Development Environment

We are transitioning from the Internet era to the intelligent era, with the nation actively building a digital society and smart cities. Over the next 5–10 years, both the consumer electronics market and the Internet of Things sector hold significant growth potential. The wireless communications field is highly diverse; going forward, Yusheng will leverage its customer network built around its core antenna business and its comprehensive capabilities to deliver competitive, professional-grade product solutions.



Yusheng Communications product portfolio covers nearly all antenna applications for wireless terminal devices, including automotive antennas, high-precision measurement and mapping antennas, ground-based and satellite data navigation antennas for drones, high-precision positioning antennas, wireless transmission antennas for medical devices, consumer-grade antennas (for mobile phones, tablets, and laptops), base station/infrared distributed antennas, smart wearable antennas (for smartwatches and TWS earphones), security and home surveillance antennas, as well as antennas for various wireless data transmission and control-enabled smart devices.

1 Project Debugging Overview

2 Report Version Outline

3 Antenna Active Parameters

4 Antenna Environment Processing and Improvement

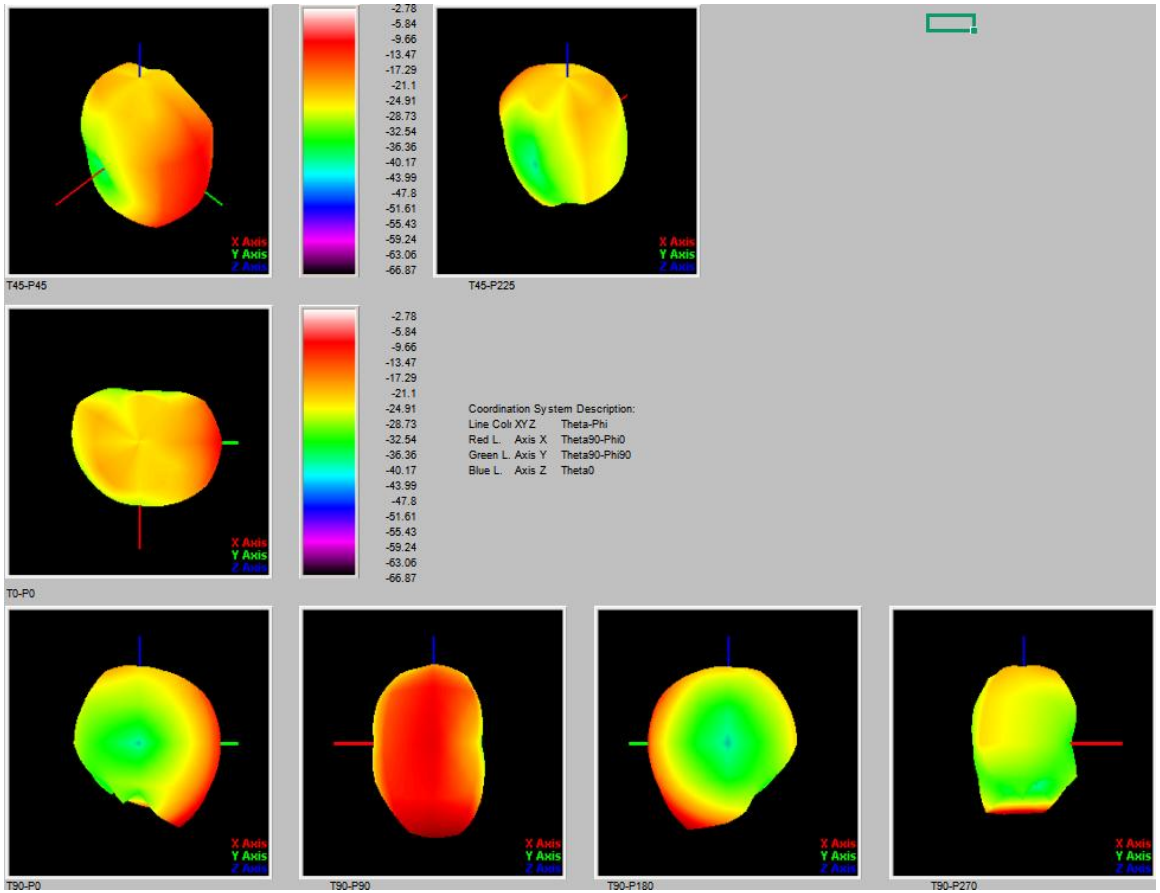
Project Debugging Overview

type	dull and stereotyped			
template	motherboard			
Band Range and Antenna Material	Other Antennas	WiFi+BT	2.45GHz/5.8GHz	LDS
performance requirement	Execute according to customer requirements			

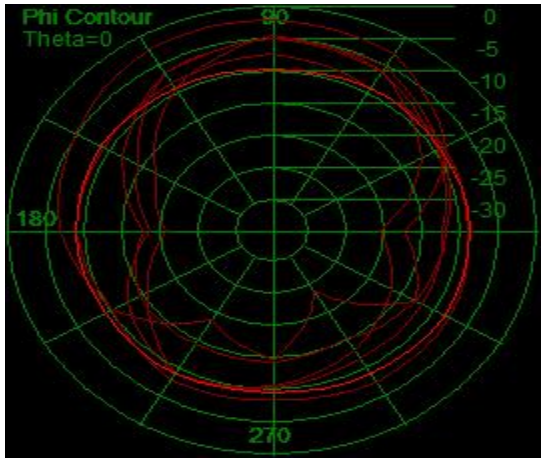
Antenna passive parameters: WIFI0

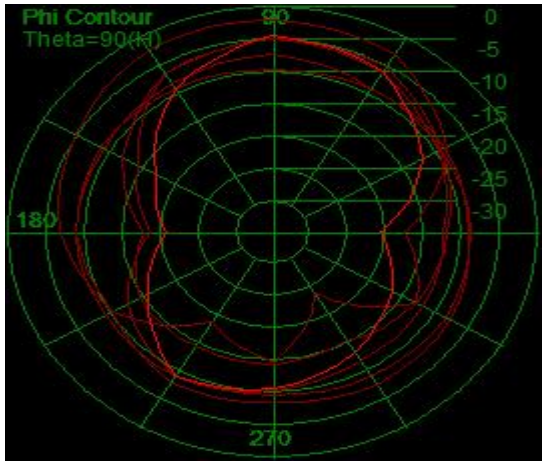
Passive Test					
Freq (MHz)	Effi (%%)	Gain (dBi)	Freq (MHz)	Effi (%%)	Gain (dBi)
2400.0	19.5%	-3.29	5100.0	14.1%	-4.22
2420.0	18.3%	-3.12	5150.0	15.9%	-3.30
2440.0	16.3%	-2.78	5200.0	16.7%	-3.69
2460.0	19.4%	-3.81	5250.0	17.8%	-2.82
2480.0	16.4%	-3.93	5300.0	18.8%	-2.44
2500.0	18.0%	-4.31	5350.0	19.5%	-2.32
			5400.0	20.7%	-2.22
			5450.0	20.7%	-2.10
			5500.0	19.6%	-2.62
			5550.0	18.5%	-2.40
			5600.0	18.3%	-2.62
			5650.0	17.7%	-2.96
			5700.0	16.8%	-3.09
			5750.0	15.9%	-4.02
			5800.0	15.8%	-4.50
			5850.0	15.2%	-4.91

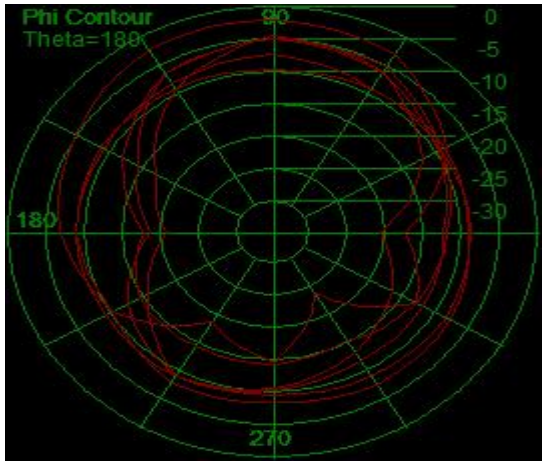
WIFI0 passive parameters - Apple spectrum band: 2400 MHz to 2500 MHz

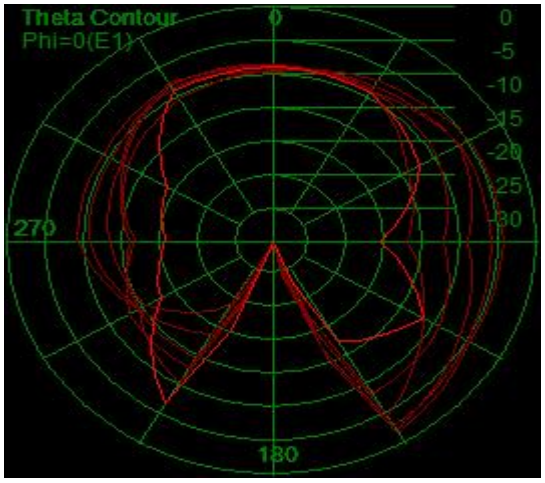


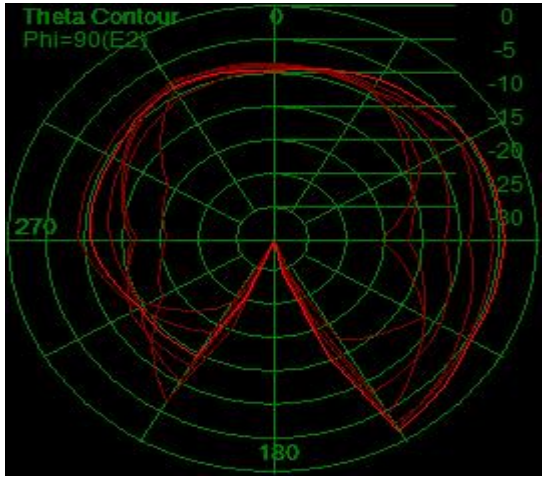
WIFIO passive parameters - Apple spectrum range: 2400 MHz to 2500 MHz

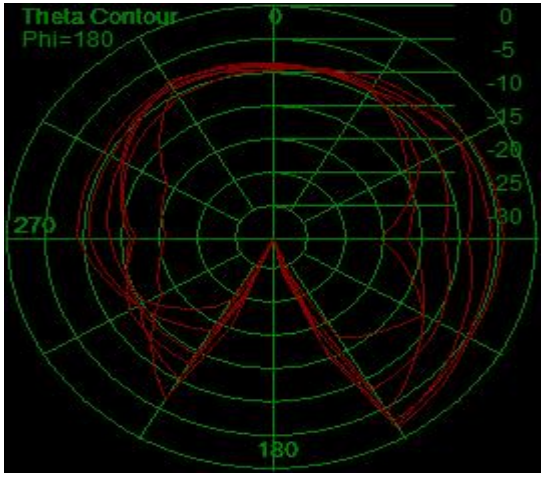




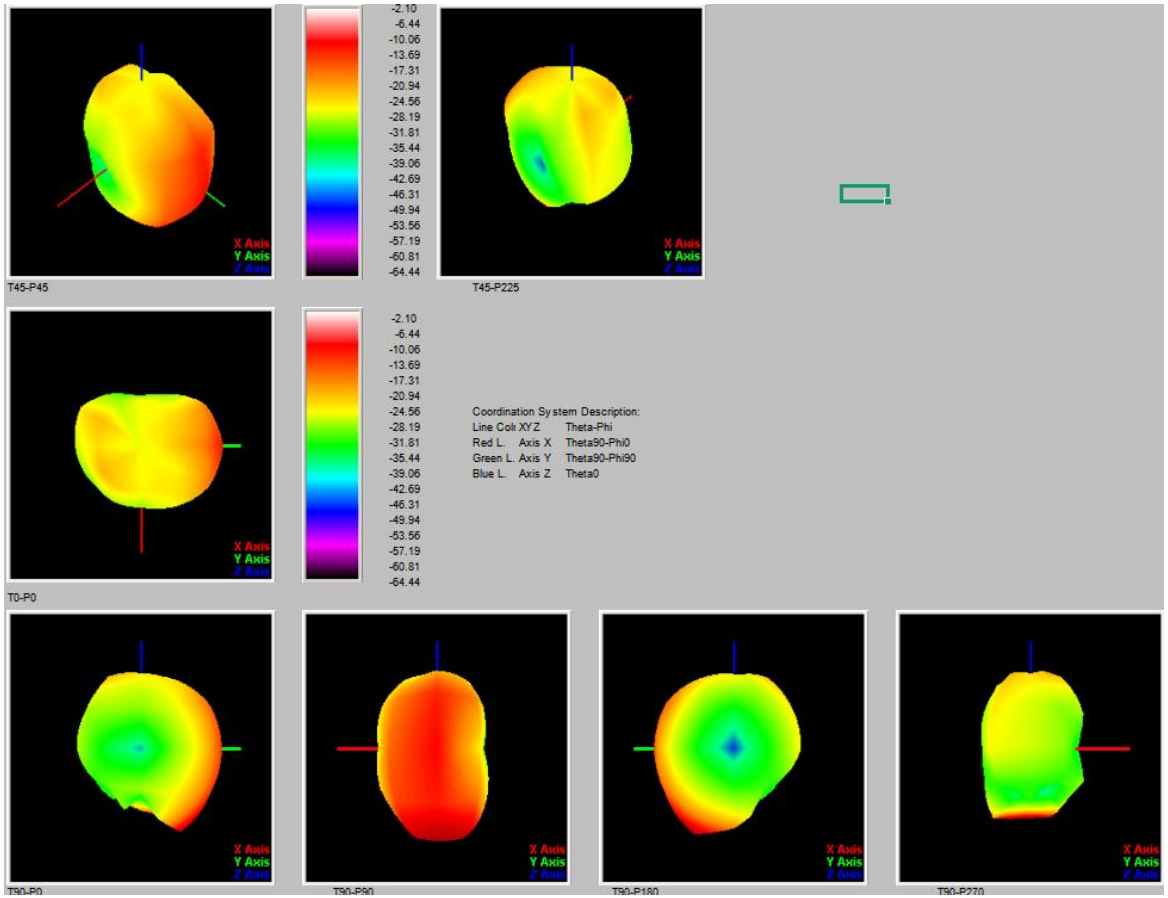








5GWIFI0 - Passive Parameters - Apple Diagram - 5100 MHz - 5850 MHz



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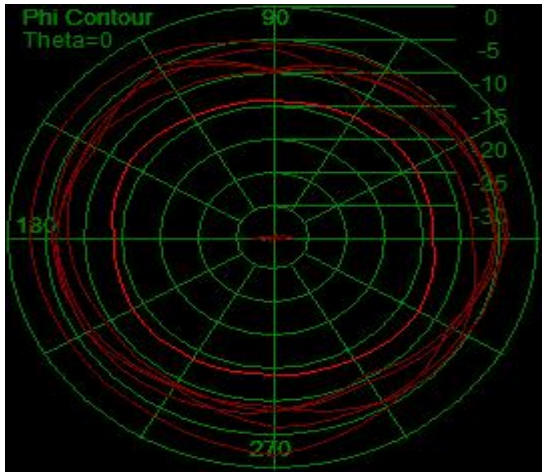
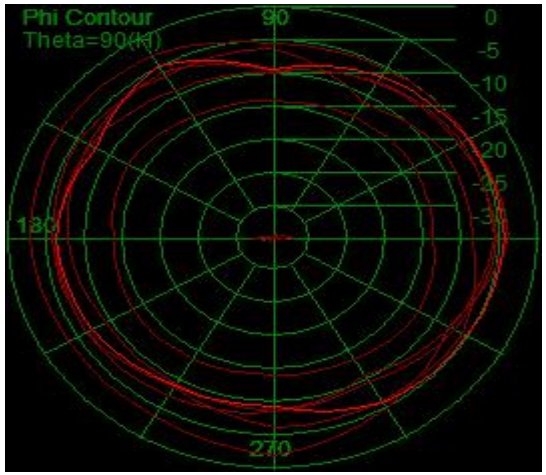
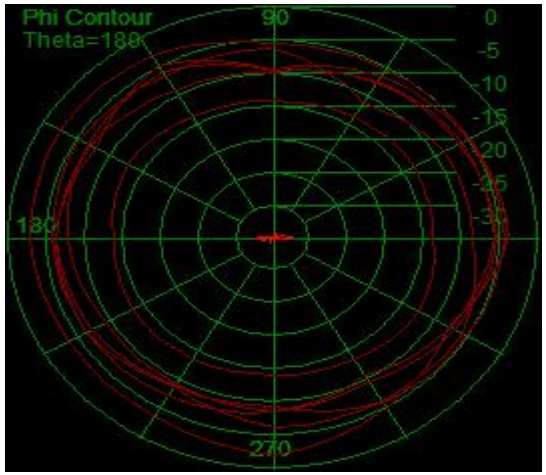
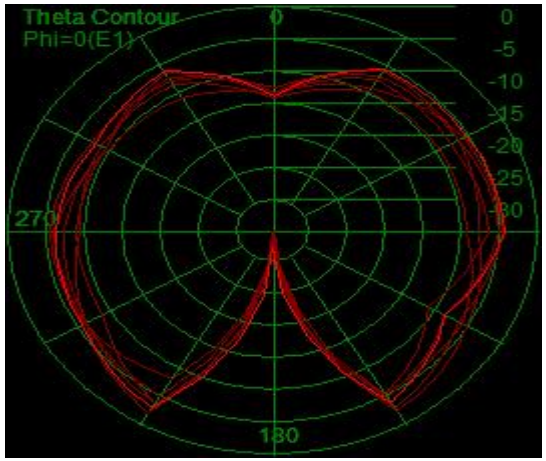
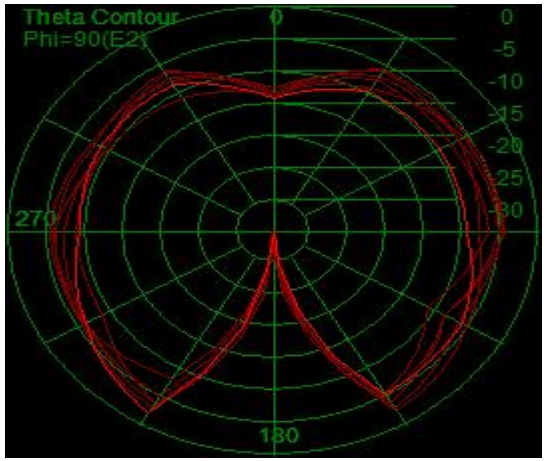
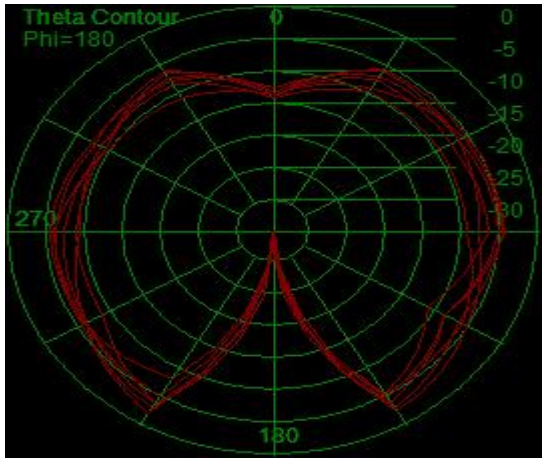








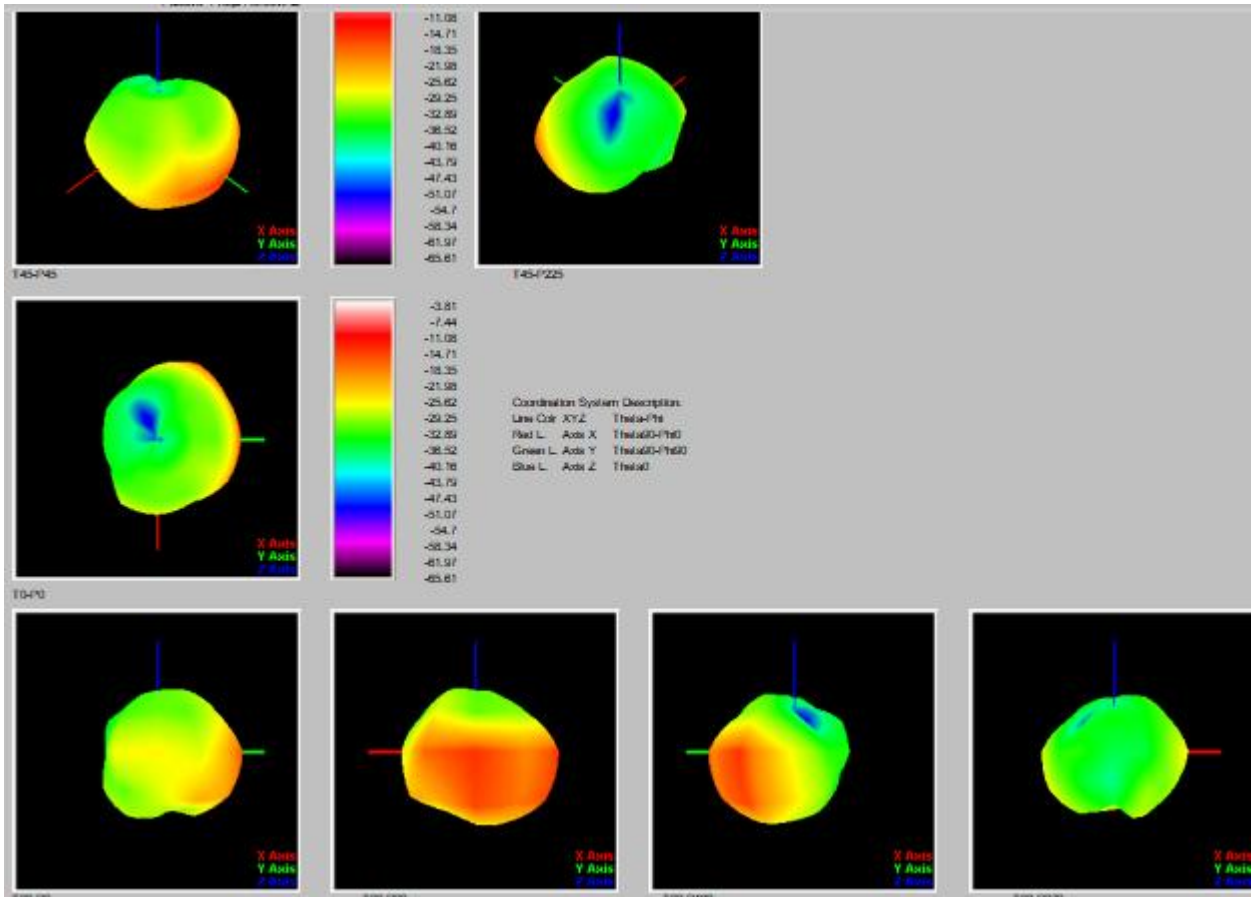




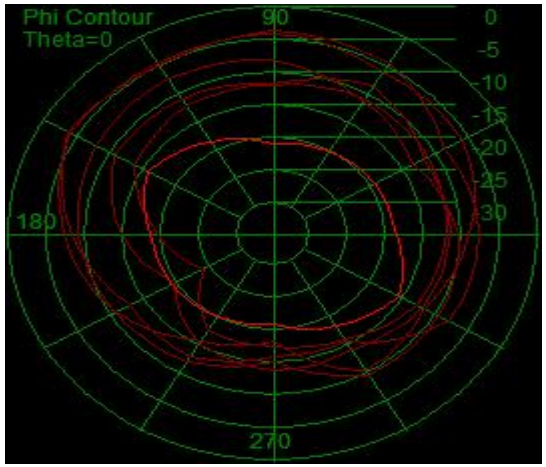
Antenna passive parameters for WIFI1

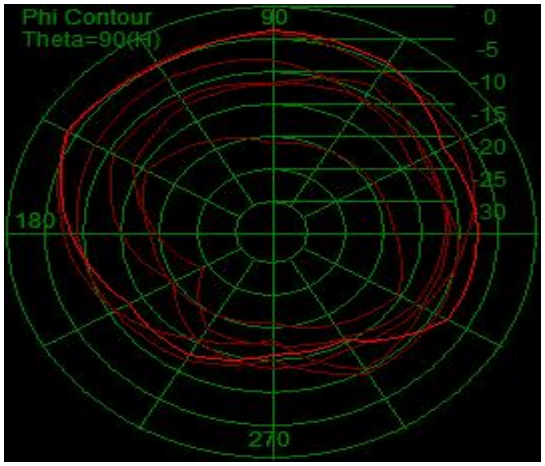
Passive Test					
Freq (MHz)	Effi (%%)	Gain (dBi)	Freq (MHz)	Effi (%%)	Gain (dBi)
2400.0	20.10%	-3.91	5100.0	16.3%	-2.60
2420.0	21.70%	-3.87	5150.0	19.1%	-1.81
2440.0	21.90%	-3.81	5200.0	22.0%	-0.79
2460.0	22.00%	-3.56	5250.0	20.8%	-0.93
2480.0	21.00%	-3.66	5300.0	20.3%	-0.54
2500.0	20.20%	-4.01	5350.0	22.6%	-0.78
			5400.0	24.4%	0.16
			5450.0	27.4%	-0.09
			5500.0	25.2%	-0.54
			5550.0	32.6%	-1.68
			5600.0	32.3%	-1.93
			5650.0	28.8%	-0.62
			5700.0	27.0%	-0.06
			5750.0	25.4%	-0.10
			5800.0	28.3%	-0.95
			5850.0	27.8%	-1.06

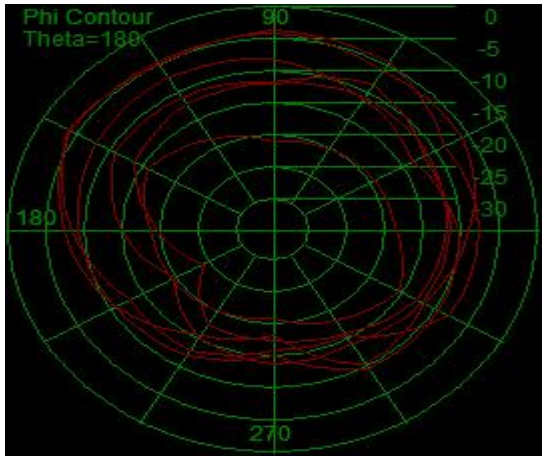
WIFI1 passive parameters - Apple spectrum range: 2400 MHz to 2500 MHz

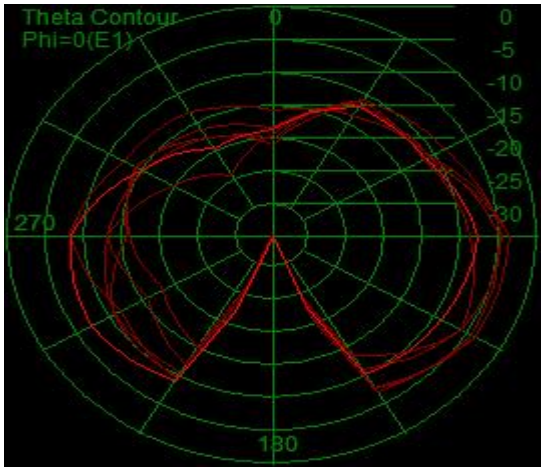


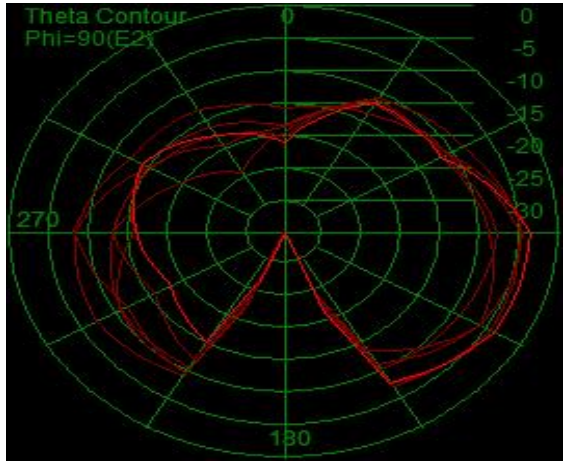
WIFI1 passive parameters - Apple spectrum bands: 2400 MHz to 2500 MHz

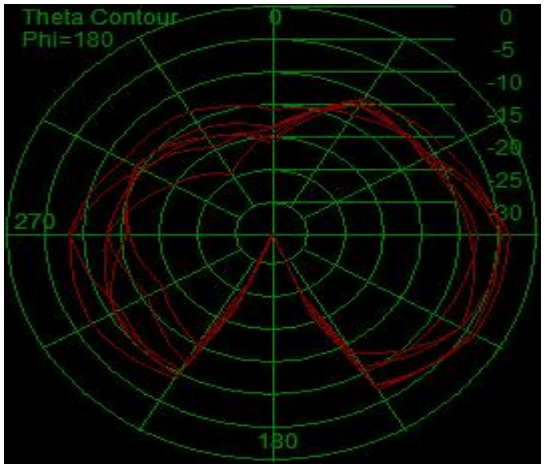




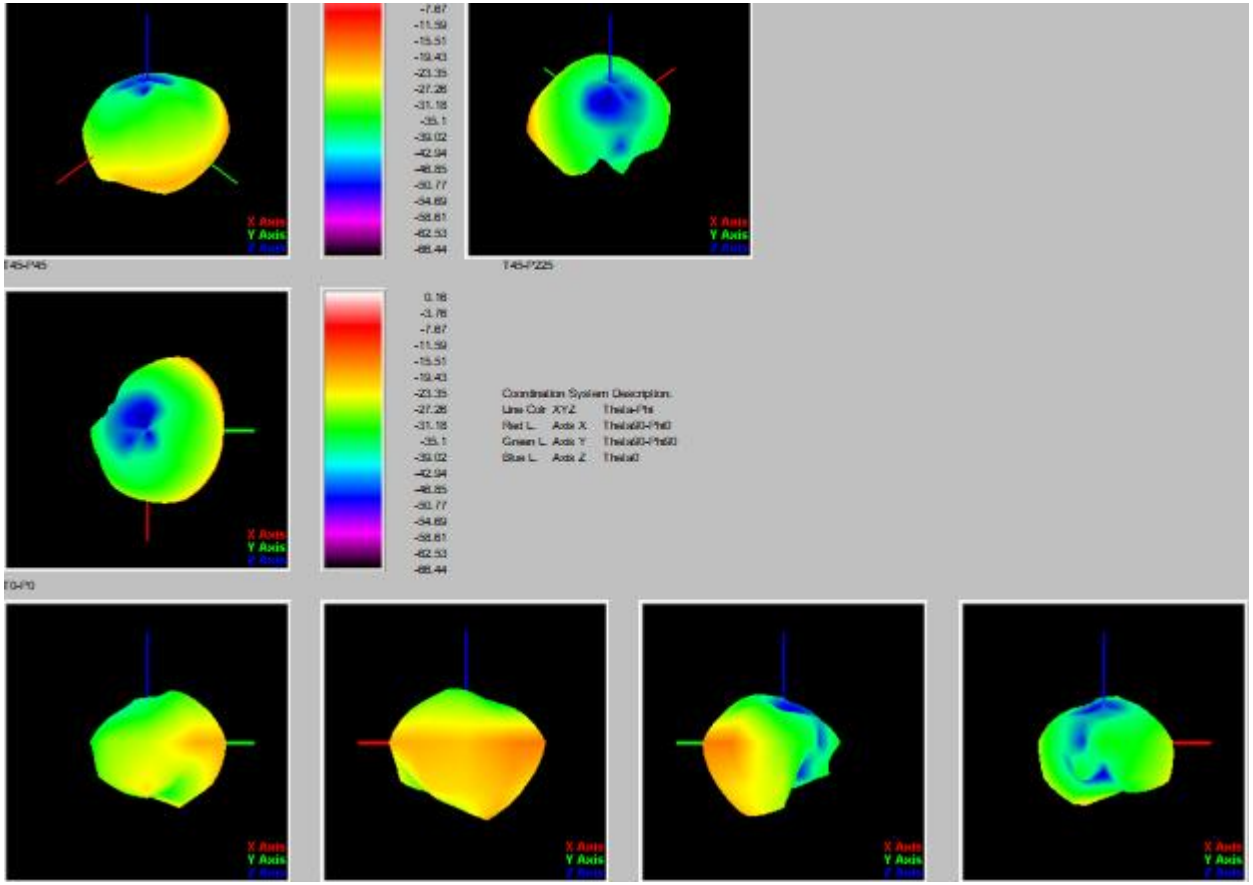








5GWIFI1 - Passive Parameters - Apple Diagram - 5100 MHz - 5850 MHz



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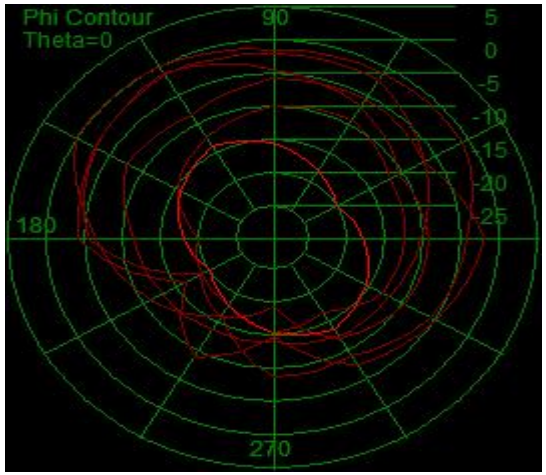
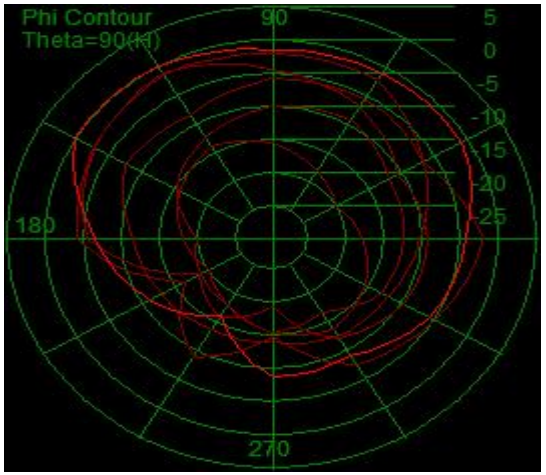
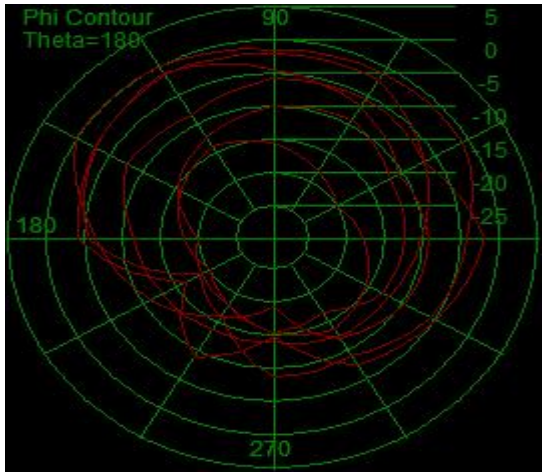
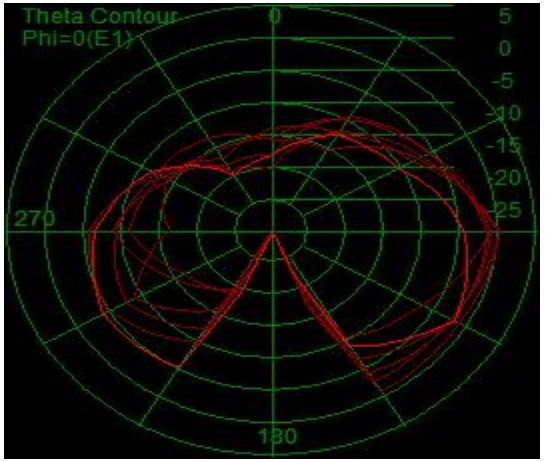
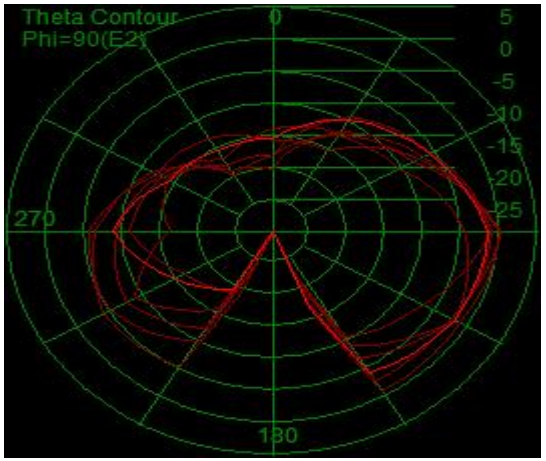
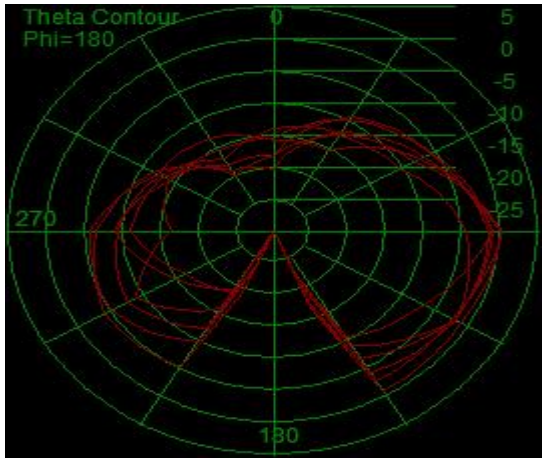










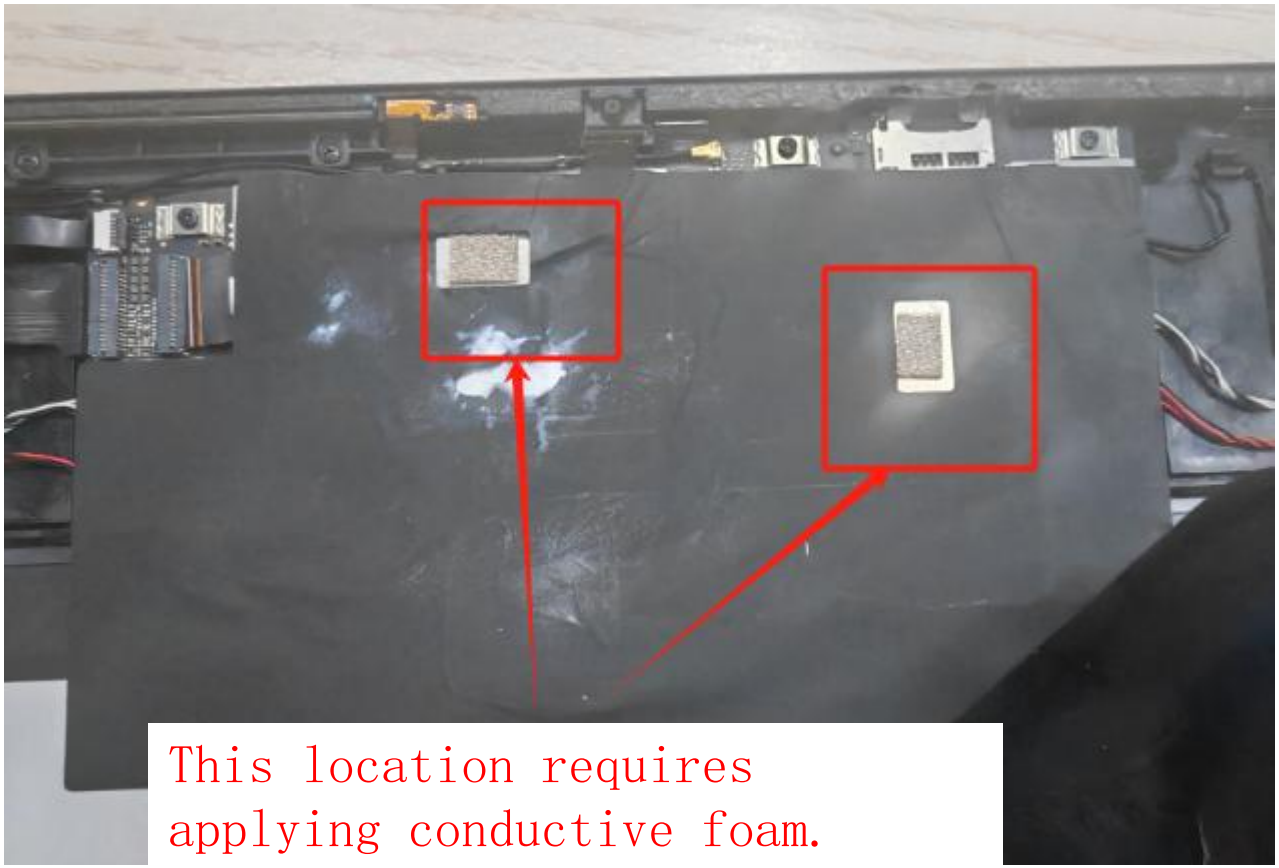


Antenna Active Parameters

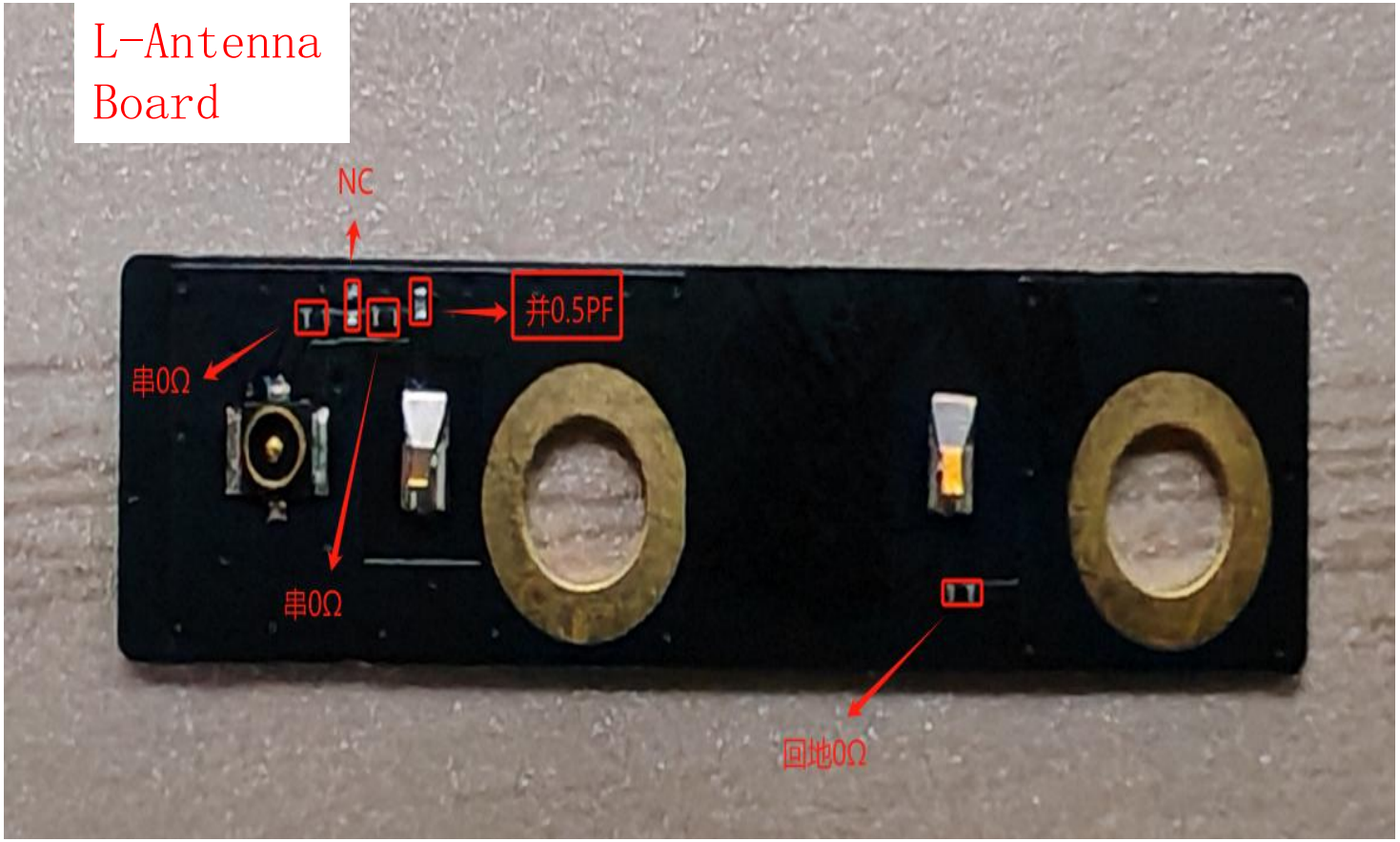
On Screen				
	802.11	channel number	TRP(db)	TIS(dbm)
WIFI	11B	CH1	11.13	
		CH6	11.65	
		CH11	11.63	-82.14
	11G	CH1	10.15	
		CH6	10.87	
		CH11	10.96	-67.13
	11N	CH1	10.51	
		CH6	10.72	
		CH11	10.82	-66.48
	11A	CH36	8.61	
		CH64	8.35	
		CH165	7.17	-67.81

Screen Off				
	802.11	channel number	TRP(db)	TIS(dbm)
WIFI	11B	CH1	11.27	
		CH6	11.54	
		CH11	11.65	-83.32
	11G	CH1	10.45	
		CH6	10.67	
		CH11	10.73	-67.88
	11N	CH1	10.12	
		CH6	10.73	
		CH11	10.79	-66.94
	11A	CH36	8.48	
		CH64	8.25	
		CH165	7.25	-68.14

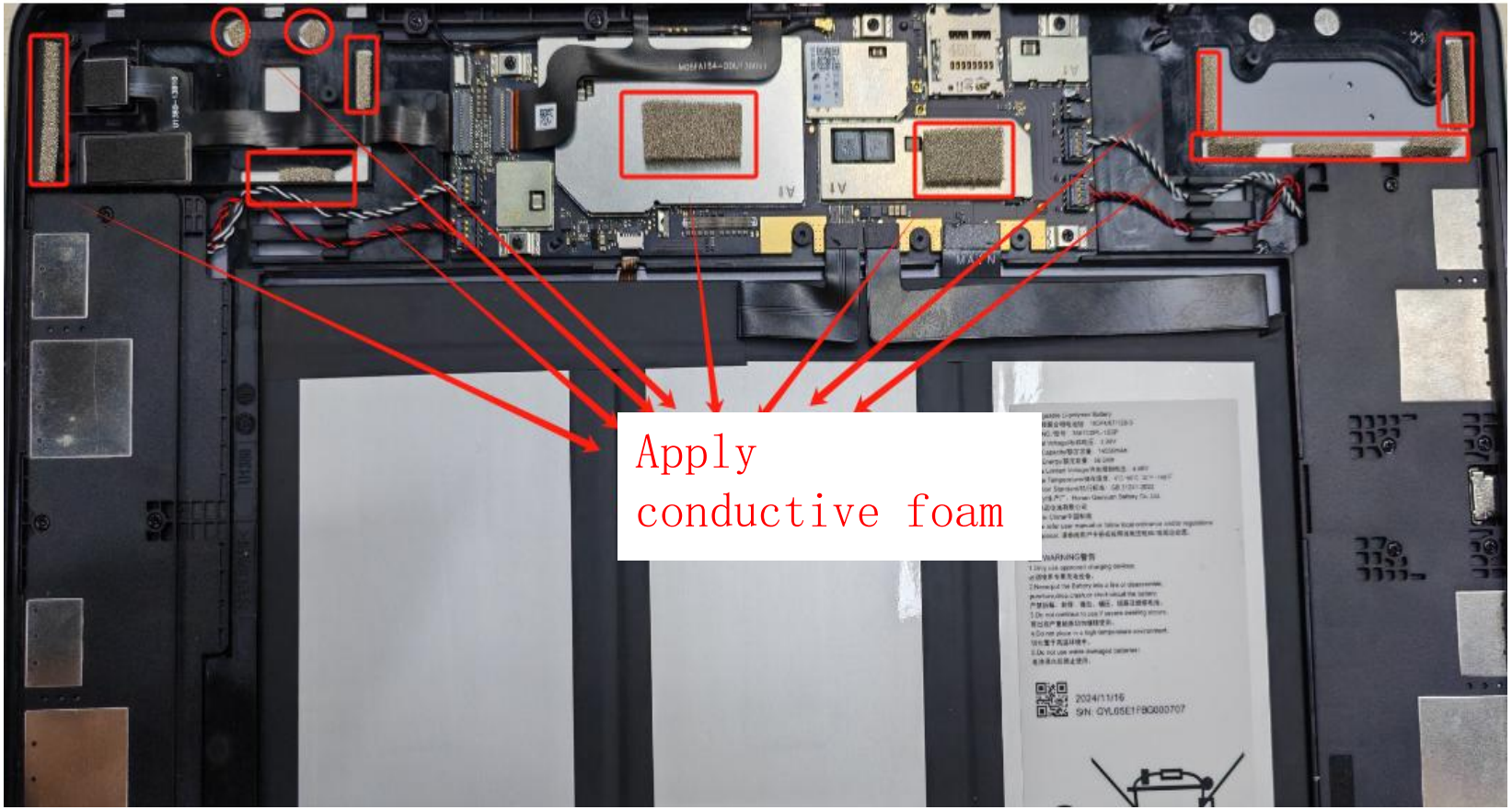
Antenna Environment Processing and Improvement



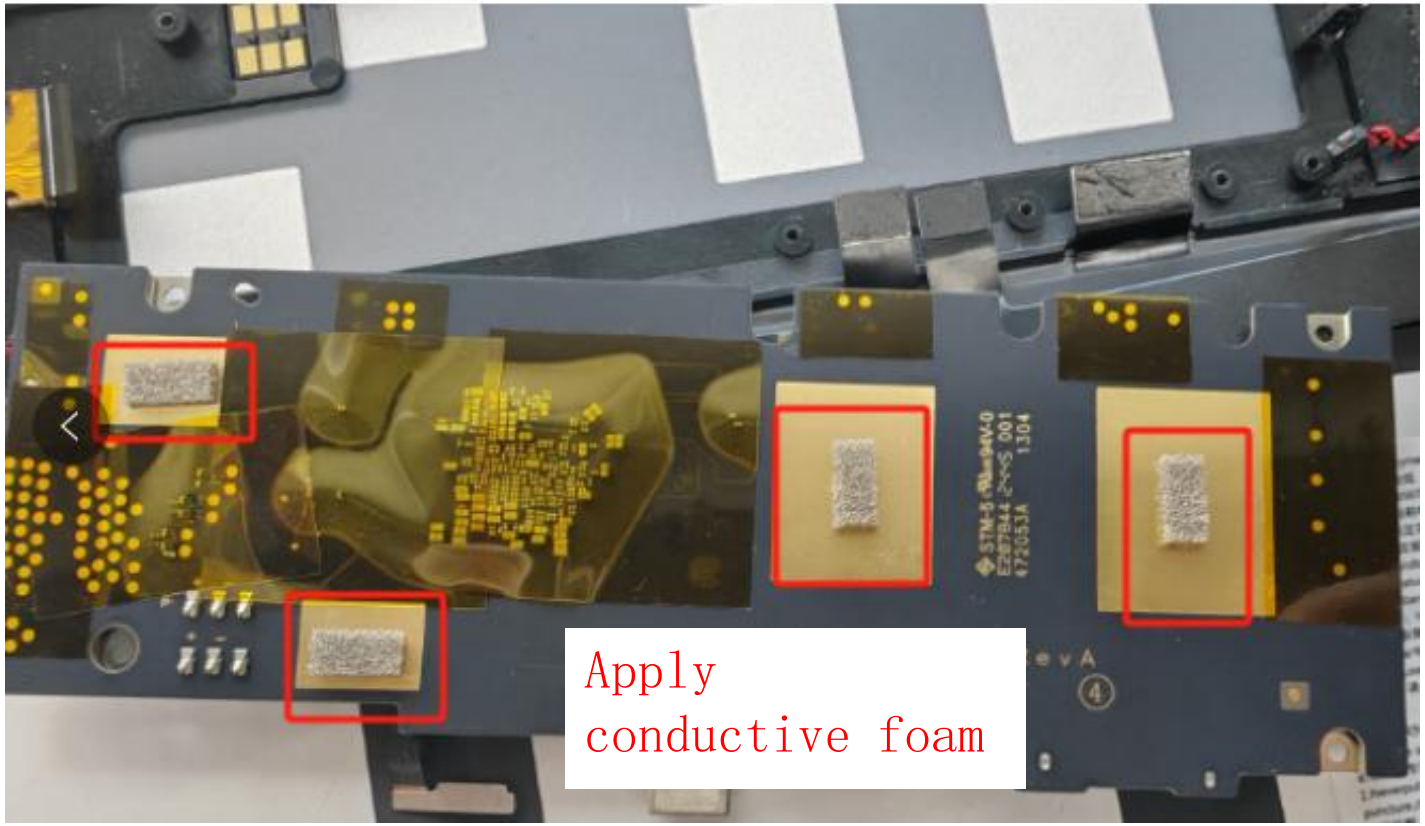
Antenna Matching Change



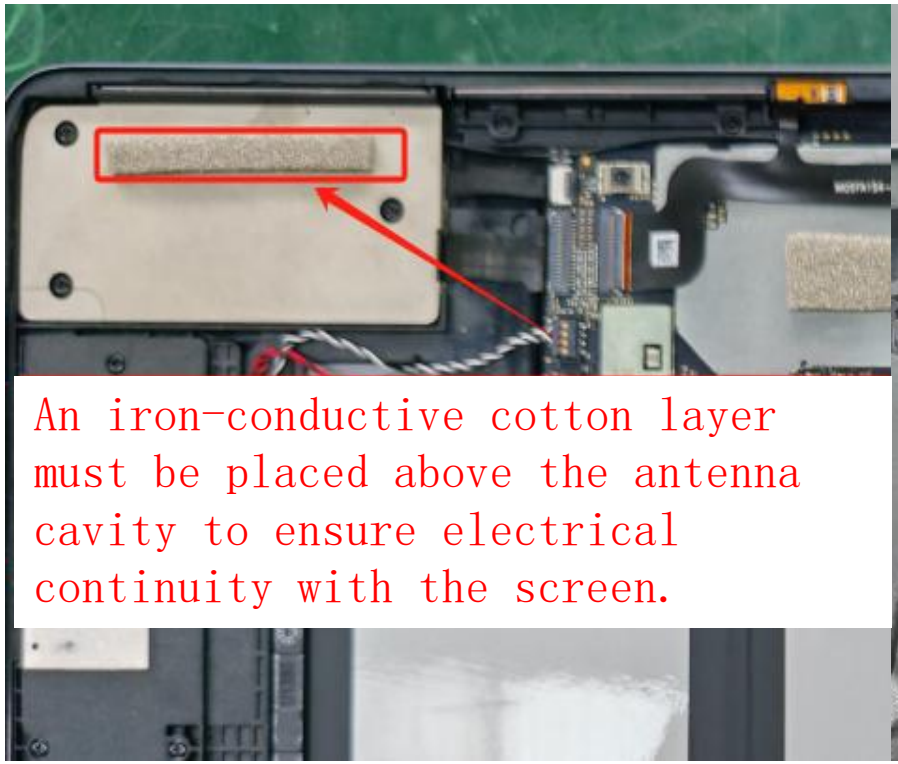
Antenna Environment Processing and Improvement



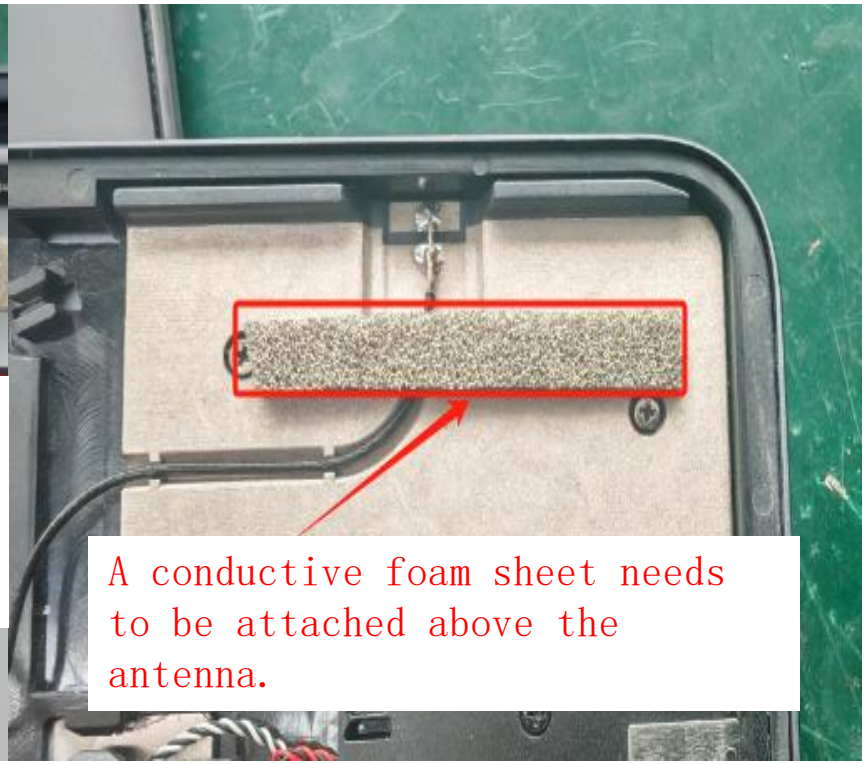
Antenna Environment Processing and Improvement



Antenna Environment Processing and Improvement

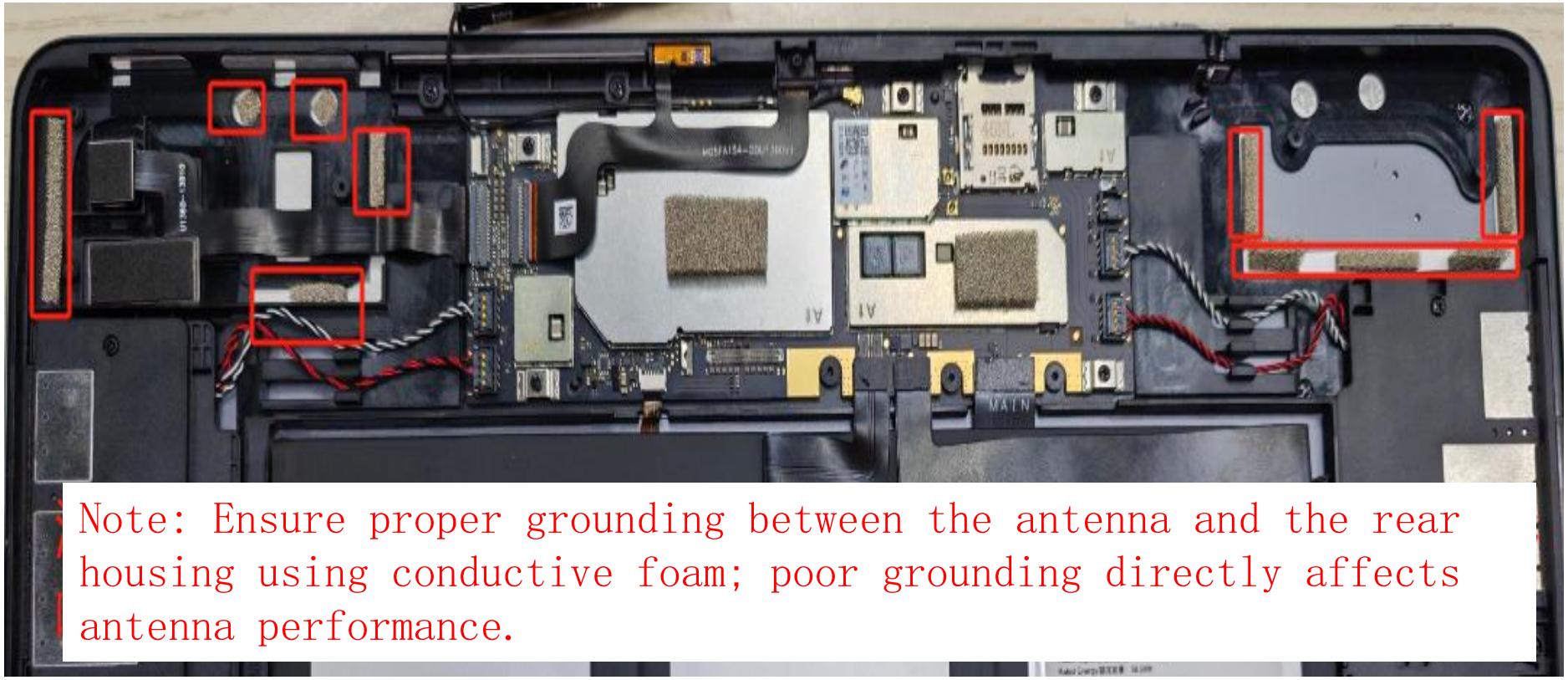


An iron-conductive cotton layer must be placed above the antenna cavity to ensure electrical continuity with the screen.



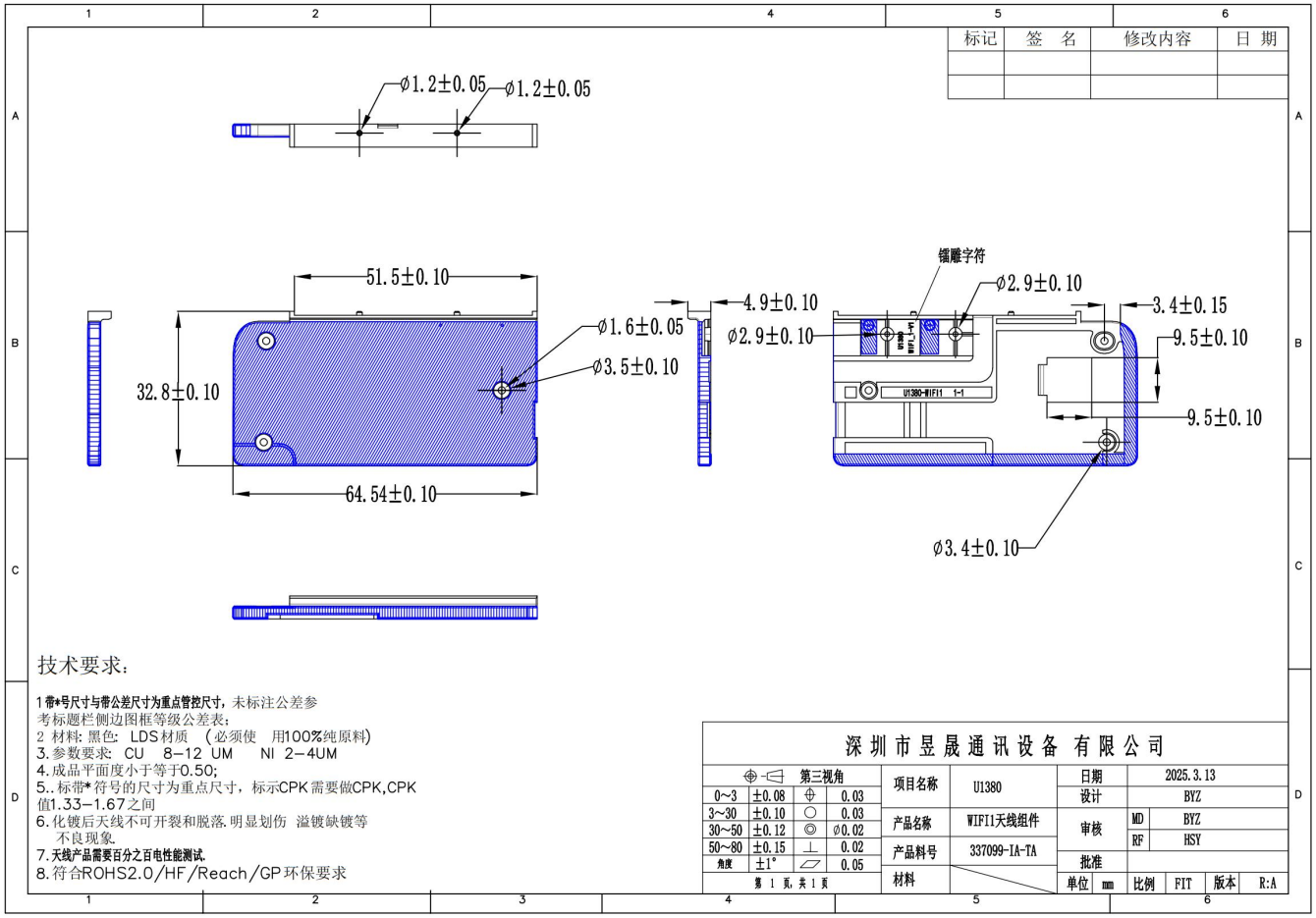
A conductive foam sheet needs to be attached above the antenna.

pay attention to :

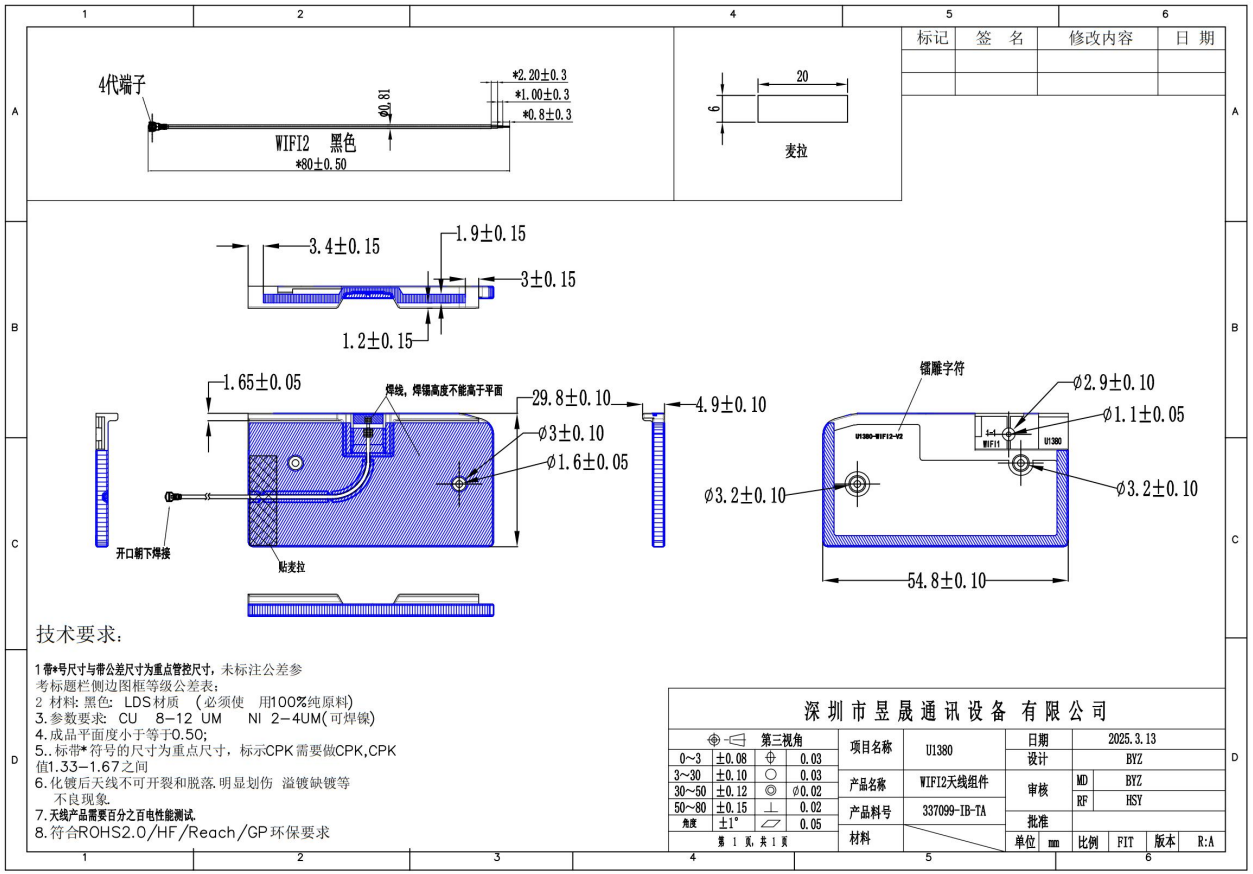


Note: Ensure proper grounding between the antenna and the rear housing using conductive foam; poor grounding directly affects antenna performance.

Antenna Drawing WIFI0



Antenna Drawing WIFI1



Thank you!

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