



深圳市昱晟通讯设备有限公司

Yusheng Communications-equipment Co.,LTD

MaiLan V999 Antenna Debug Report

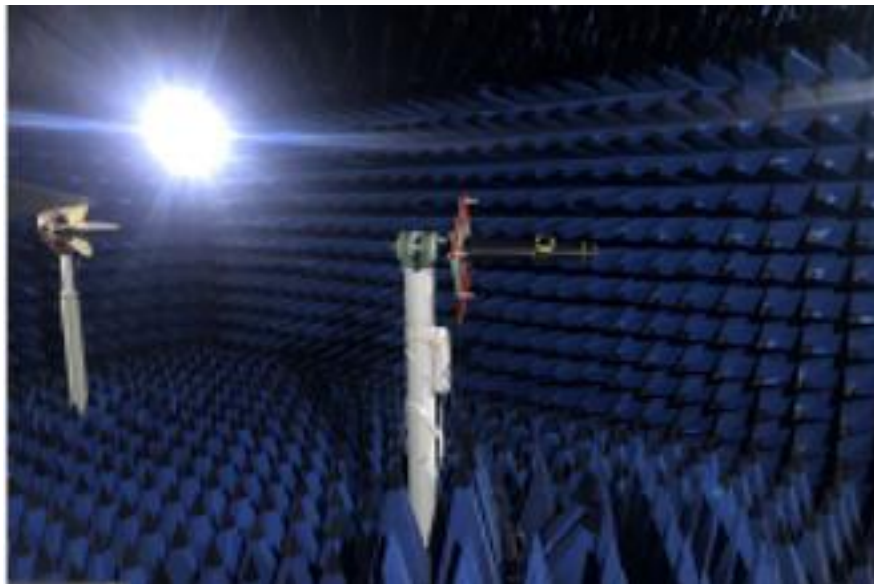
Radio frequency: He Shiying

Date: 2025-10-11

Tel: 13823351625

Project development environment

As we transition from the internet era to the intelligent age, the nation is building a digital society and smart cities. Over the next 5-10 years, both the consumer electronics market and the Internet of Things (IoT) market hold tremendous growth potential. The wireless communications sector is highly diversified. Looking ahead, Yusheng will leverage its core antenna business platform and comprehensive capabilities to deliver professional-grade product solutions with strong market competitiveness.



Yusheng Communications product portfolio covers nearly all antenna applications for wireless terminal devices, including automotive antennas, high-precision surveying and mapping antennas, UAV ground and satellite data navigation systems, high-precision positioning antennas, wireless transmission for medical equipment, consumer-grade antennas (mobile phone, tablet, and laptop antennas), base station and indoor distribution antennas, smart wearable antennas (smartwatches, TWS earbuds), home security antennas, as well as antennas for various wireless data transmission and control-enabled smart devices.



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explain

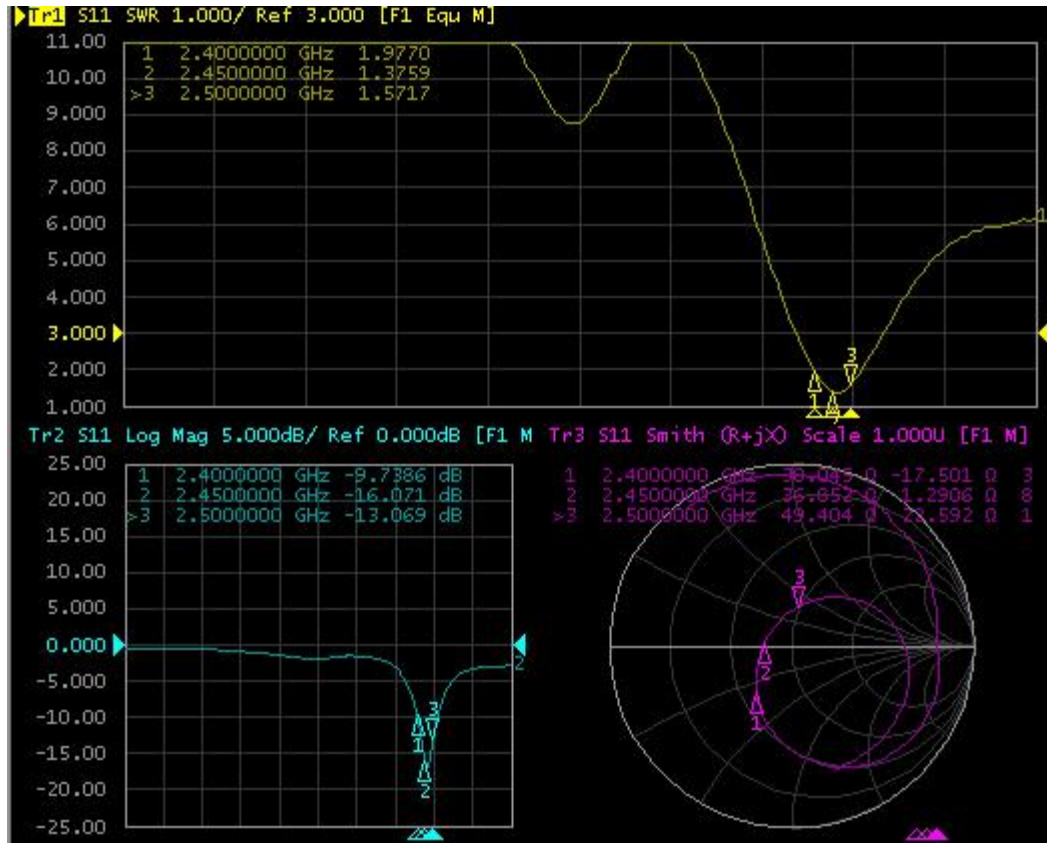
**Project Debugging
Introduction**

type	wrist strap		
Band and antenna material	BT	frequency range	material quality
		2400MHZ-2500MHZ	Metal Frame
performance requirement	Execute as requested by the customer		

Report Version Outline

Report Version	Report time	The problem solved by the antenna development
V0.1	2025-8-28	Antenna Debug Report
V0.2	2025-10-11	Antenna Debugging and Optimization Report

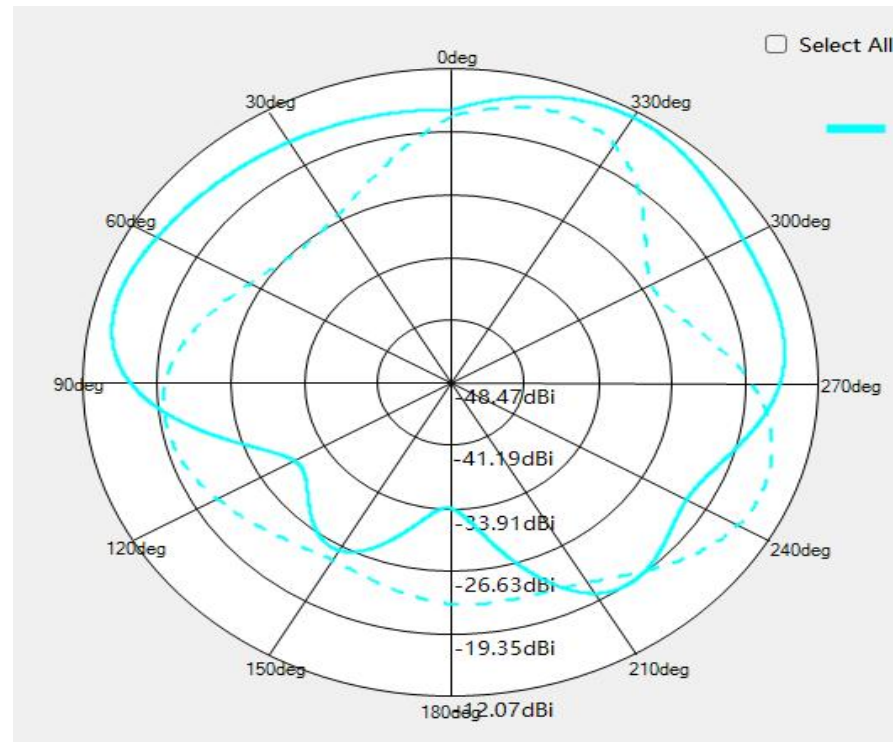
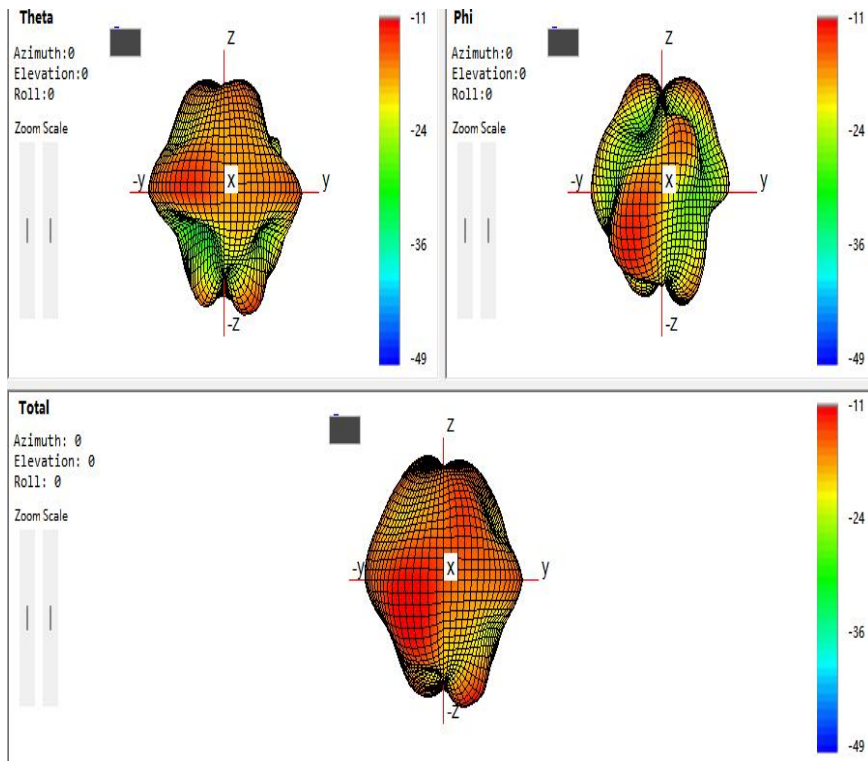
Antenna passive parameters



Antenna Passive Data-Arm

Freq (MHz)	Effi (%)	Gain (dBi)
2400	2.42	-10.55
2420	2.31	-10.96
2440	3.34	-10.47
2450	3.47	-11.21
2460	2.46	-11.13
2480	2.48	-10.6

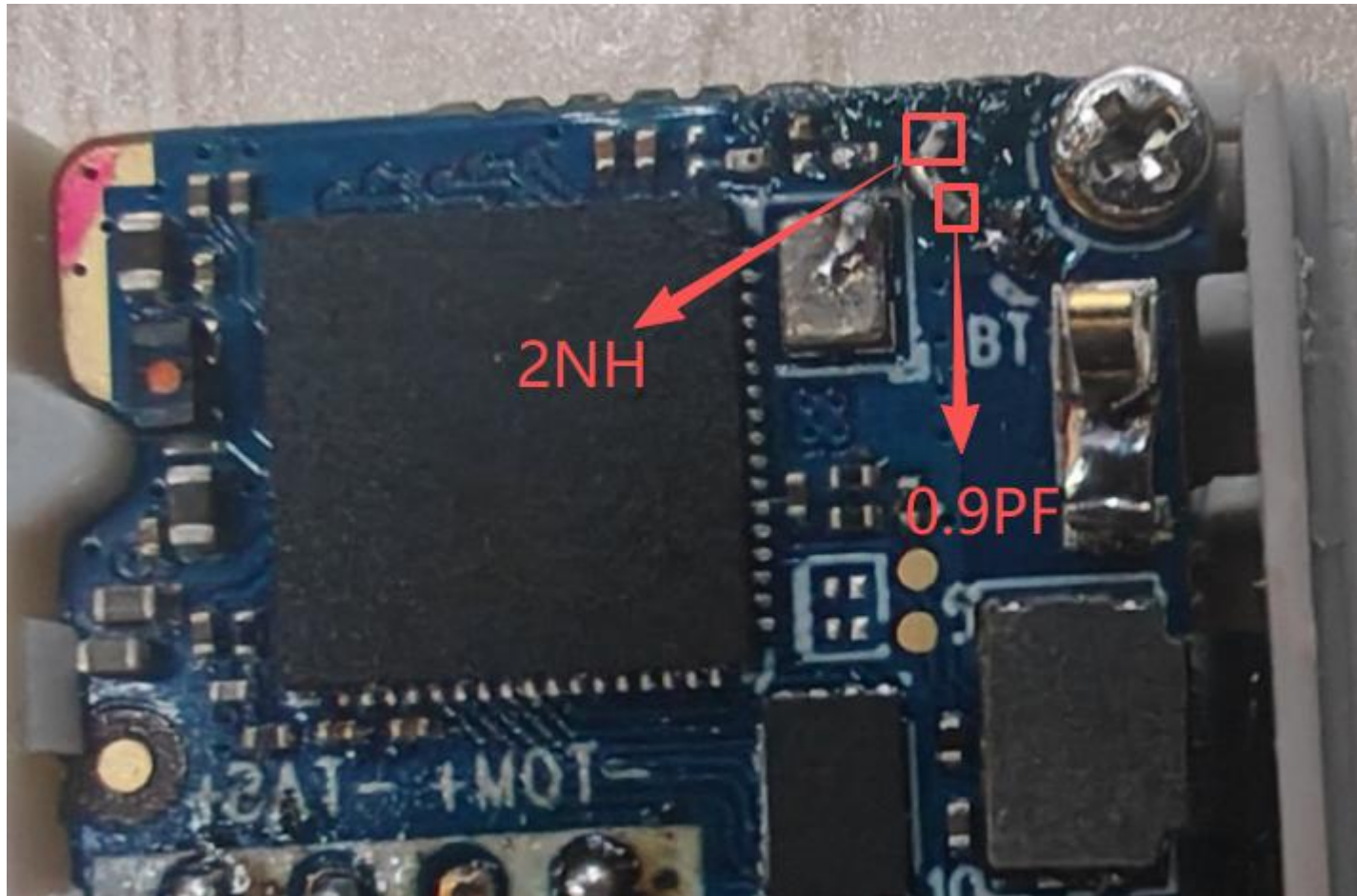
BT Apple Chart/Direction Chart—Arm



The motherboard transmits data

channel	TRP
0	4.92
19	5.02
39	5.08

antenna loading
coil





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Entire device
antenna





Summary& Additional Notes

In-room measurement: Apple 14
Search distance: 5m, connection distance: 14m
Disconnect and reconnect 4m
Field test: Apple 14
Search distance: 4m, connection distance: 12m
Disconnect and reconnect 2m

In-room measurement: Apple 12
Search distance: 4m, connection distance: 14m
Reconnect after disconnecting 11m
Field test: Apple 12
Search distance: 3m, connection distance: 13m
Disconnect and reconnect 10m

In-room test: Honor 100 Pro
Search distance: 16m, actual connection distance: 18m
Disconnect and reconnect 15m
Outdoor measurement: Honor 100por
Search distance: 15m, connection distance: 16m
Reconnect after disconnecting 13m

In-room measurement: IQ00U3
Search distance: 16m, actual connection distance: 17m
Reconnect after disconnecting 14m
Outdoor measurement: IQ00U3
Search distance: 15m, actual connection distance: 16m
Reconnect after disconnecting 13m

Thank you!



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