Antenna report TEMPLATE_V02

20220902/Zheng Chong

Appendix - Version index

Date	version	Report name	Content description	Remarks
0817	V01	Dashine-1351 High step handle	Antenna test report	
0902	V02	Dashine-1351 High step handle	Antenna test report	

Outline

- Test environment
- Antenna configuration and measurement techniques
- Test data
- Extended experiment and optimization
- Summarize

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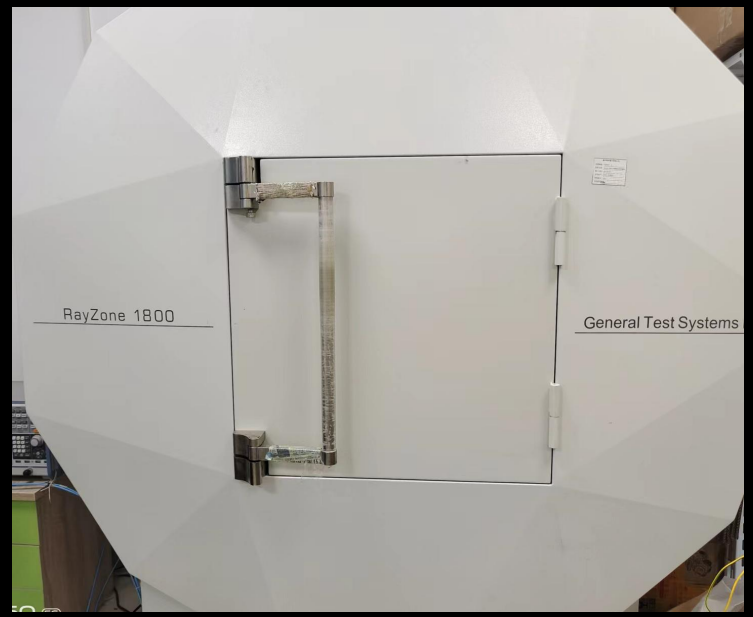
Measurement Setup

CHAMBER

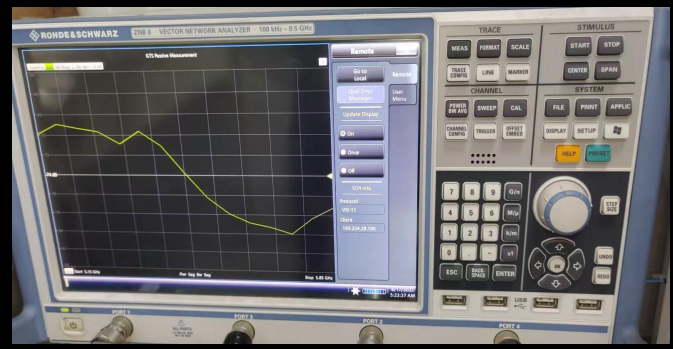
- GTS-1800 Microwave darkroom

Instrument

- R&S ZNB8 Vector network analyzer



GTS1800



R&S ZNB8 Vector network analyzer

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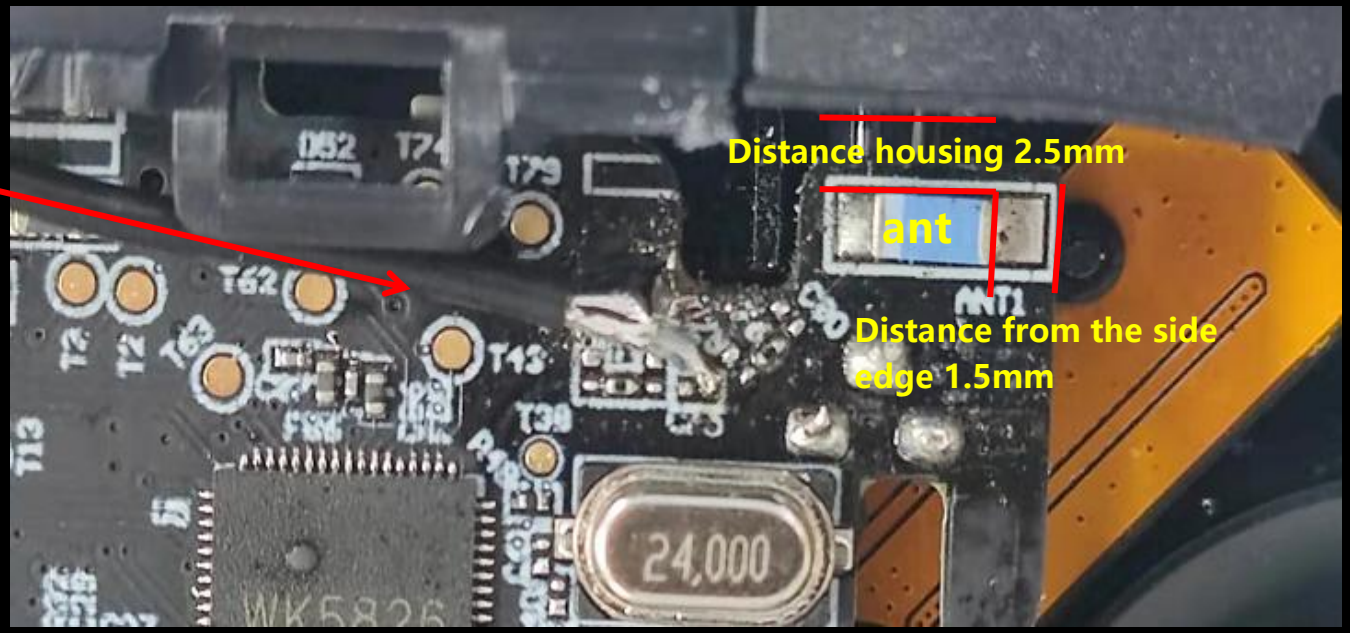
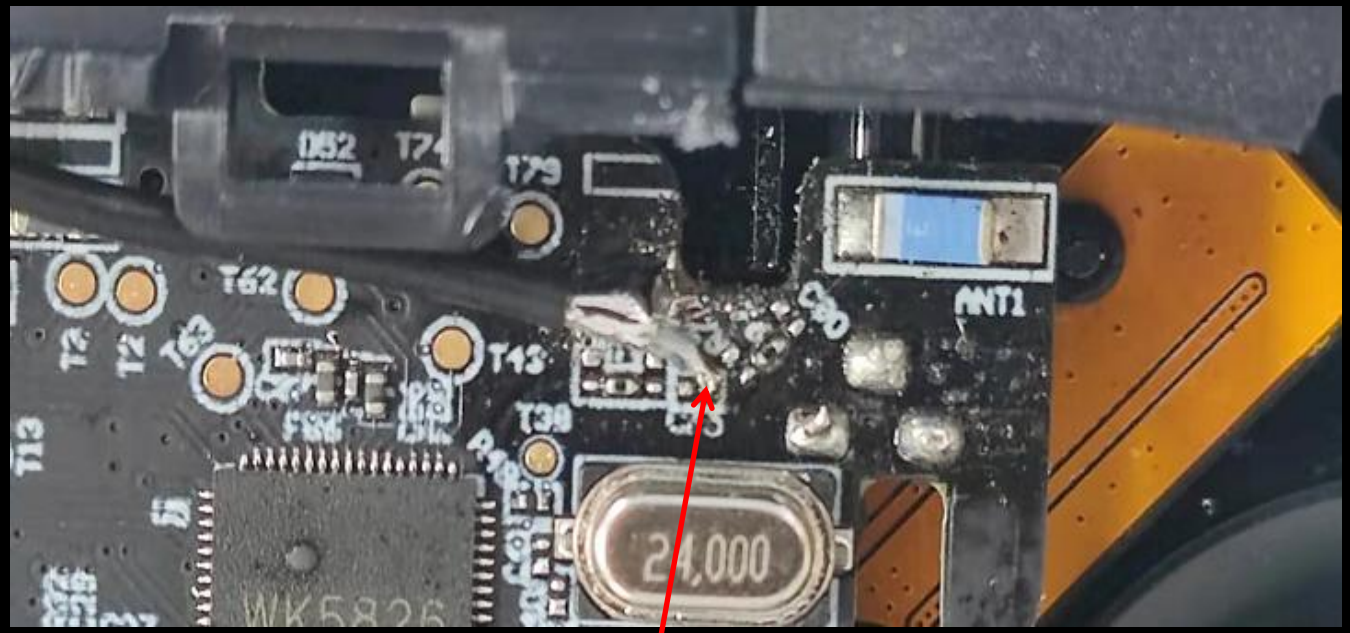
ID/ME/Fix

Antenna Location



Fixture Cable Routing

Cable routing



Feed in point

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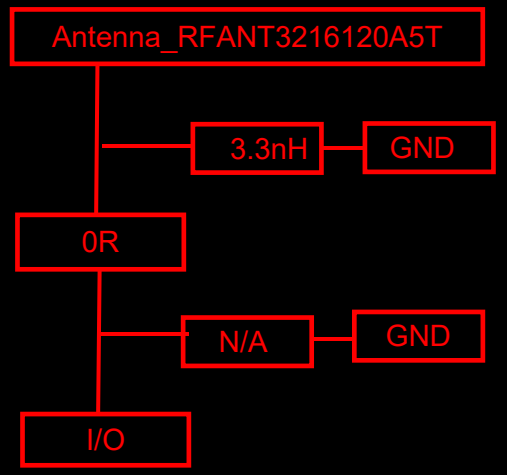
Matching Circuits

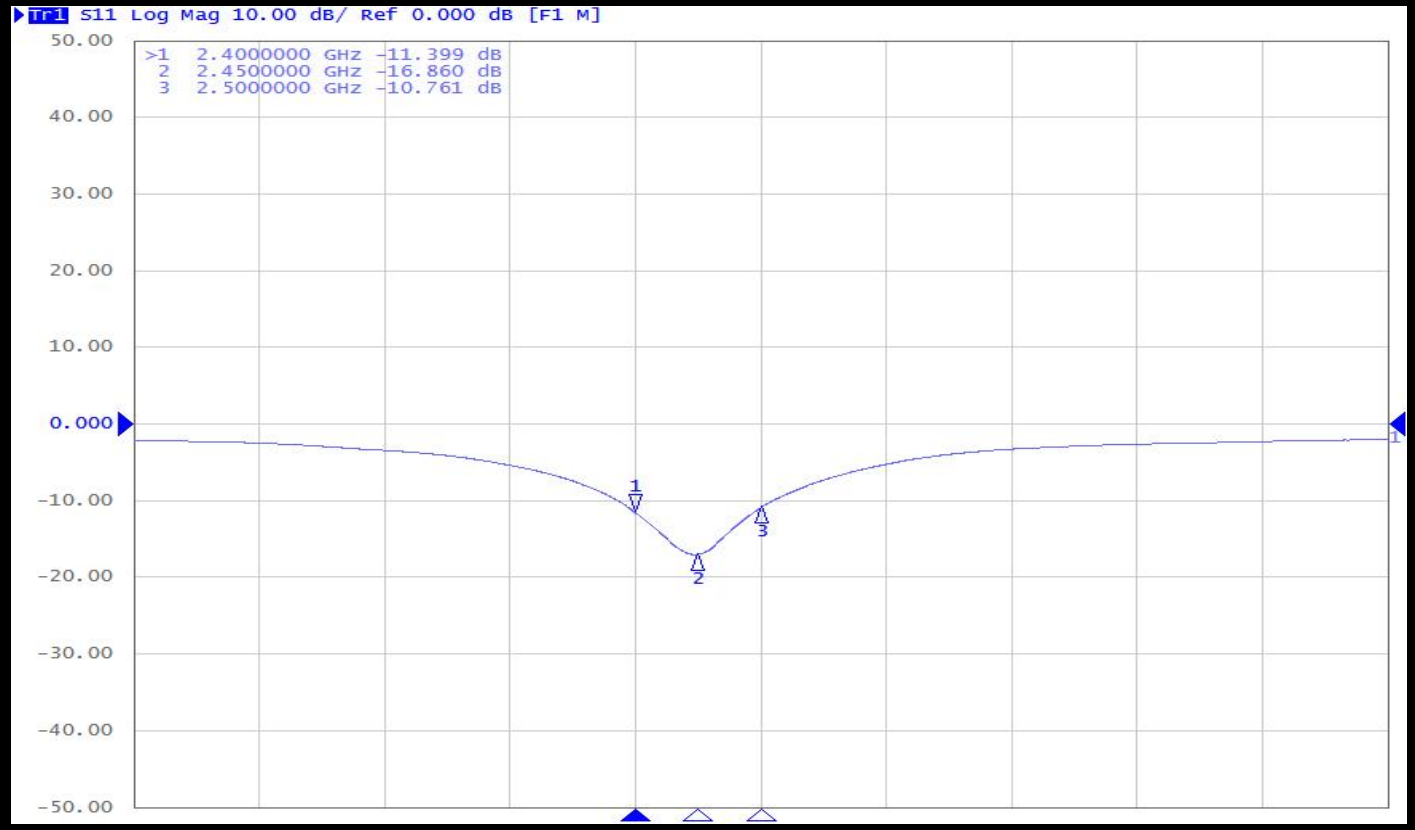


Test Case & DUT Position

- **Test conclusion**

Return Loss

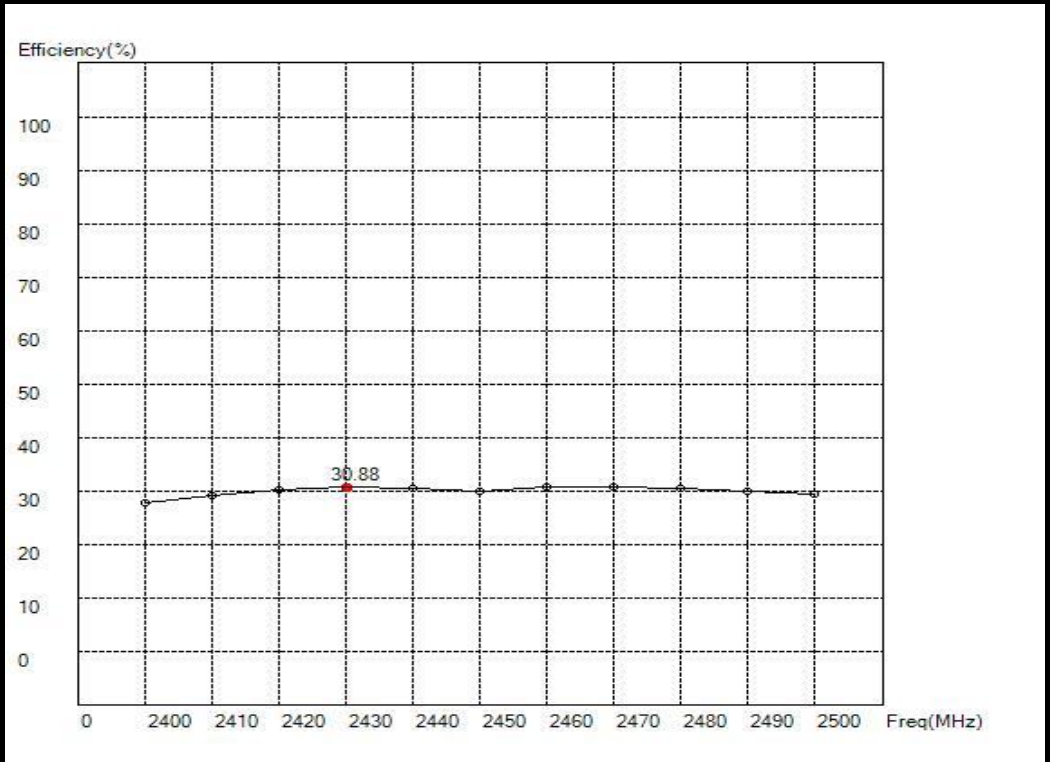
- **Test conclusion**



DUT Return loss Data graph

Passive Efficiency

- **Test conclusion**



DUT passive efficiency Line chart

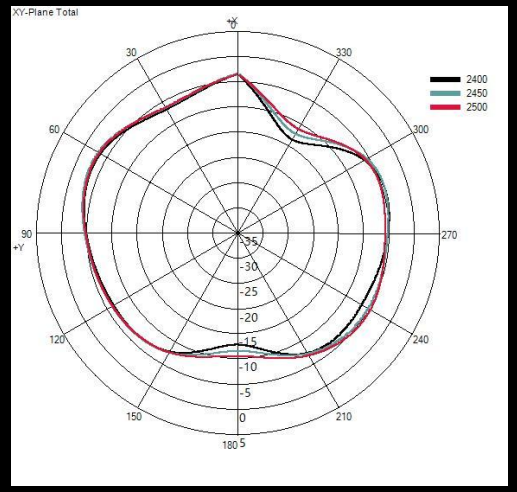
Freq(MHz)	Efficiency(%)
2400	27.75
2410	29.05
2420	30.16
2430	30.88
2440	30.65
2450	30.12
2460	30.73
2470	30.84
2480	30.47
2490	30.00
2500	29.52

DUT passive efficiency table

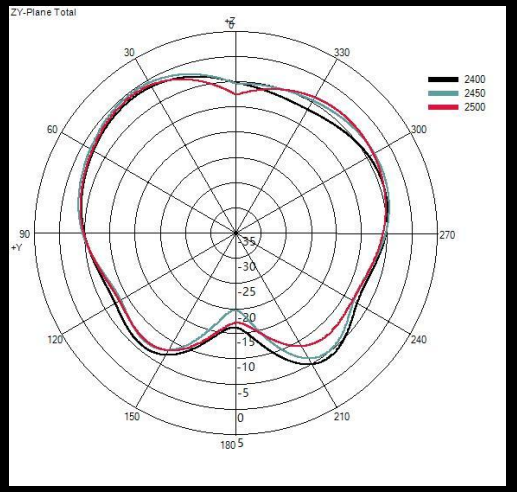
2D/3D Gain Pattern

Radiation Pattern @ 2450 MHz (unit: dBi)

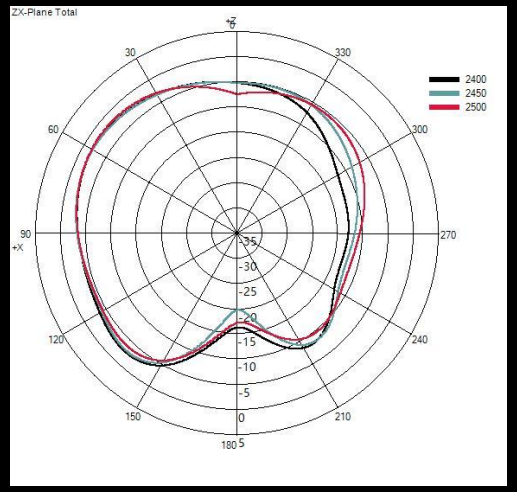
2D



XY

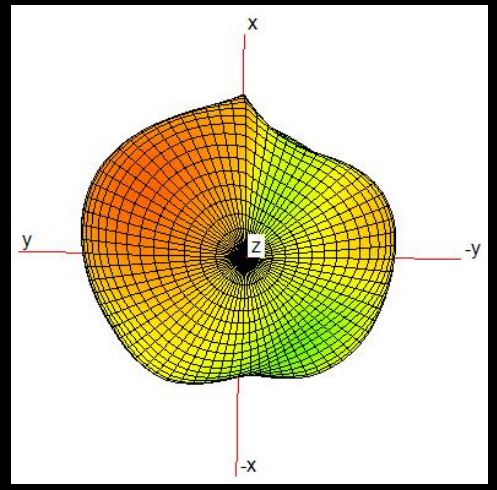


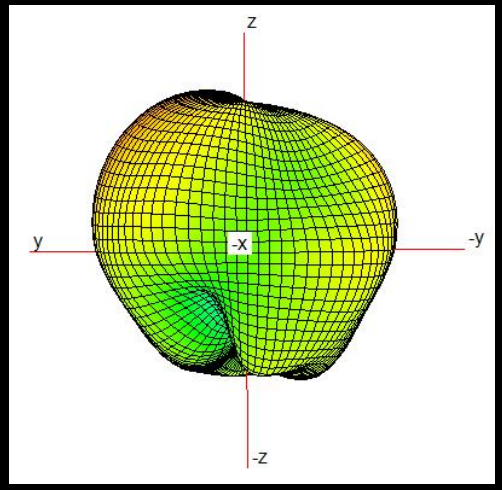
YZ

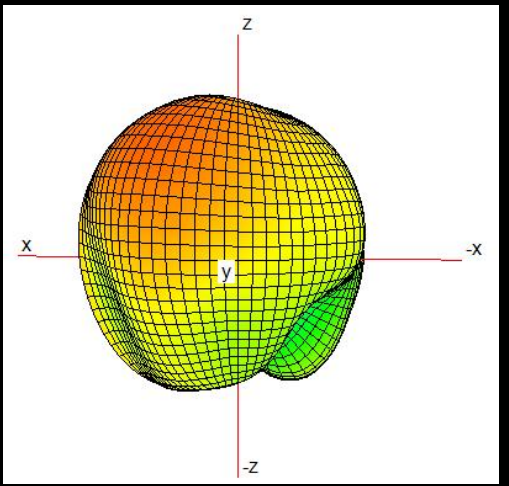


XZ

3D







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Experiment(example)

Experiment 2: With Hand

Simulate a grip scenario

Conclusion: The blue line is the original state, and the red line is the hand-held state. Hand-held has no effect on S11

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Summary

- **Conclusion:**

ANT			
Frequency (MHz)	2400	2450	2500
Efficiency (%)	27.75	30.12	29.52
Peak gain (dBi)	-0.26	0.68	0.34