

868-915MHz Antenna Test Report



Project	Thermostat1
Antenna Revision	A0
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Date:	2026.01.31

Purpose

This report is to measure the performance of 868-915MHz antenna for Thermostat1. The antenna operating frequency at 868-915MHz, All test data are showed as below.

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2. Test system
3. Antenna Matching Network
4. Test Result
 - 4.1 S11 Parameter
 - 4.2 Gain & Efficiency
 - 4.3 2D&3D Pattern
5. Conclusion

1. Product Overview & Dimension

Front

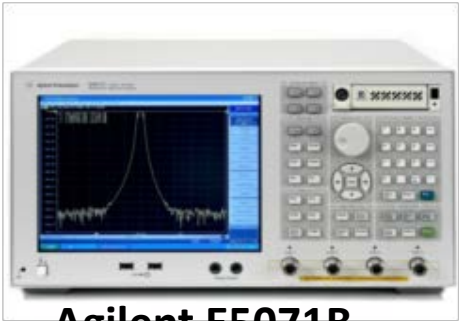


Antenna

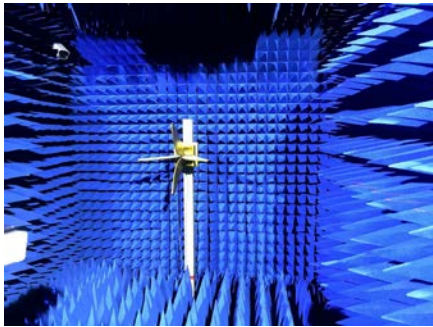


2.Test System

Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent E5071B & Agilent E5071B
OTA Test	TRP&TIS	Agilent 8960 & CMW500 Feitu Microwave anechoic chamber
Gain & Efficiency	Gain & Efficiency	Feitu Microwave anechoic chamber Agilent E5071B



Agilent E5071B



飞图微波暗室

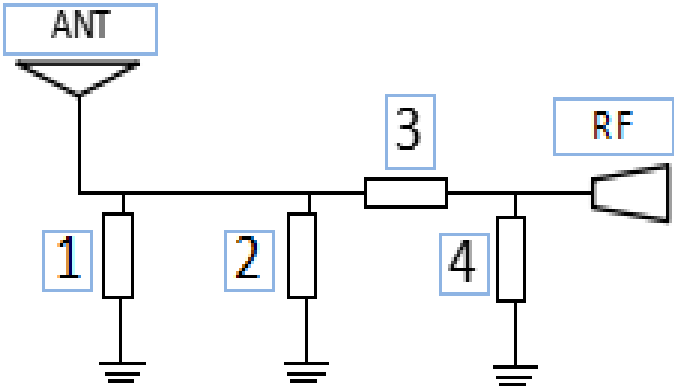


Agilent 8960



CMW 500

3. Antenna Matching Network

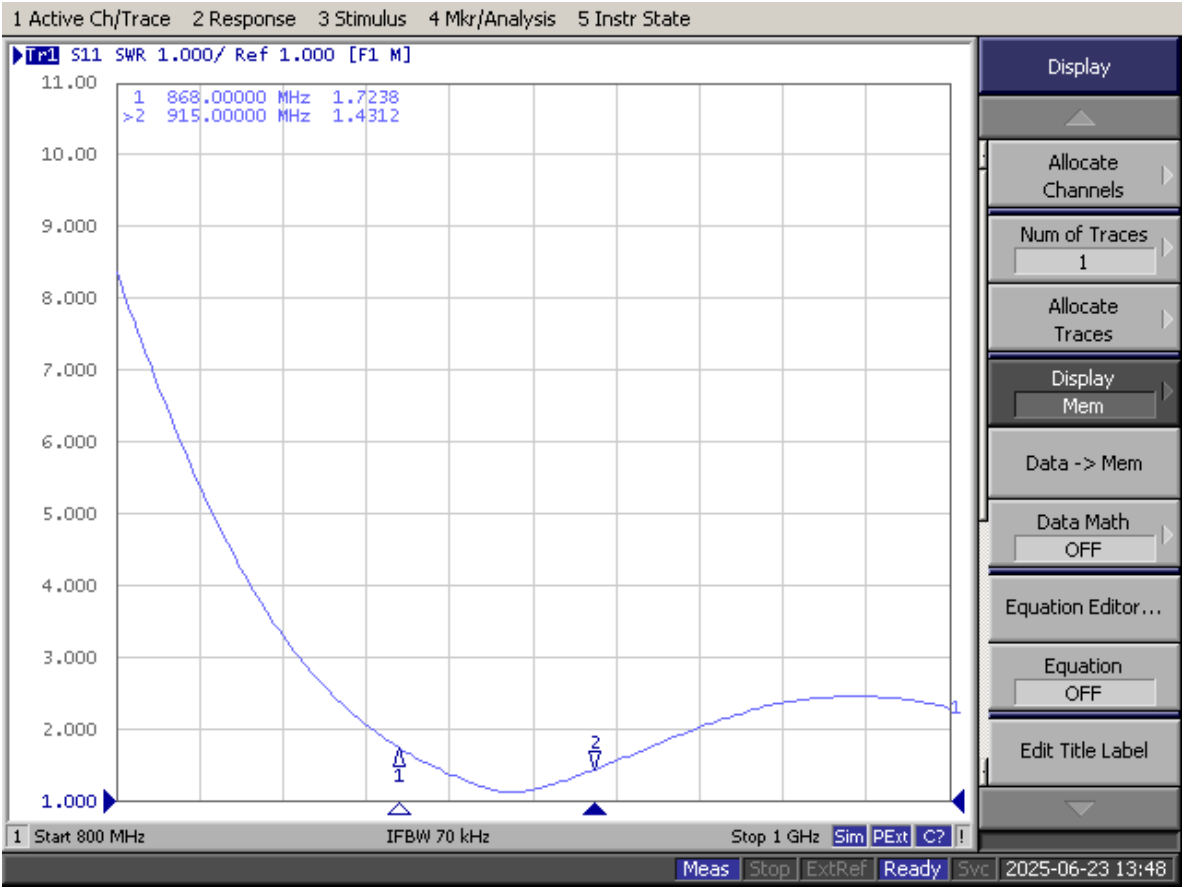


Element	Capacitor	Inductor	Electric resistance
1	N/A	N/A	N/A
2	N/A	N/A	N/A
3	N/A	N/A	N/A
4	N/A	N/A	N/A

The matching circuit at the PCB board end has not been modified

4. Test Result

4.1 S11 Parameter-VSWR



Frequency(MHz)	824	960
VSWR	1.72	1.43

4. Test Result

4.2 Gain & Efficiency

Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
860	4.14	-13.83
862	4.00	-13.97
864	3.89	-14.11
866	4.55	-14.22
868	3.74	-14.27
870	3.77	-14.24
902	6.58	-11.82
904	7.07	-11.51

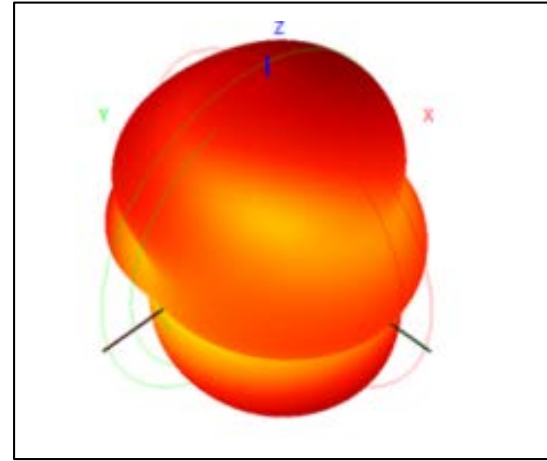
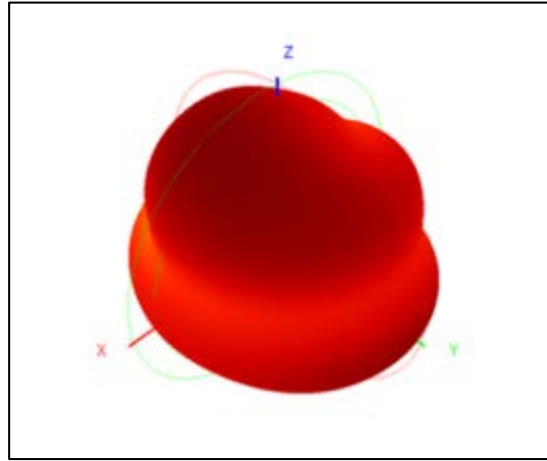
Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
906	7.70	-11.14
908	8.48	-10.71
910	9.39	-10.27
912	10.28	-9.88
914	11.00	-9.59
916	11.55	-9.38
918	12.03	-9.20
920	12.60	-9.00

4. Test Result

4.3 2D&3D Pattern

868MHz

3D

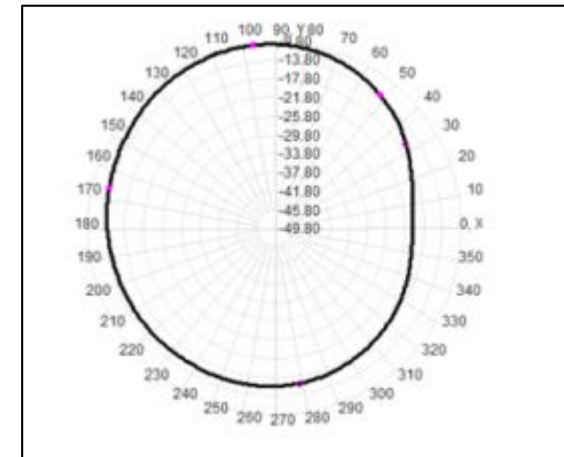
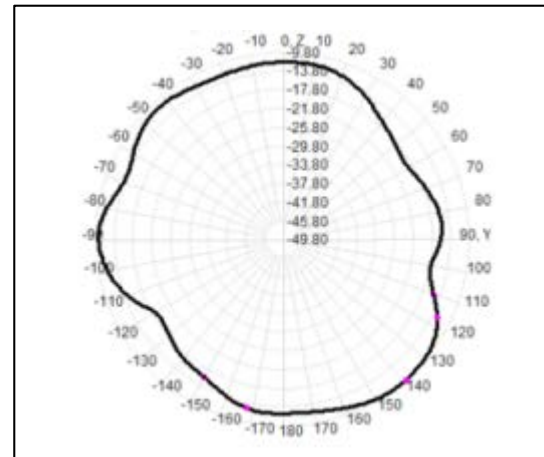
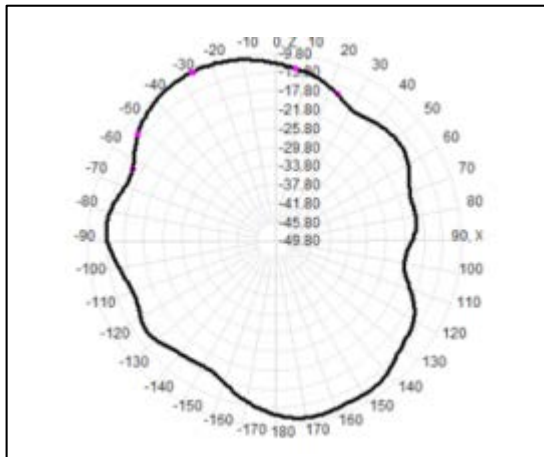


E1=XZ

E2=YZ

H=XY

2D

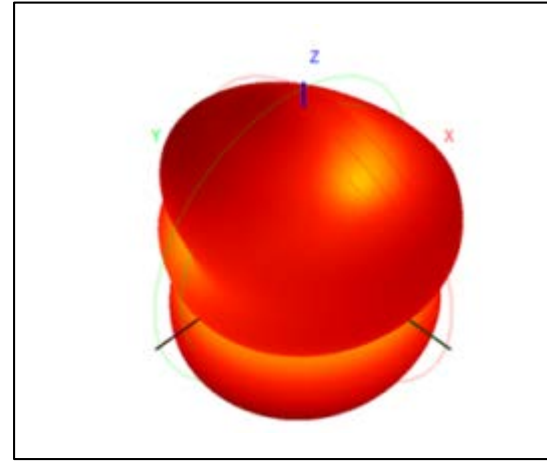
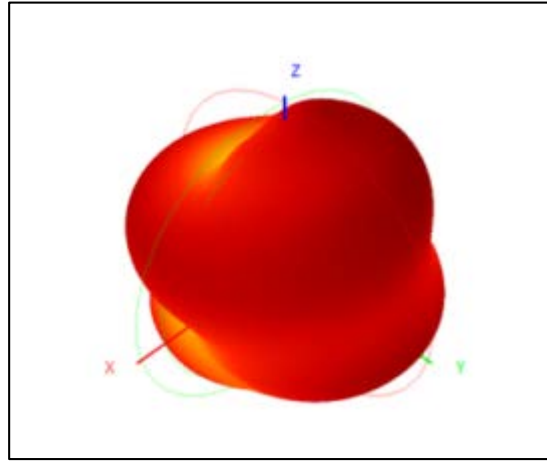


4. Test Result

4.3 2D&3D Pattern

915MHz

3D

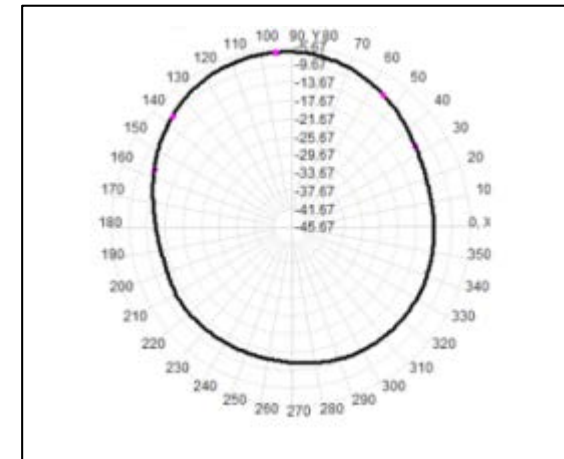
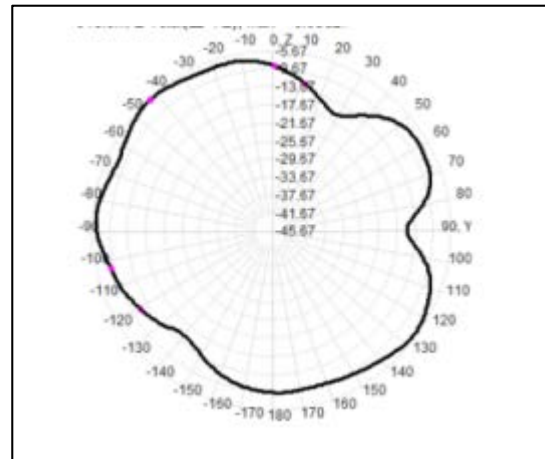
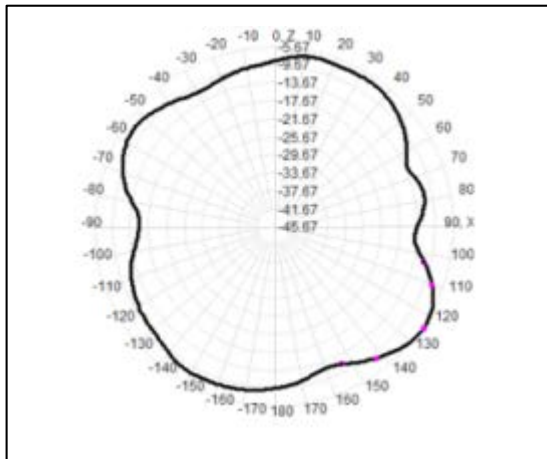


E1=XZ

E2=YZ

H=XY

2D



5. *Conclusion*

From the perspective of our active testing, the current performance is satisfactory. We would appreciate it if your team could promptly inform us of any other matters that may require attention

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