

PATPET-PS01-A-Transmitting-receiving-antenna debugging report

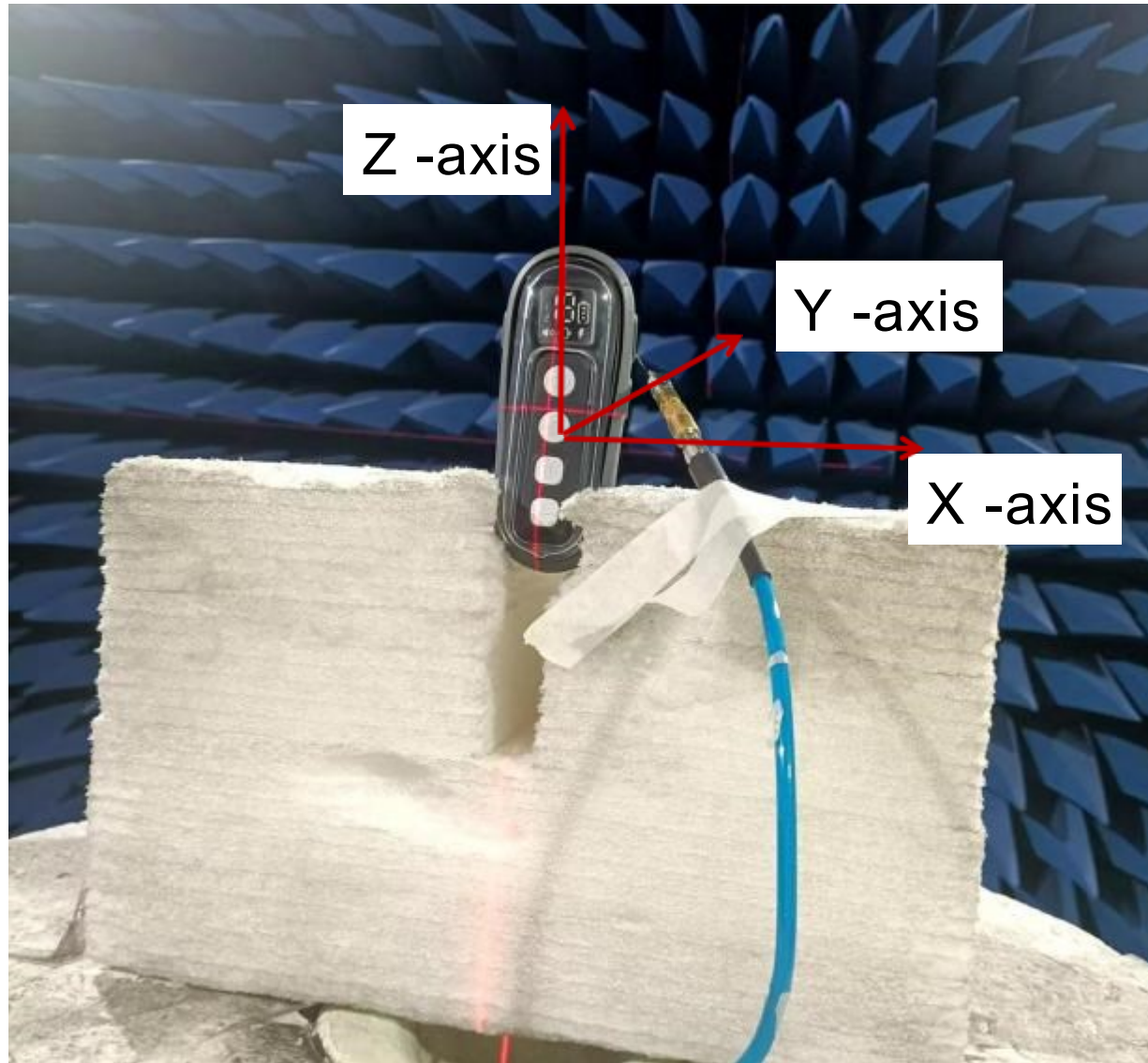
contents

- ☐ Project Requirements Analysis
- ☐ Passive debugging data

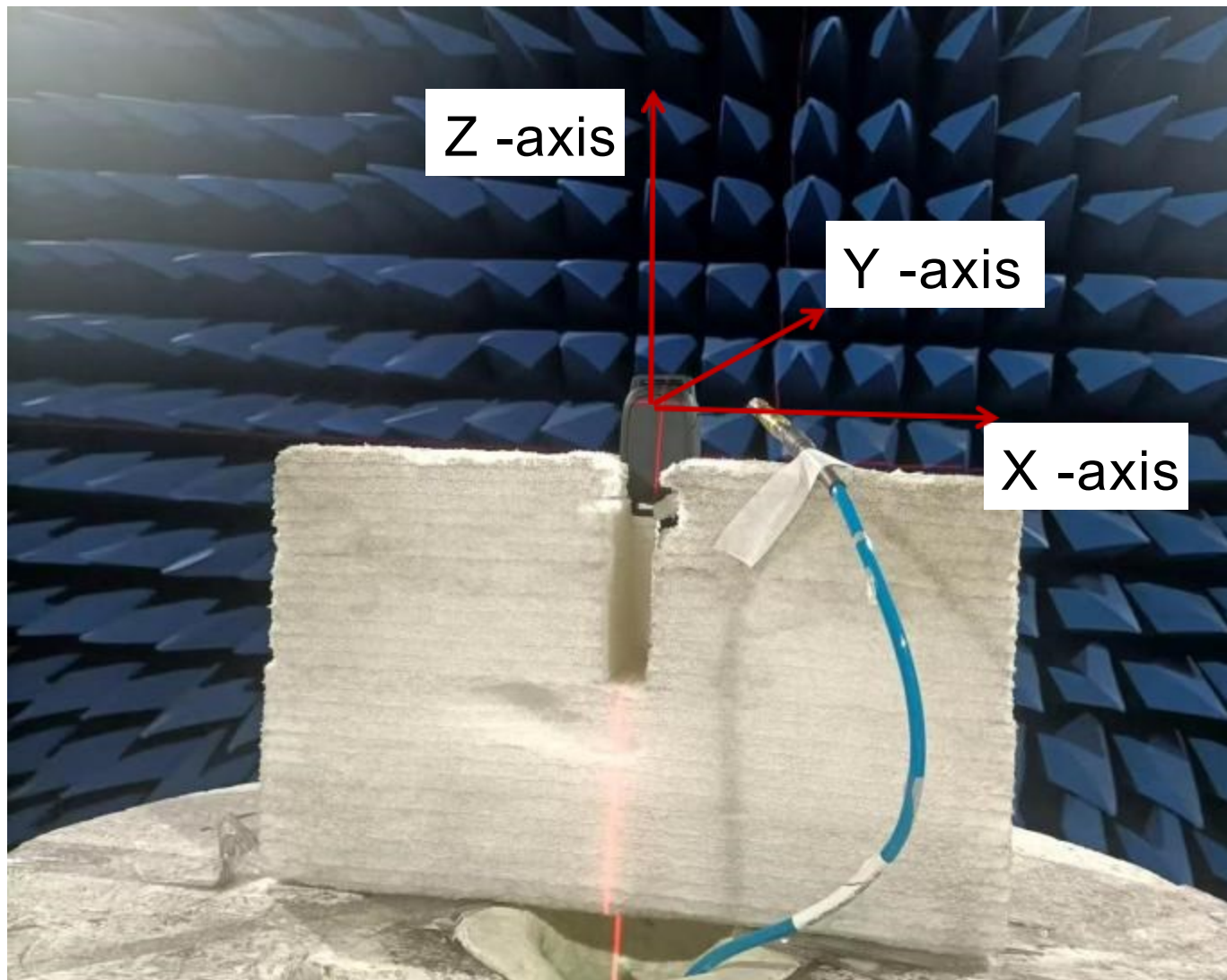
Project requirements

- ☐ Passive data
- ☐ S11, Efficiency, gain, directional diagram, 3D diagram

Test of transmitting antenna in darkroom ZTX 中天迅



Test of receiving antenna in darkroom

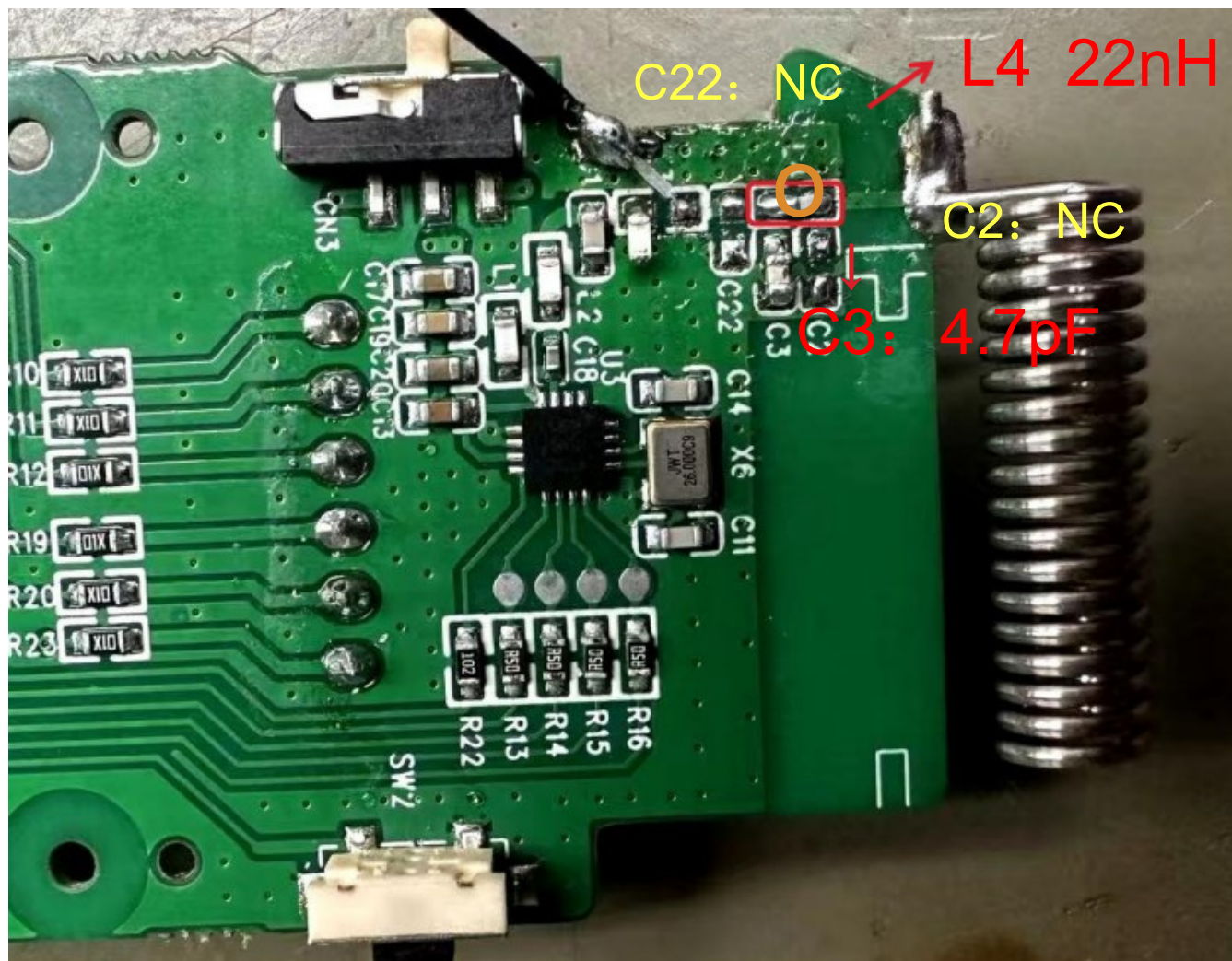


Installation position of spring antenna at the transmitting end

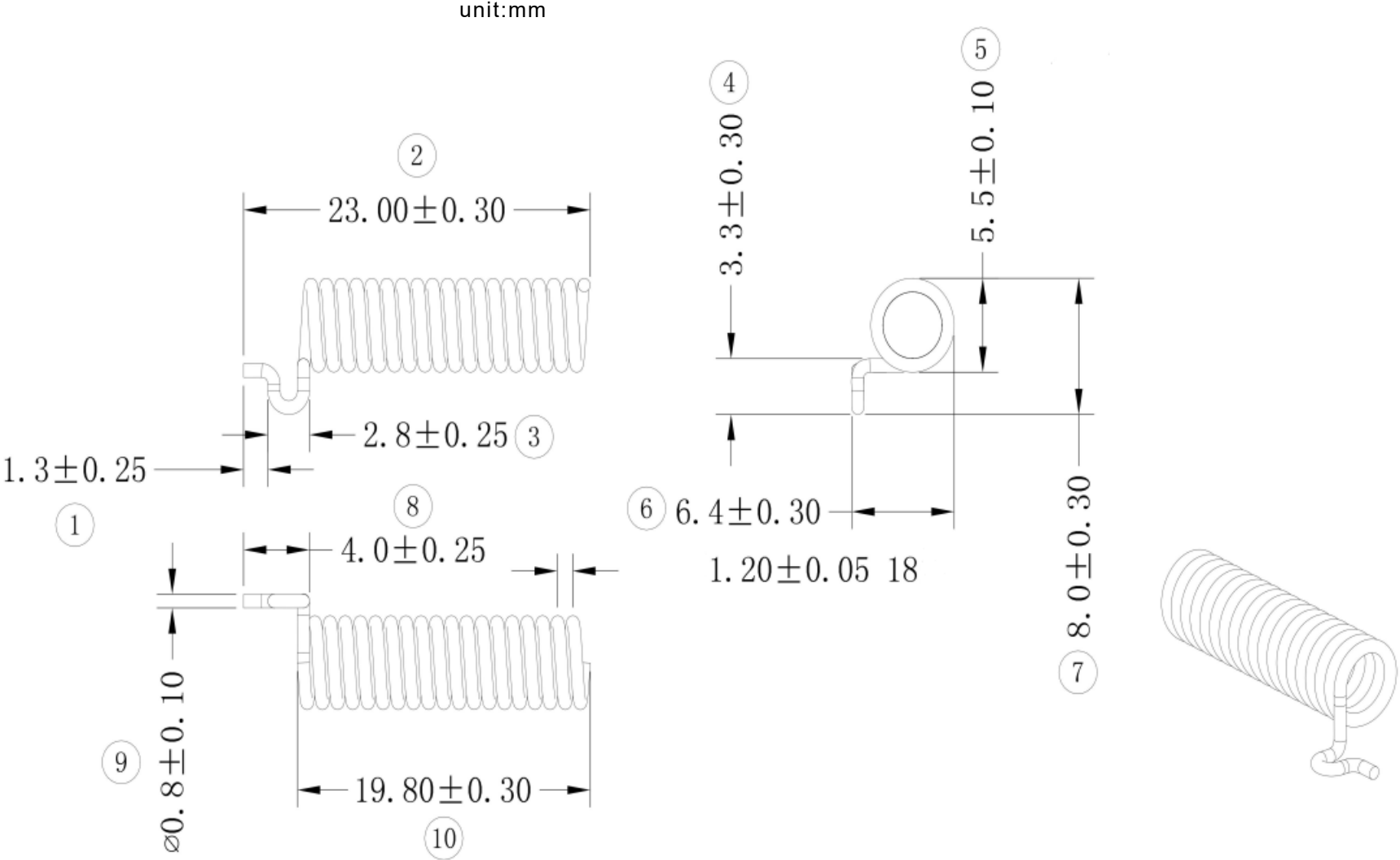


Spring Antenna

Schematic diagram of spring antenna matching at the transmitting end

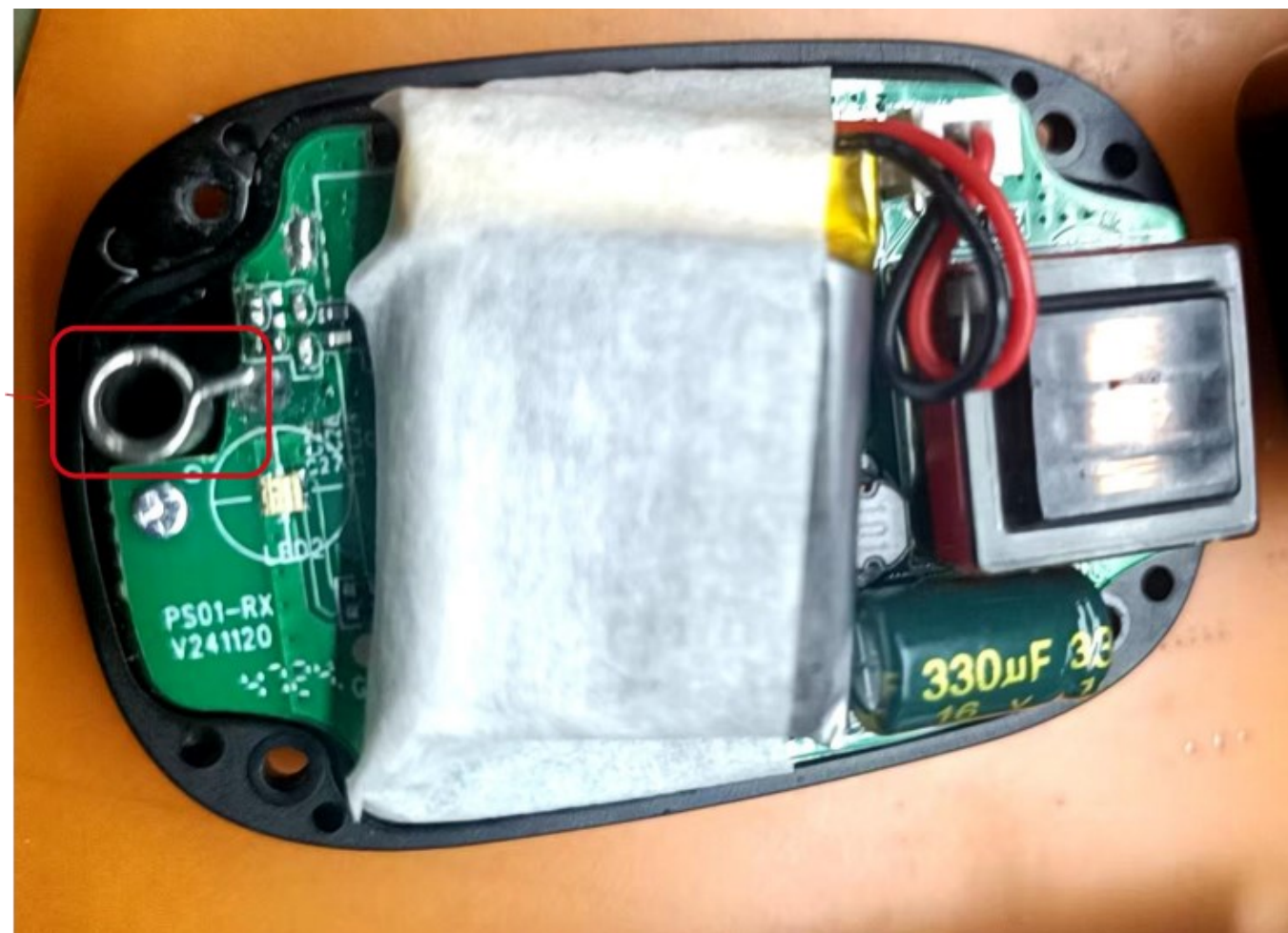


Transmitter antenna size diagram



Installation position of spring antenna at the receiving end

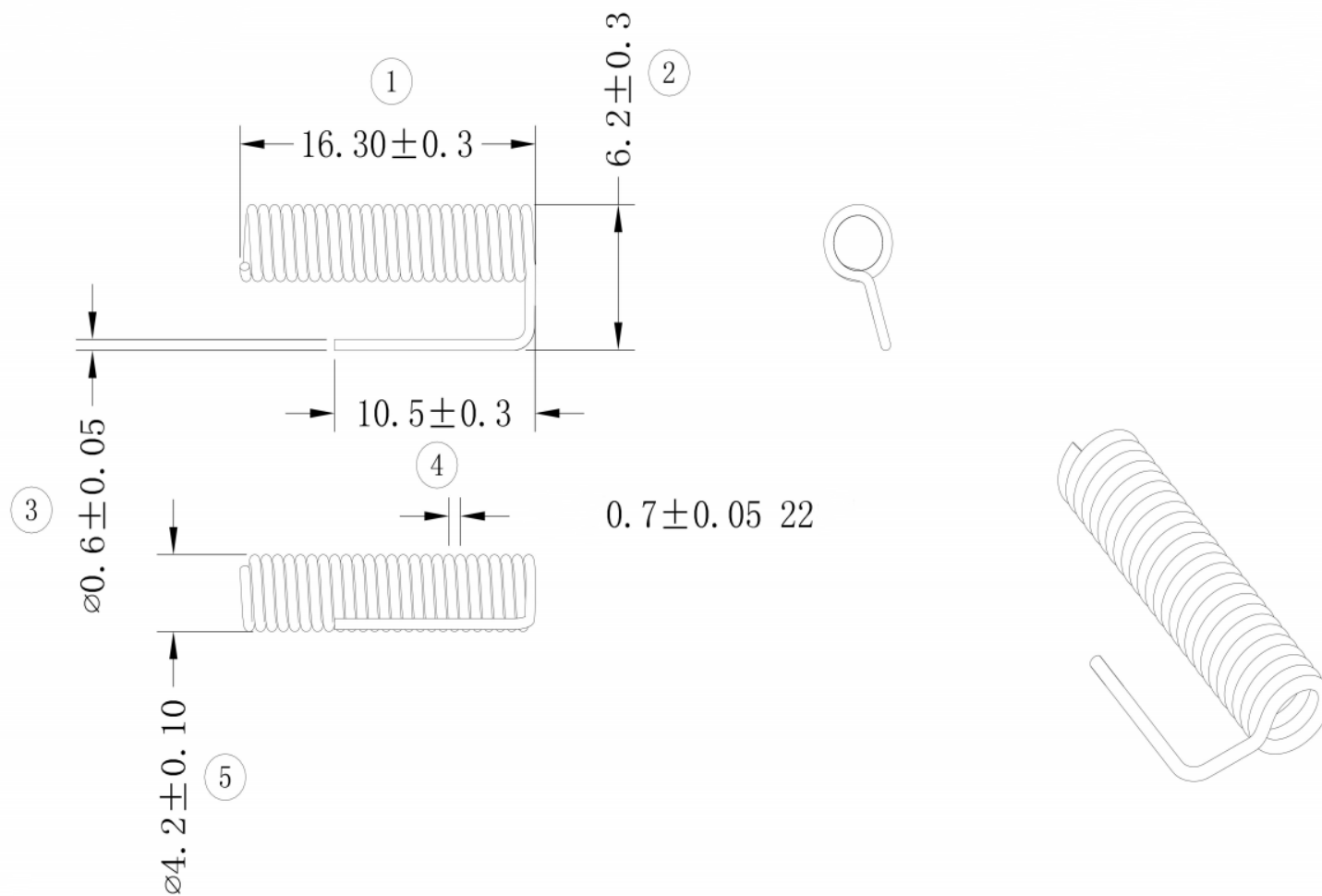
Place the antenna vertically to the bottom and weld it.
Pay attention to keeping the antenna away from the matching end



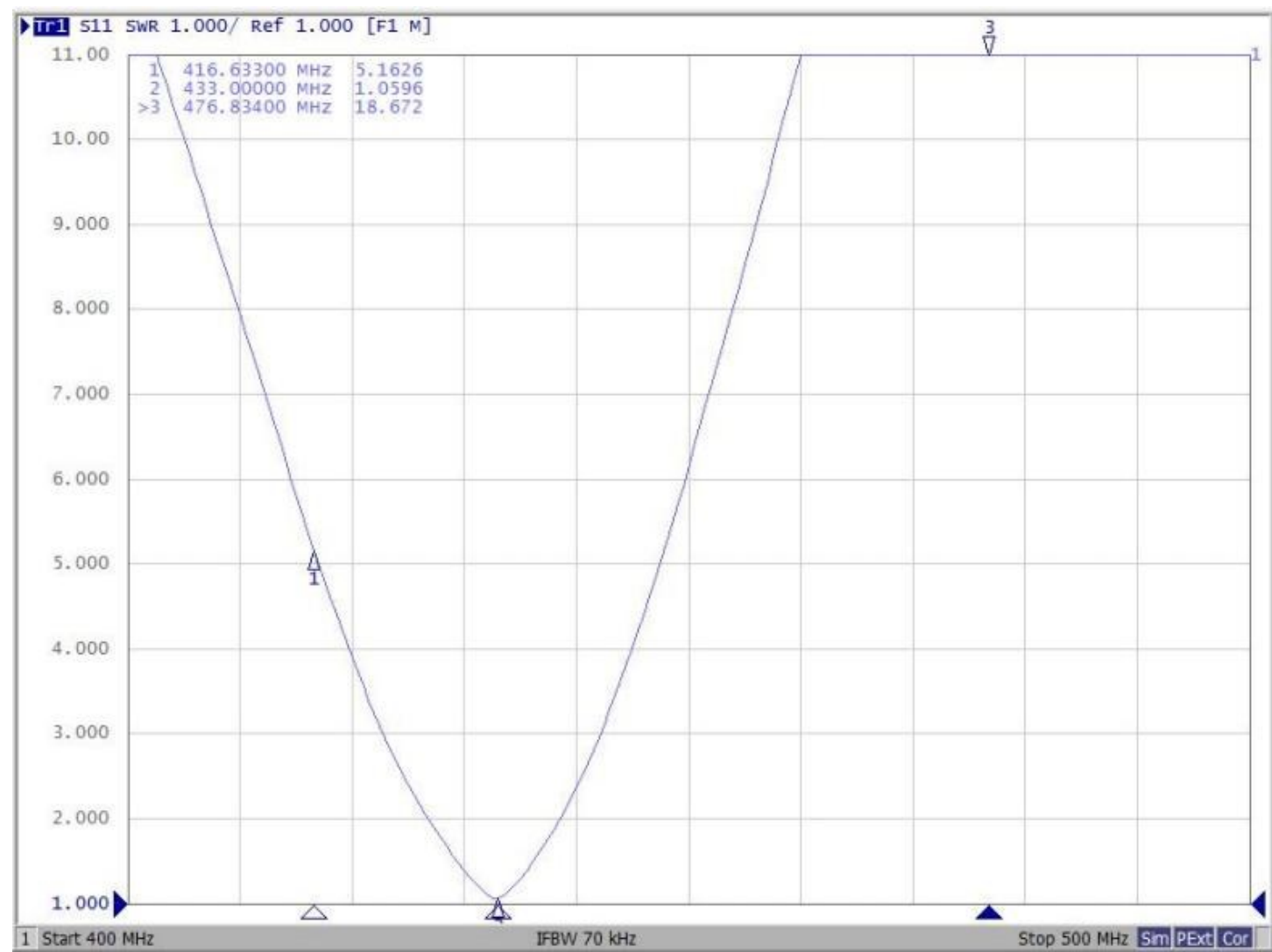
Schematic diagram of antenna matching at the receiving end



Receiver antenna size diagram

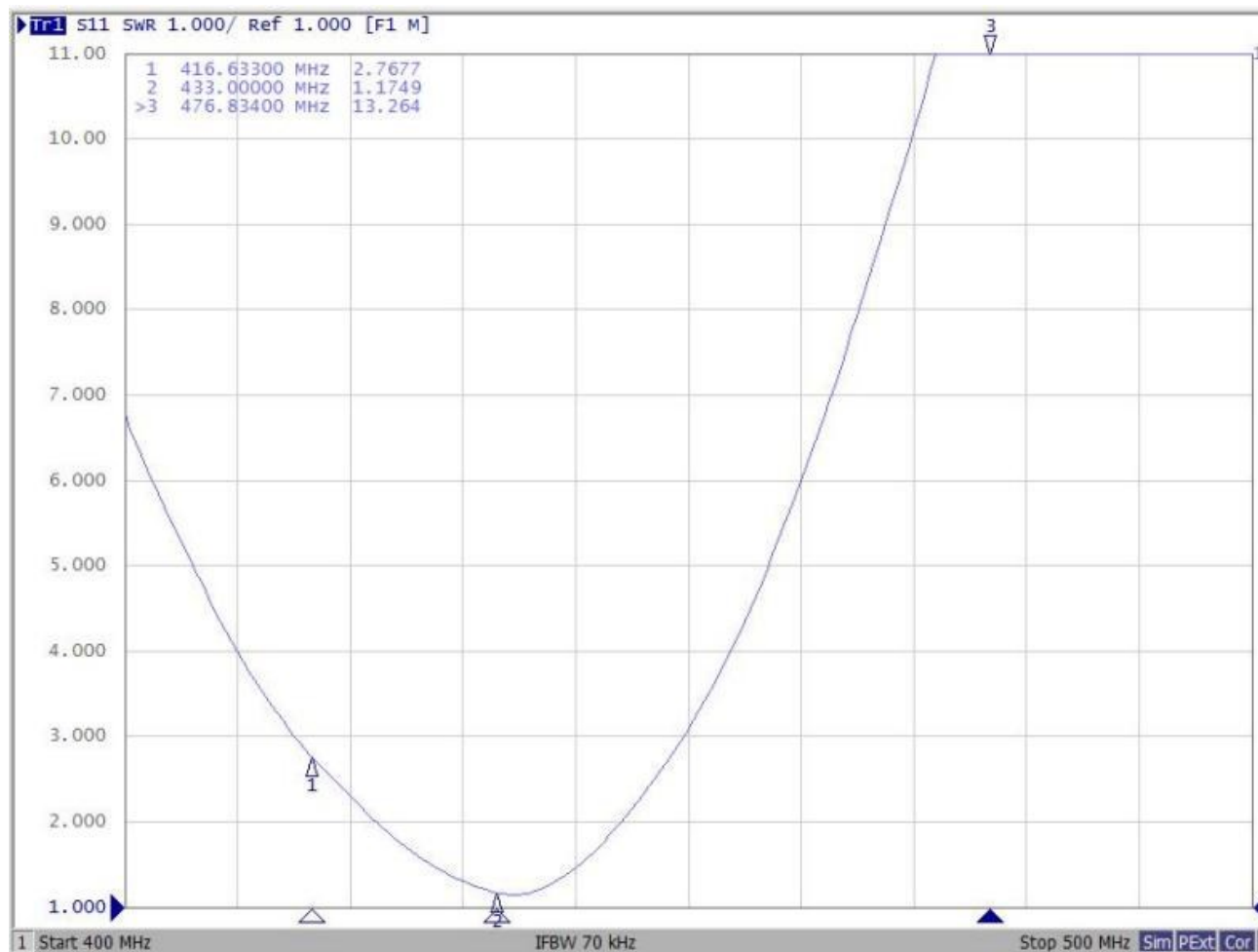


Passive test data of transmitting end spring antenna (VSWR)



Frequency (MHz)	VSWR (standing-wave ratio)
433	1.05

Passive test data of receiving end spring antenna (VSWR)



Frequency (MHz)	VSWR (standing- wave ratio)
433	1.17

Passive debugging data of transmitting end spring antenna: efficiency/gain

Frequency (MHz)	Efficiency	Efficiency . dB	Gain . dB
400	5%	-12.85	-9.38
410	7%	-11.25	-7.86
420	8%	-10.72	-5.90
430	12%	-9.09	-4.38
433	16%	-7.99	-4.11
440	14%	-8.65	-5.45
450	6%	-12.42	-8.17
460	3%	-14.96	-10.57
470	2%	-16.65	-12.24
480	2%	-17.97	-13.50
490	1%	-19.17	-14.86
500	1%	-20.56	-16.27

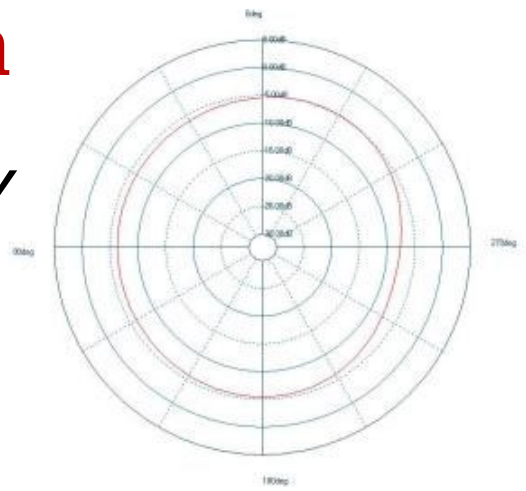
Passive debugging data of receiving end spring antenna: efficiency/gain

Frequency (MHz)	Efficiency	Efficiency . dB	Gain . dB
400	5%	-13.27	-10.23
410	7%	-11.74	-8.23
420	7%	-11.51	-7.20
430	8%	-11.04	-7.04
433	8%	-11.22	-7.12
440	9%	-10.36	-8.15
450	4%	-14.30	-10.28
460	2%	-16.65	-12.43
470	1%	-18.80	-14.28
480	1%	-20.62	-15.85
490	1%	-22.27	-17.41
500	0%	-23.86	-19.24

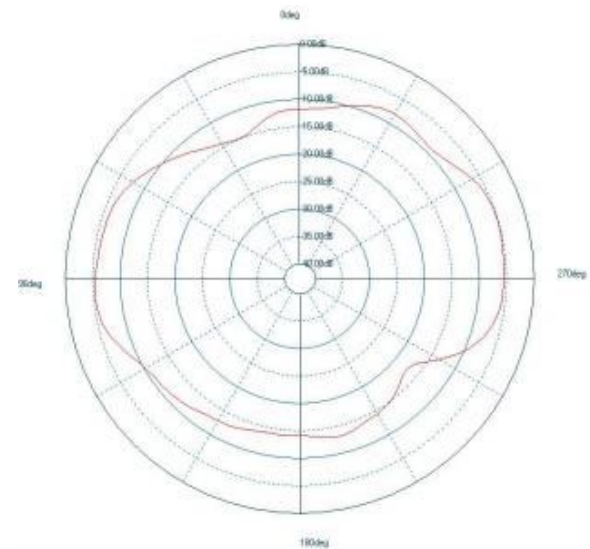
Passive debugging data of transmitting end spring antenna: 433MHz directional pattern/3D pattern



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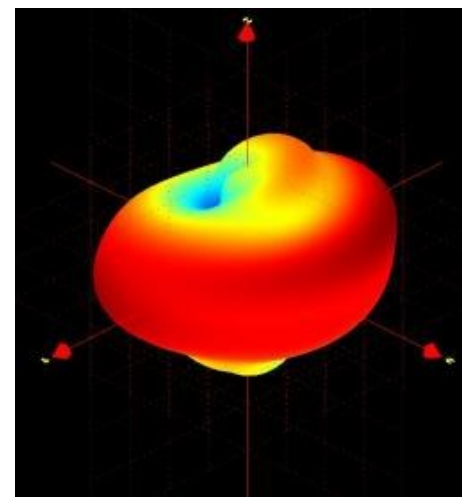
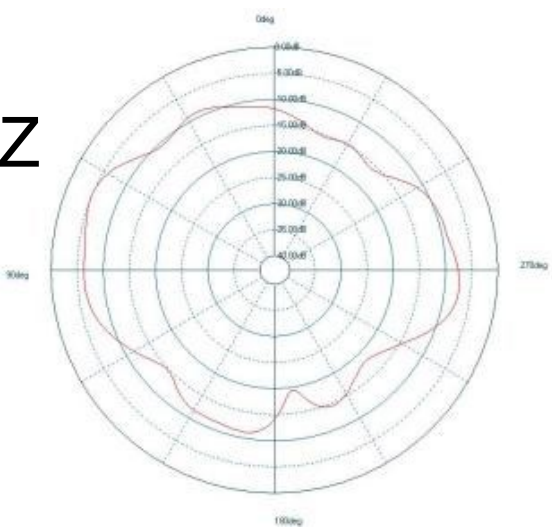


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Legend
— 433.00(MHz)

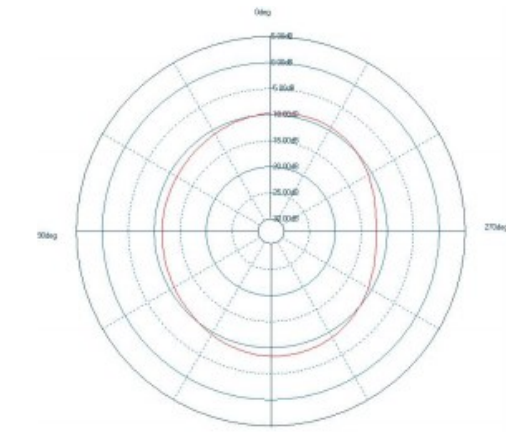
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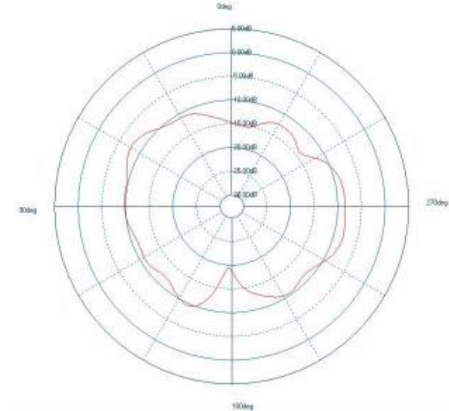
Passive debugging data of receiving end spring antenna: 433MHz directional pattern/3D pattern



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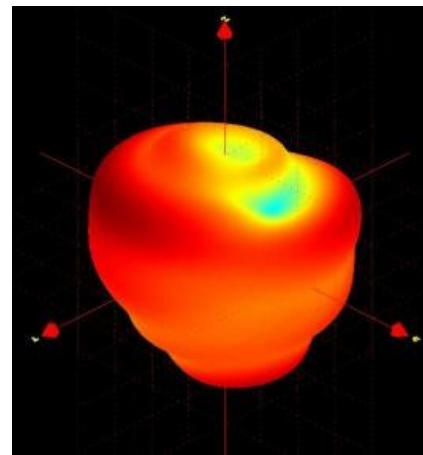
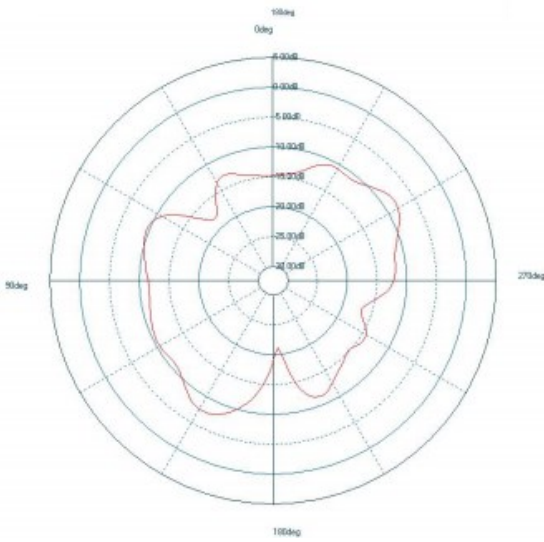


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Legend
— 433.00(MHz)

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Thank You

