
SL009TC project WBG antenna acknowledgement

1. Overview

This document is the SL009TC project WBG antenna acknowledgement;

The antenna operates in the frequency band of 1575MHz; 2400MHz~2500MHz,
5100MHz~5900MHz

2. Manufacturere and its address

Company name: Haidemen Electronics Co, Ltd

Address Address: Jinye First Road, Yanta District, Xi'an City, Shaanxi Province

3. The model and type of antenna

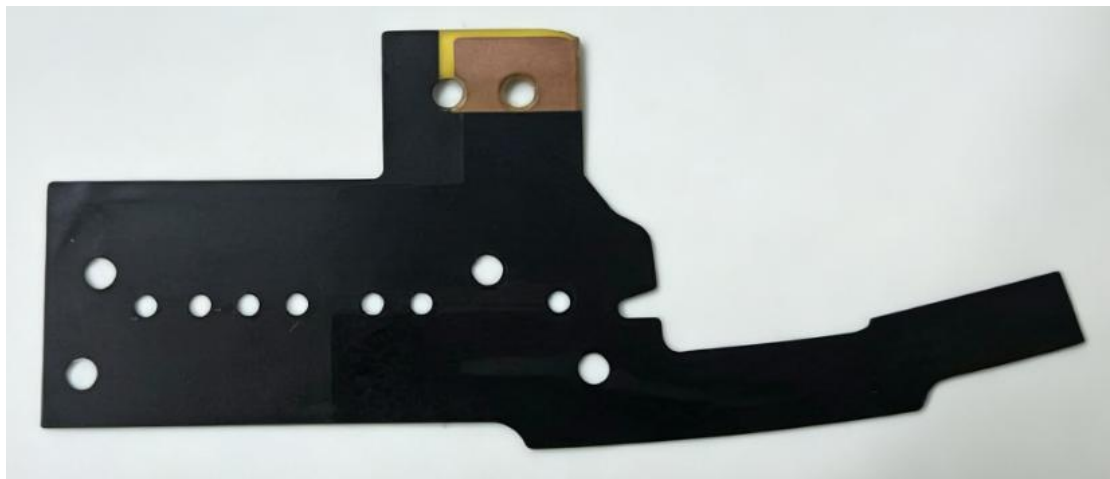


Figure 3.1 WBG physical photo

Antenna type: IFA

4. Antenna test environment

4.1 Antenna test lab, test instrument, and calibration date

Antenna input characteristics are tested using the Agilent E5071B vector network analyzer.

The antenna radiation characteristics test uses the GTS 2800 darkroom. The test coordinate system is shown in Figure 4.1.1.

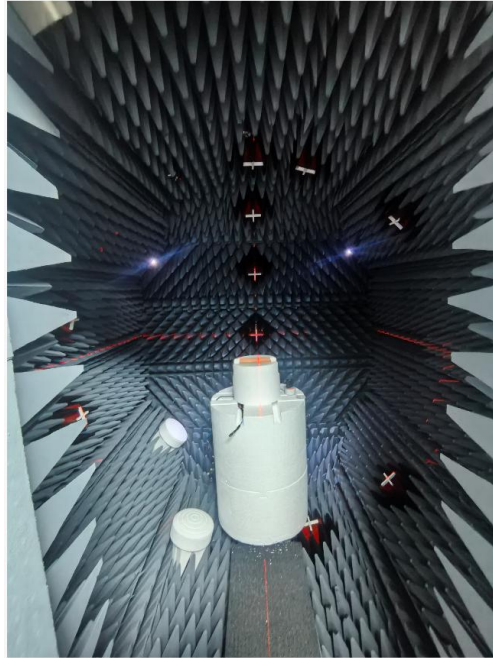


Figure 4.1.1 3D anechoic chamber test coordinate system (back view)

4.2 Antenna test lab, test instrument, and calibration date

The tester uses the Anritsu CMW500.

The antenna radiation characteristics test uses the GTS2800 darkroom. The test coordinate system is shown in Figure 4.2.1.

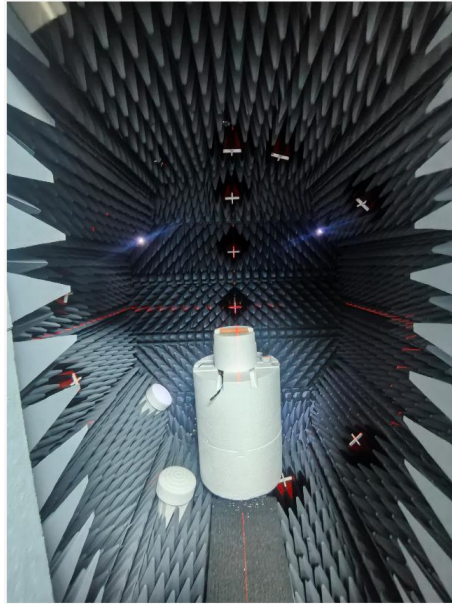


Figure 4.2.1 3D anechoic chamber test coordinate system (back view)

4.3 Antenna test lab, test instrument, and calibration date.

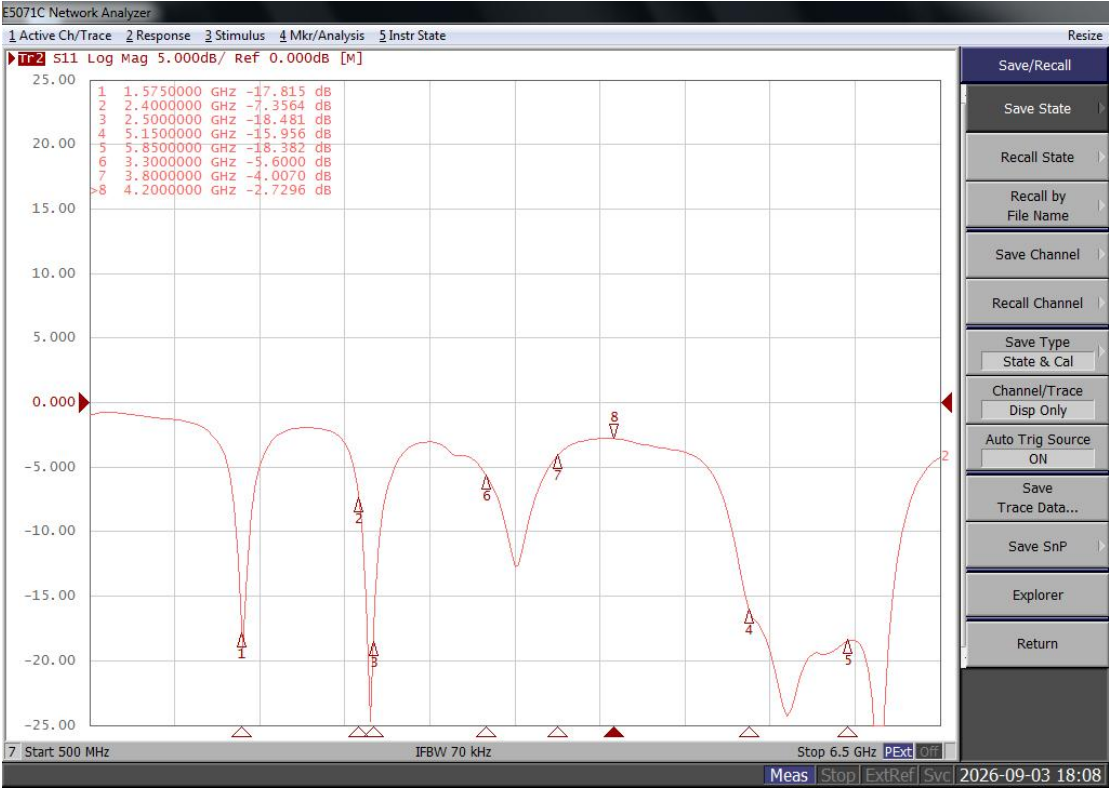


Figure 4.3.1 Dark room physical drawing

4.3 E5071B/E5071C/E5062A/CWM500 calibration date

Calibration date
2026.07.18

5. Reflection loss



WBG S11

6. Antenna gain and 2D or 3D Pattern diagram:

Frequency(MHz)	Efficiency(dB)	Efficiency(dBi)
1560	-3.29	1.03
1565	-3.53	1.05
1570	-3.51	1.11
1575	-3.29	1.09
1580	-3.24	1.05
1585	-3.44	1.07

1590	-3.73	1.04
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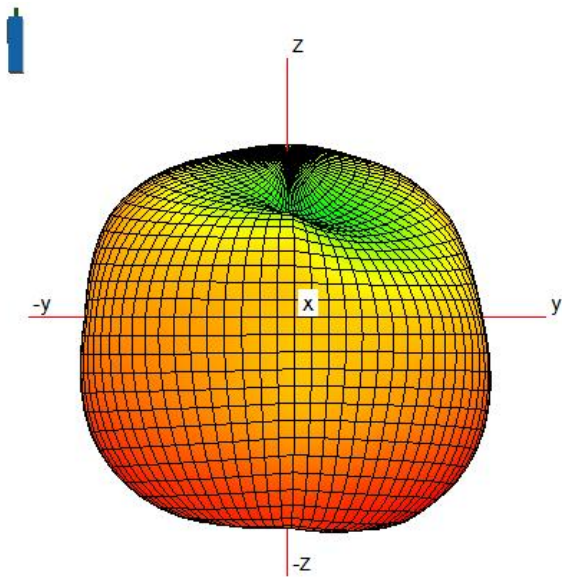
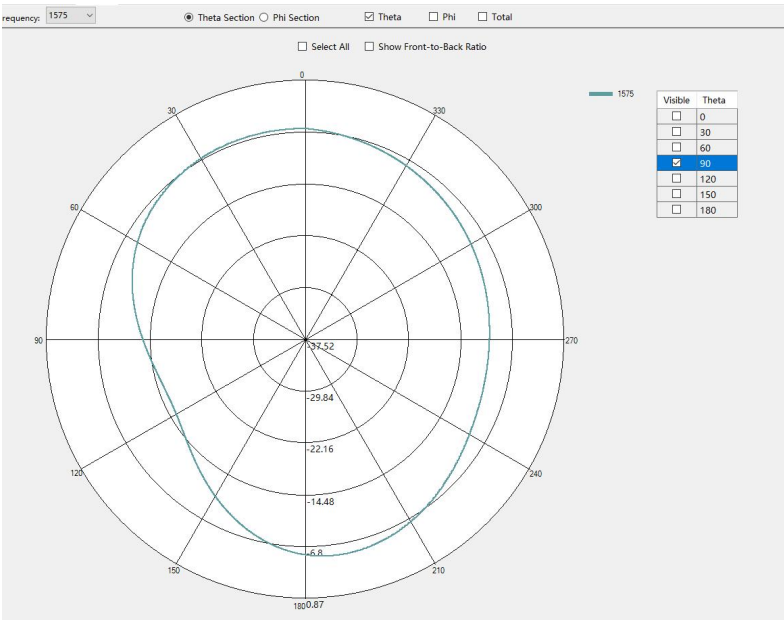
Frequency(MHz)	Efficiency(dB)	Efficiency(dBi)
2400	-5.49	1.23
2410	-5.7	1.25
2420	-5.11	1.1
2430	-4.88	1.27
2440	-4.87	1.30
2450	-4.31	1.24
2460	-4.45	1.12
2470	-3.87	0.85
2480	-3.92	0.58
2490	-3.93	0.65
2500	-3.6	0.27

Frequency(MHz)	Efficiency(dB)	Efficiency(dBi)
5000	-6.08	-1.46
5020	-5.7	-1.52
5040	-5.6	-1.35
5060	-5.54	-1.29
5080	-5.51	-1.33
5100	-5.56	-1.31
5120	-5.5	-1.08
5140	-5.53	-0.67

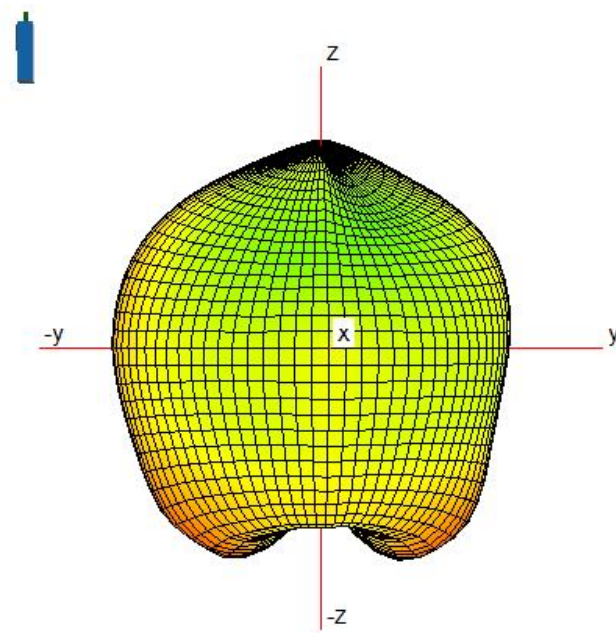
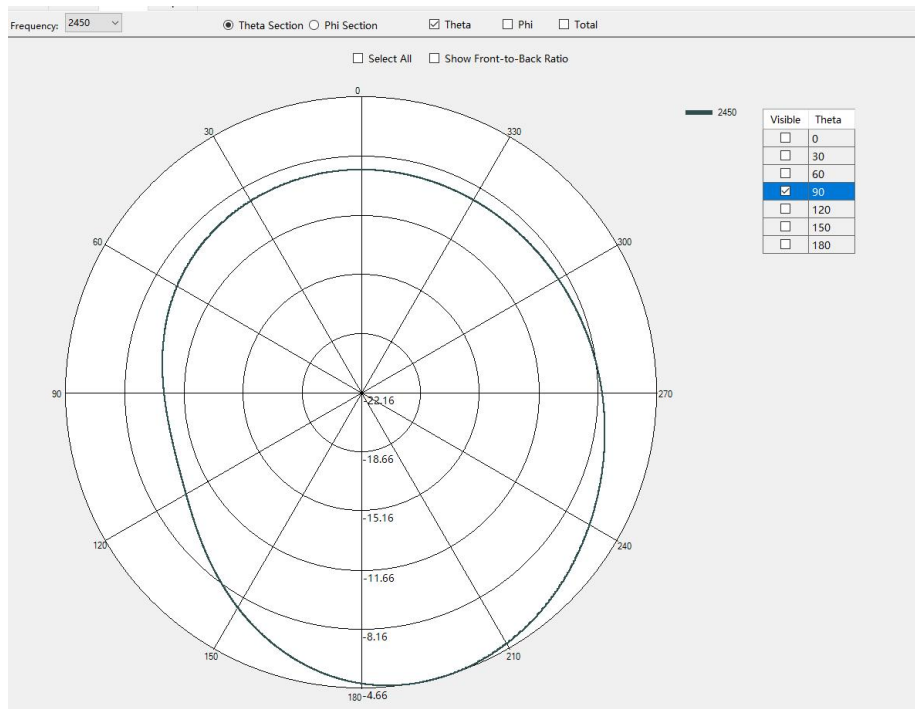
5160	-5.7	-0.71
5180	-5.73	-0.63
5200	-5.68	-0.84
5220	-5.77	-0.66
5240	-5.82	-0.58
5260	-6	-0.53
5280	-6.05	-0.58
5300	-5.82	-0.29
5320	-5.64	-0.12
5340	-5.26	0.45
5360	-5.03	0.7
5380	-5.1	0.45
5400	-5.04	0.27
5420	-4.85	0.29
5440	-4.39	0.65
5460	-4.03	-0.55
5480	-4.01	-0.65
5500	-4.16	-0.72
5520	-4.29	-0.72
5540	-4.3	-0.77
5560	-4.13	-0.82
5580	-3.88	-0.83
5600	-3.71	-0.85
5620	-3.51	-0.89
5640	-3.58	-0.92
5660	-3.84	-0.92
5680	-3.85	-0.93
5700	-3.68	-0.95
5720	-3.35	-0.96
5740	-3.34	-0.98
5760	-3.5	-0.99
5780	-3.55	-1.04
5800	-3.66	-0.94

6.1 Antenna gain and 2D or 3D pattern diagram:

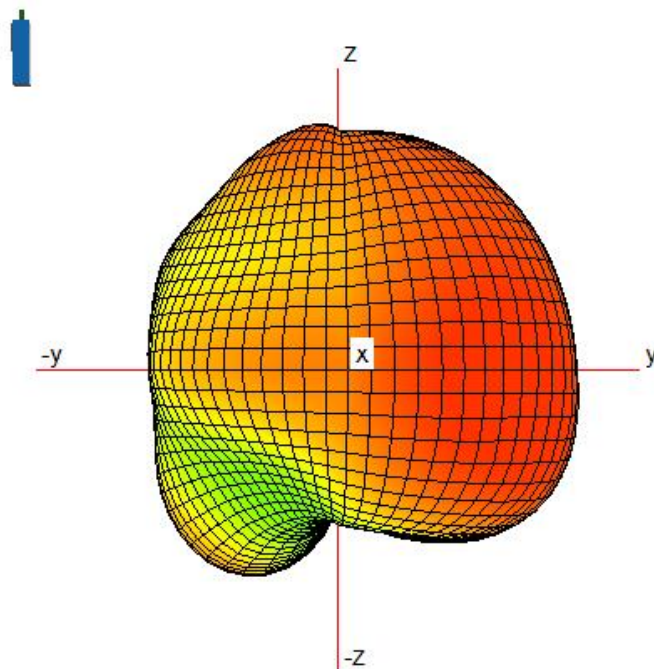
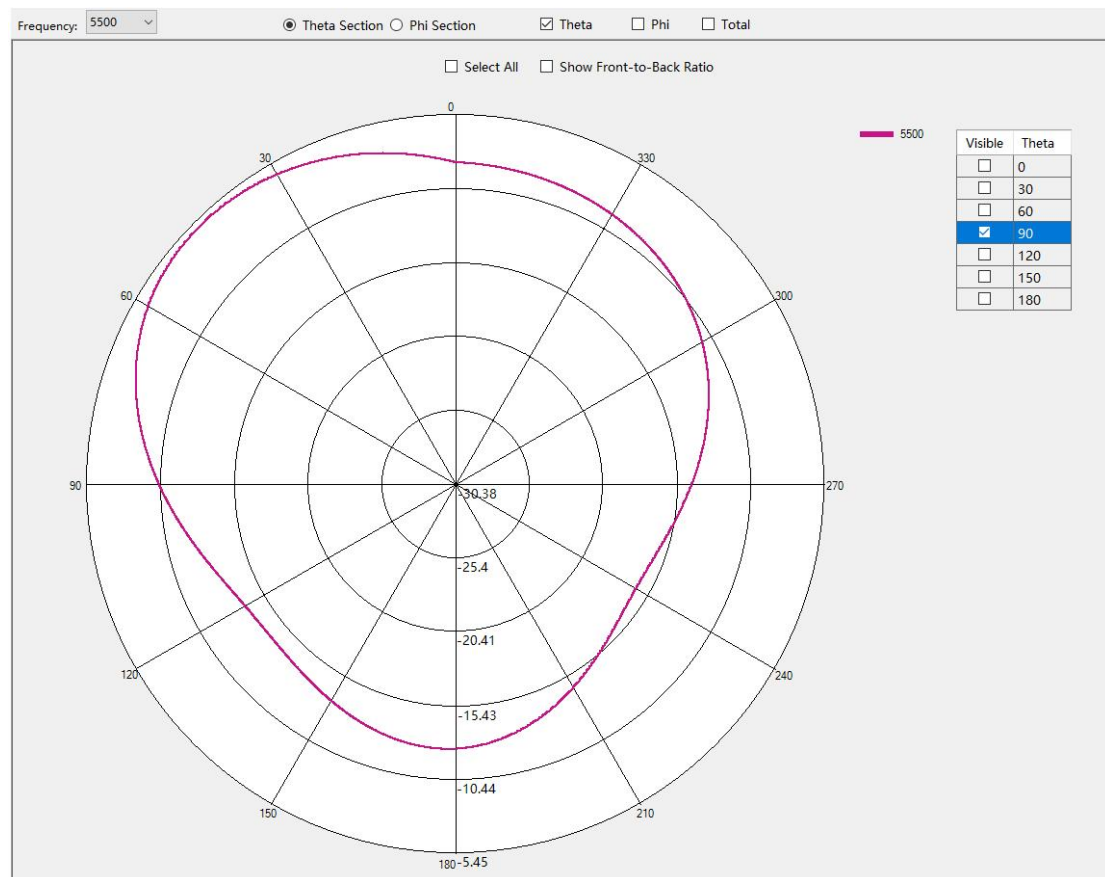
GPS (1575 MHz)



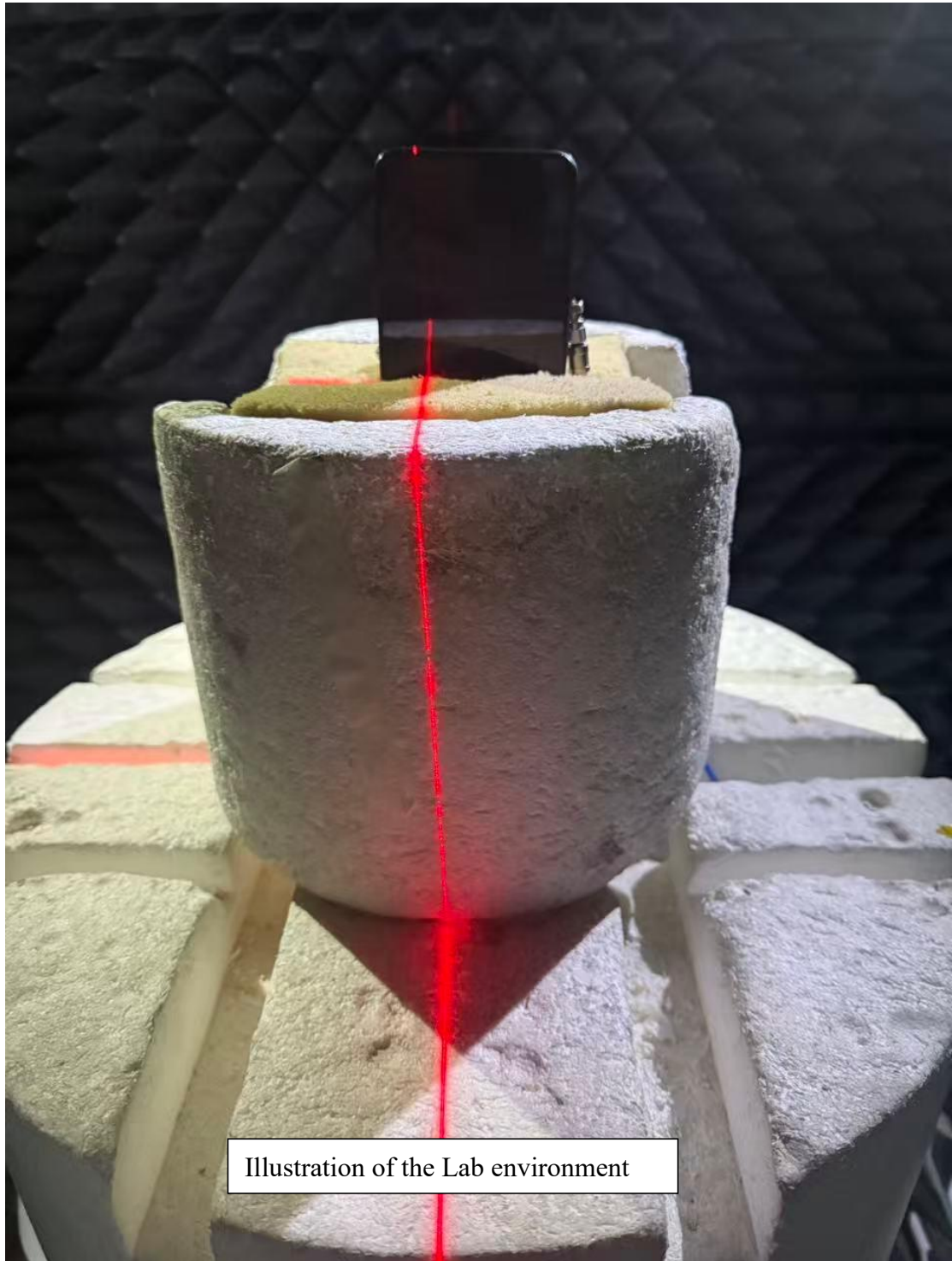
WIFI 2.4G (2450 MHz)



WIFI 5G (5500 MHz)



7. Antenna test photo



8. Test software: GTS

9. Signature:
