

Shenzhen Xingtong Wieress Technology Co .,Ltd

For

Shenzhen Buzz Tech CO.,LTD

S99

Antenna Specifications

Part No. :

STYLE:S99-GPS/BT- Antenna

Specification No. :20260617-1

Client	
Approved	

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Date: 2026-6-17			
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A	English		
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Number: 0755-27850514		Fax: 0755-27850514	

Revision History

Date	Revision	Description of Changes
2026-6-17	RA	Measured with Metal Case Carrier sample.

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1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the

S99 program. We test the antenna with the latest version handset. And it seems to be acceptable.

2 General Description

2.1 Components/Part revisions

VSWR: Voltage Standing Wave Rate.

3 Mechanical Description

4 Electrical Performance

4.1 Set-up

4.1.1 VSWR

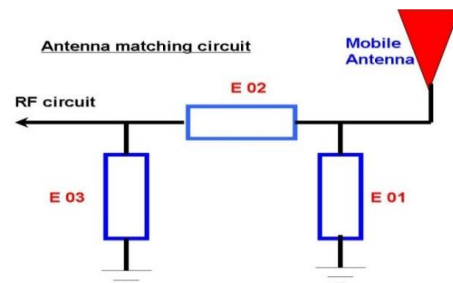
VSWR measurements (S21) were performed using an Keysight 5071C Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

4.1.2 Gain & Radiation Patterns

The gain of the antenna was measured in the XingTong' s anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than -30 dB reflectivity from 1GHz through 3 GHz and an 18" diameter spherical quiet zone. The measurement results are calibrated using both dipole and leaky wave horn standards.

4.1.3 Matching Circuit Description

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Main Antenna	
Element	Value
E1 (0402)	1PF
E2 (0402)	0Ω
E3 (0402)	7.5NH
E3 (0402)	empty

4.2 Measurement Data

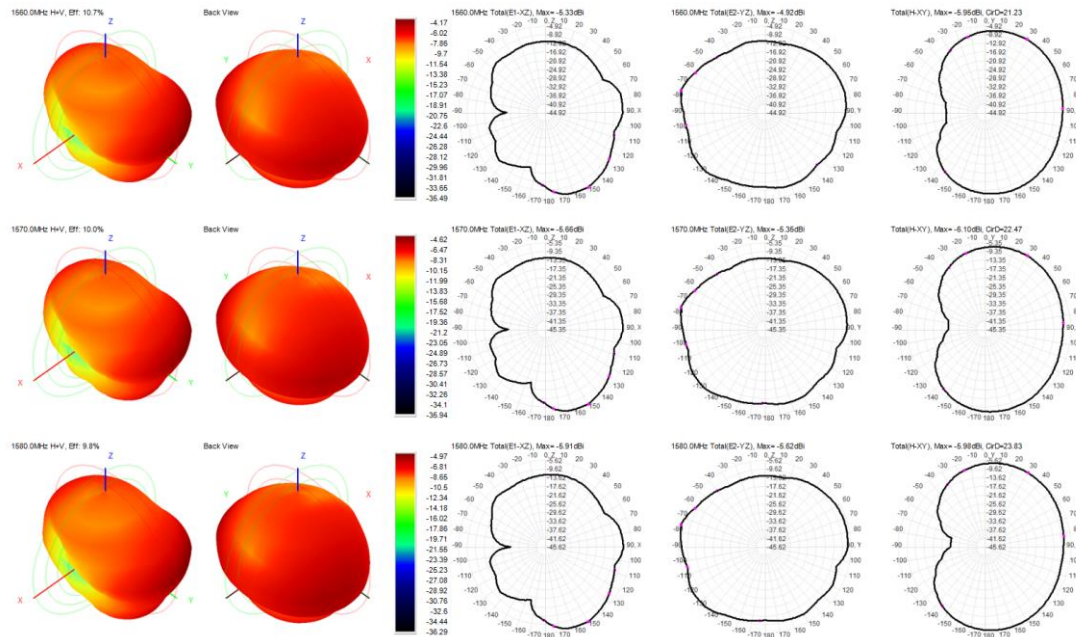
Antenna-2D-OTA

4.2.1 1.575-2.4GHZ:

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Frequency (MHz)	1500.0	1510.0	1520.0	1530.0	1540.0	1550.0	1560.0	1570.0	1580.0	1590.0	1600.0	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dB)	-12.02	-11.55	-11.05	-10.53	-10.36	-9.88	-9.71	-10.00	-10.11	-10.21	-10.49	-9.17	-9.21	-9.02	-9.08	-9.42	-9.18	-9.33	-9.64	-9.37	-9.63	-9.76
Gain (dBi)	-6.57	-6.37	-5.78	-5.04	-4.72	-4.25	-4.17	-4.62	-4.97	-5.22	-5.56	-4.27	-4.61	-4.65	-4.89	-5.14	-4.77	-4.69	-4.98	-4.70	-4.99	-4.87
Efficiency (%)	6.29	6.99	7.86	8.85	9.20	10.27	10.69	9.99	9.76	9.53	8.93	12.11	11.99	12.52	12.36	11.43	12.08	11.68	10.87	11.57	10.88	10.57
Directivity (dB)	5.44	5.18	5.27	5.48	5.64	5.64	5.54	5.38	5.14	4.99	4.93	4.90	4.60	4.38	4.19	4.28	4.41	4.64	4.65	4.66	4.65	4.89
Peak Gain Position (Theta)	150.00	150.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	60.00	60.00	60.00	60.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Peak Gain Position (Phi)	180.00	180.00	120.00	120.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	120.00	120.00	120.00	120.00	105.00	90.00	105.00	105.00	120.00	120.00	120.00
Efficiency ThetaPol (%)	4.40	4.94	5.59	6.32	6.57	7.34	7.71	7.28	7.21	7.13	6.75	8.08	8.09	8.61	8.65	8.01	8.39	8.02	7.43	7.80	7.22	6.98
Efficiency PhiPol (%)	1.89	2.05	2.26	2.54	2.64	2.93	2.98	2.71	2.55	2.40	2.19	4.04	3.90	3.92	3.71	3.42	3.69	3.66	3.45	3.77	3.65	3.59
Upper Hem. Efficiency (%)	2.67	3.05	3.53	4.11	4.39	4.98	5.21	4.86	4.76	4.71	4.48	7.61	7.50	7.82	7.72	7.15	7.49	7.17	6.61	6.98	6.54	6.36
Lower Hem. Efficiency (%)	3.62	3.95	4.32	4.75	4.81	5.29	5.48	5.13	5.00	4.83	4.45	4.51	4.49	4.70	4.64	4.28	4.59	4.52	4.27	4.60	4.34	4.20

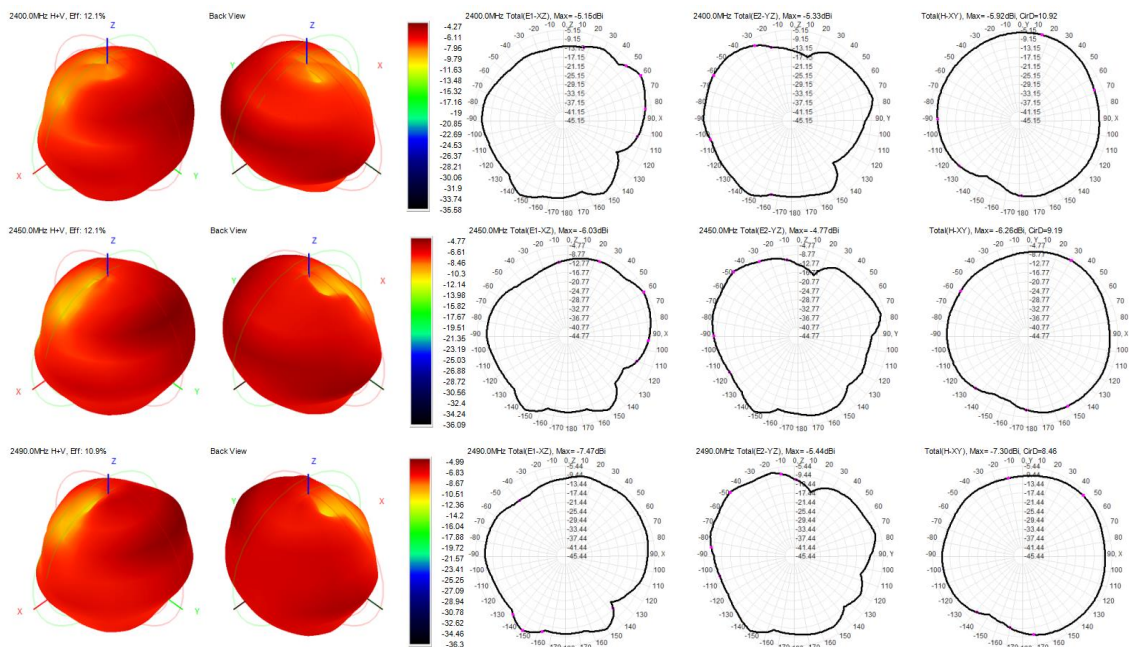
Antenna directional map

1561-1575.42MHZ



2400-2490MHZ

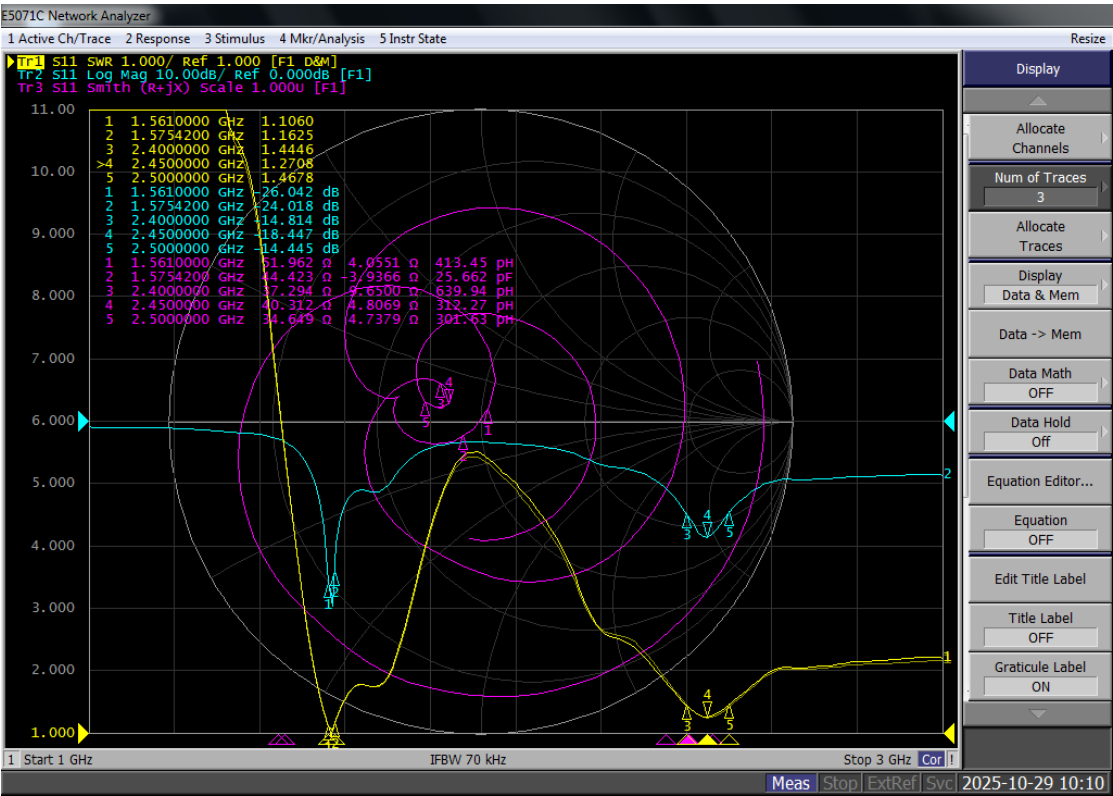
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5 Plots

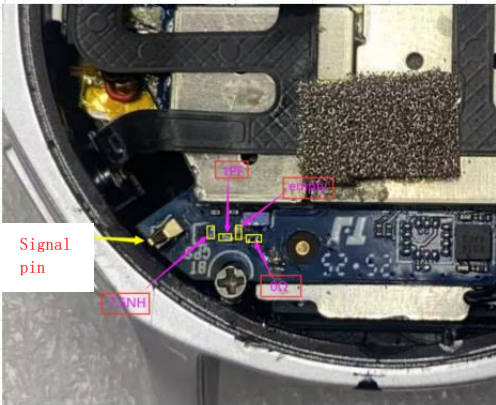
5.1 Lobe pattern/LOG MAG



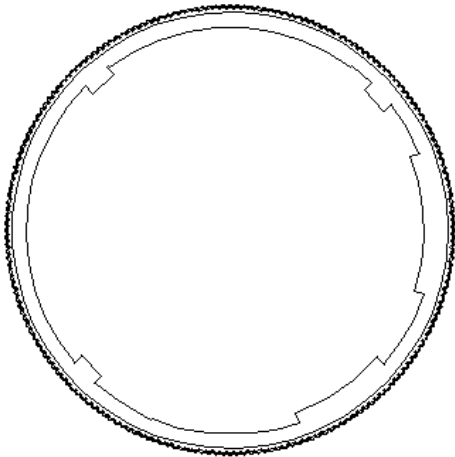
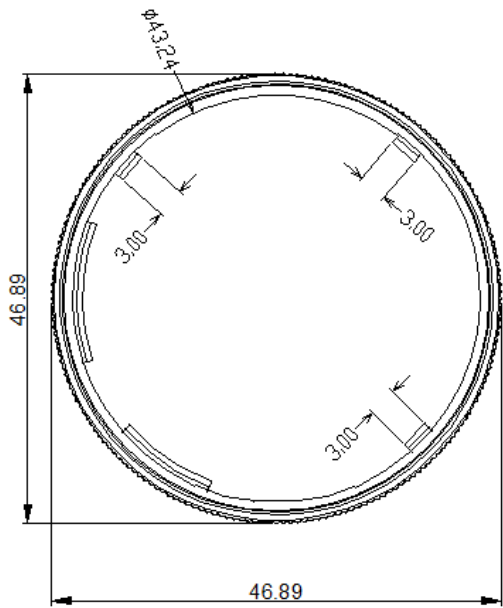
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6 Conclusion

Main Antenna		
Element	Value	
E1 (0402)	1PF	
E2 (0402)	0Ω	
E3 (0402)	7.5NH	
E3 (0402)	empty	



GND Antenna		
Element	Value	
E1 (0201)	1PF	



S99-GPS/BT- Antenna

Note: The environmental treatment of the entire machine is based on the antenna report as the final decision.

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