



深圳市昱晟通讯设备有限公司

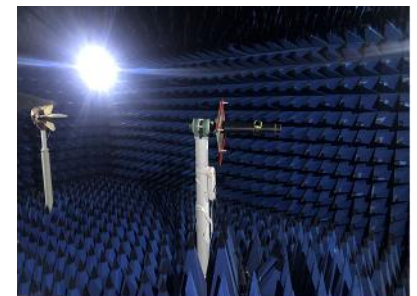
Yusheng Communications-equipment Co.,LTD

Kenaixin Z1359-01 debugging report

Radio: Lin Shaokun

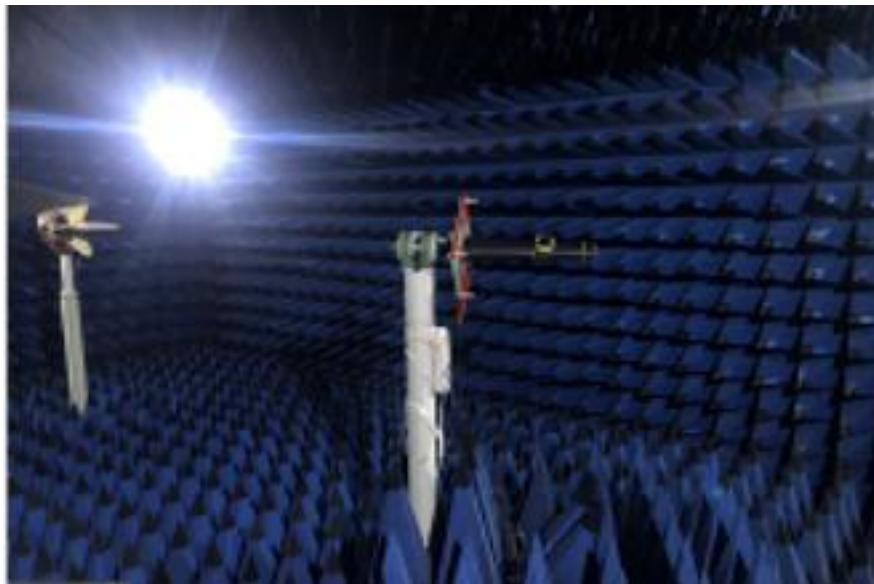
Date: 2025-8-15

Contact: 18476607352



Project development environment

As we transition from the internet era to the intelligent age, China is actively developing digital societies and smart cities. Over the next 5-10 years, both consumer electronics and IoT markets will demonstrate tremendous growth potential. The wireless communications sector remains highly diversified. Leveraging its core strengths in antenna technology and comprehensive capabilities, Yusheng is committed to delivering competitive professional-grade product solutions that meet market demands.



Yusheng Communications product portfolio covers nearly all antenna applications for wireless terminal devices, including automotive antennas, high-precision surveying and mapping antennas, UAV ground and satellite navigation data transmission systems, high-precision positioning antennas, medical device wireless transmission systems, consumer-grade antennas (mobile phone antennas, PADs, laptop antennas), base station/indoor distribution antennas, smart wearable antennas (smartwatches, TWS earbuds), security home automation antennas, and various smart devices utilizing wireless data transmission and control technologies.

Project debugging
introduction

type	earphone			
Band and antenna material	main antenna	frequency range		material quality
		BT	2400MHZ-2500MHZ	FPC
performance requirement				

Source data

Channel No.	1R	
	TRP (dBm)	TIS (dBm)
0	-5.46	-77.85
39	-4.27	-77.57
78	-3.22	-77.42

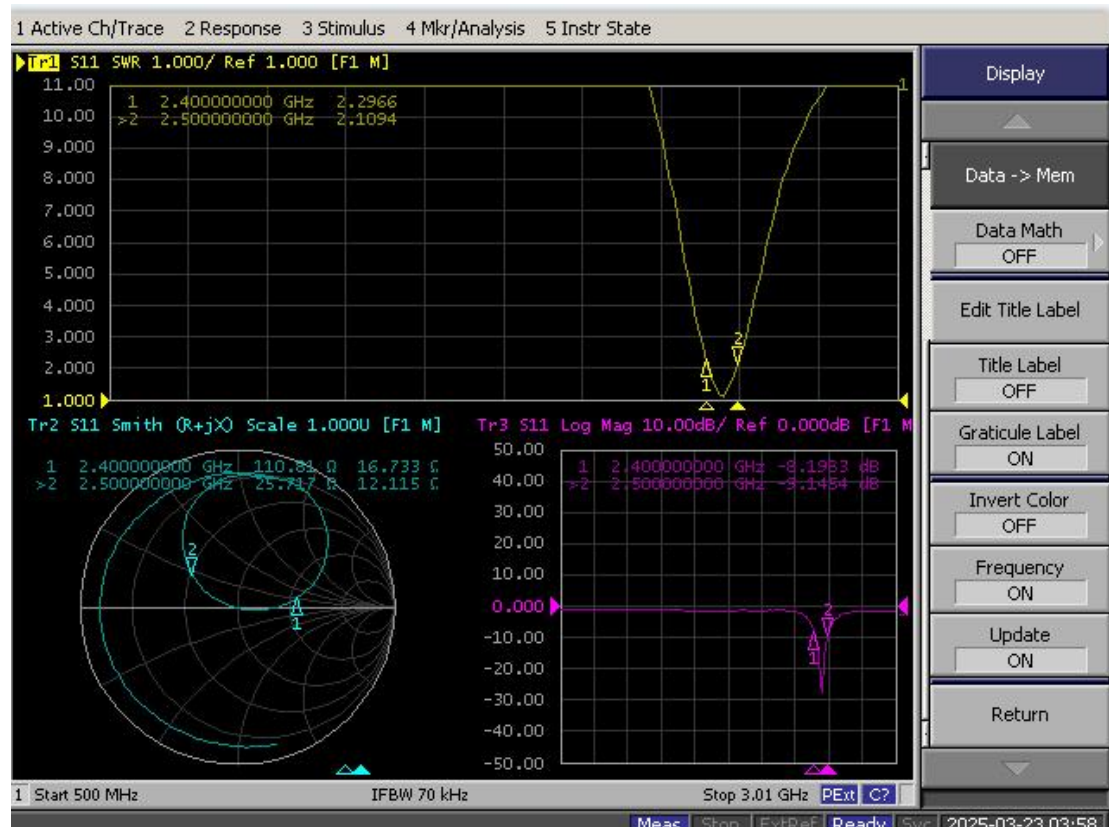
Channel No.	1L	
	TRP (dBm)	TIS (dBm)
0	-4.7	-75.26
39	-5.42	-75.29
79	-6.16	-76.77

Channel No.	2R	
	TRP (dBm)	TIS (dBm)
0	-5.26	-76.26
78	-4.11	-77.59

Channel No.	2L	
	TRP (dBm)	TIS (dBm)
0	-6.17	-74.42
78	-3.18	-77.15

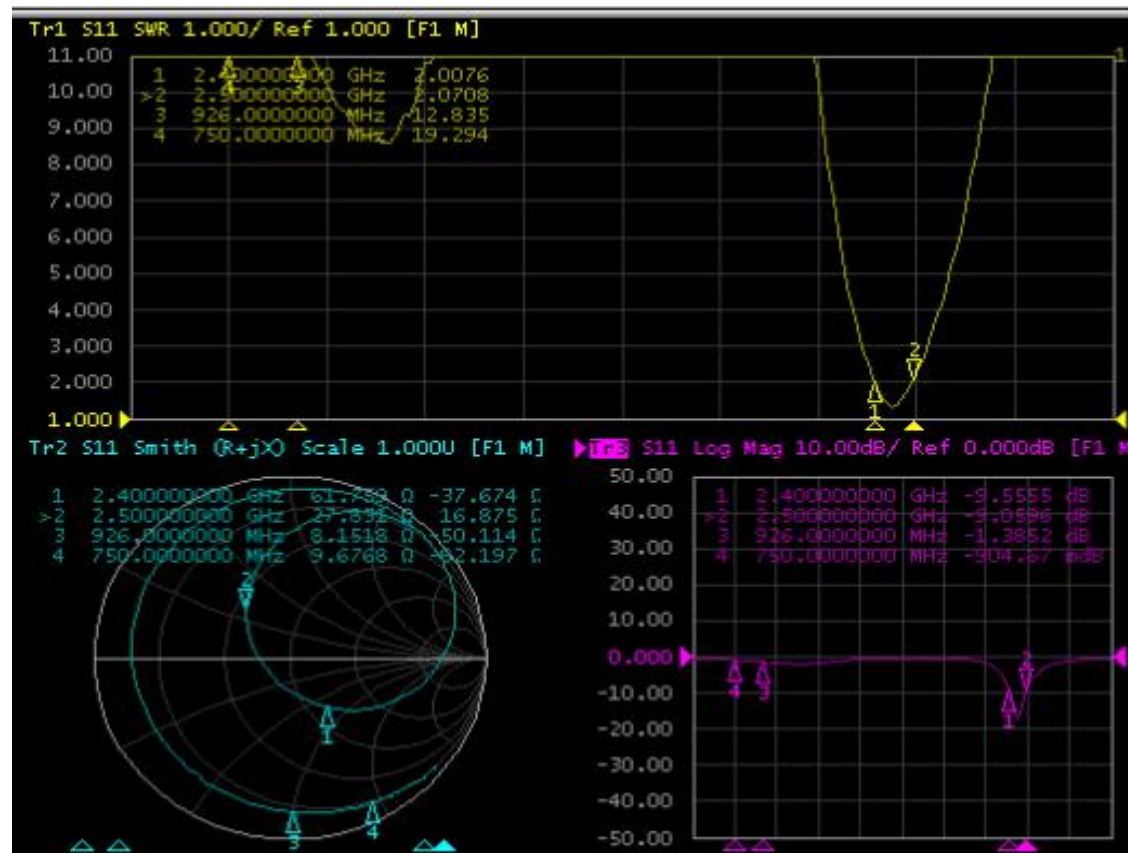
**S11/presently
unparameterized-L**

Freq. (MHz)	Efficiency (%)	Gain dBi
2400	5.88	-7.83
2410	5.97	-7.7
2420	6.11	-7.59
2430	6.31	-7.44
2440	6.21	-7.55
2450	6.17	-7.57
2460	6.19	-7.66
2470	6.17	-7.75
2480	6.07	-7.95
2490	6.21	-7.97
2500	6.34	-7.88



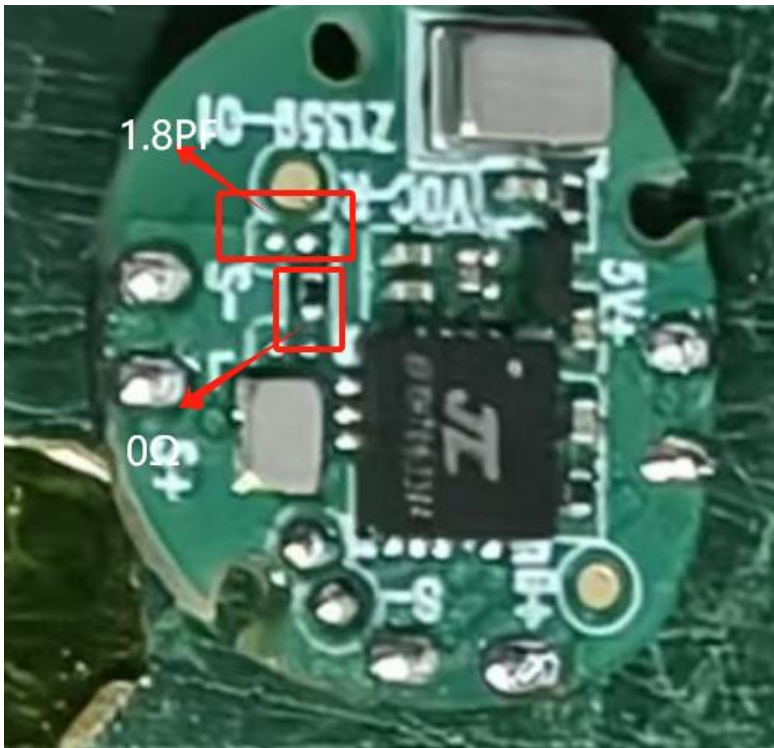
**S11/presently
unparameterized-R**

Freq. (MHz)	Efficiency (%)	Gain dBi
2400	5.94	-8.89
2410	5.92	-8.86
2420	6.16	-8.68
2430	6.4	-8.51
2440	6.42	-8.34
2450	6.64	-8.16
2460	6.8	-7.8
2470	6.87	-7.69
2480	6.88	-7.52
2490	7.04	-7.32
2500	7.14	-7.15

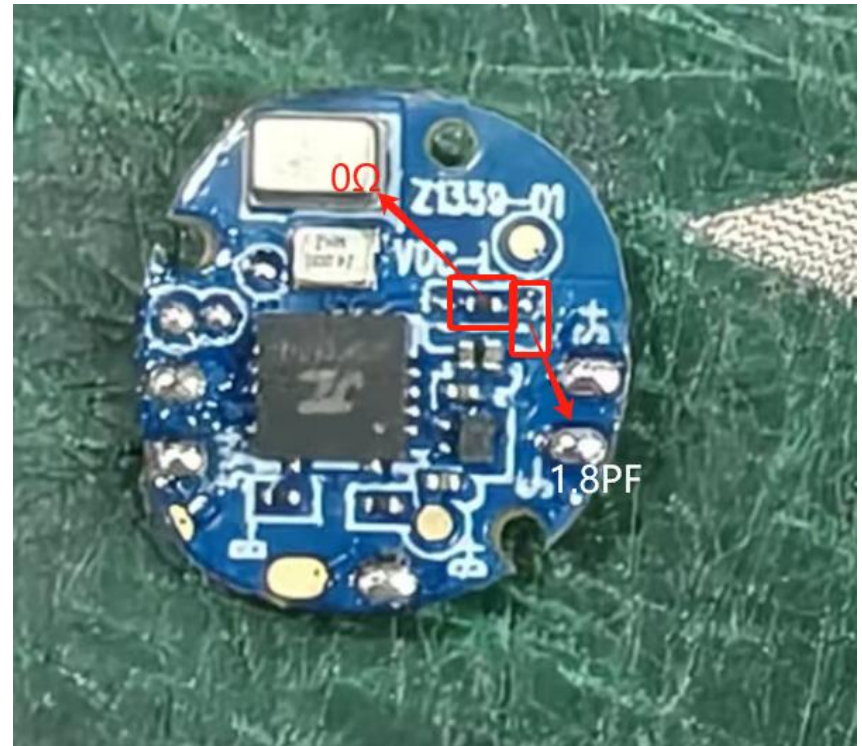


Match change-
headphones

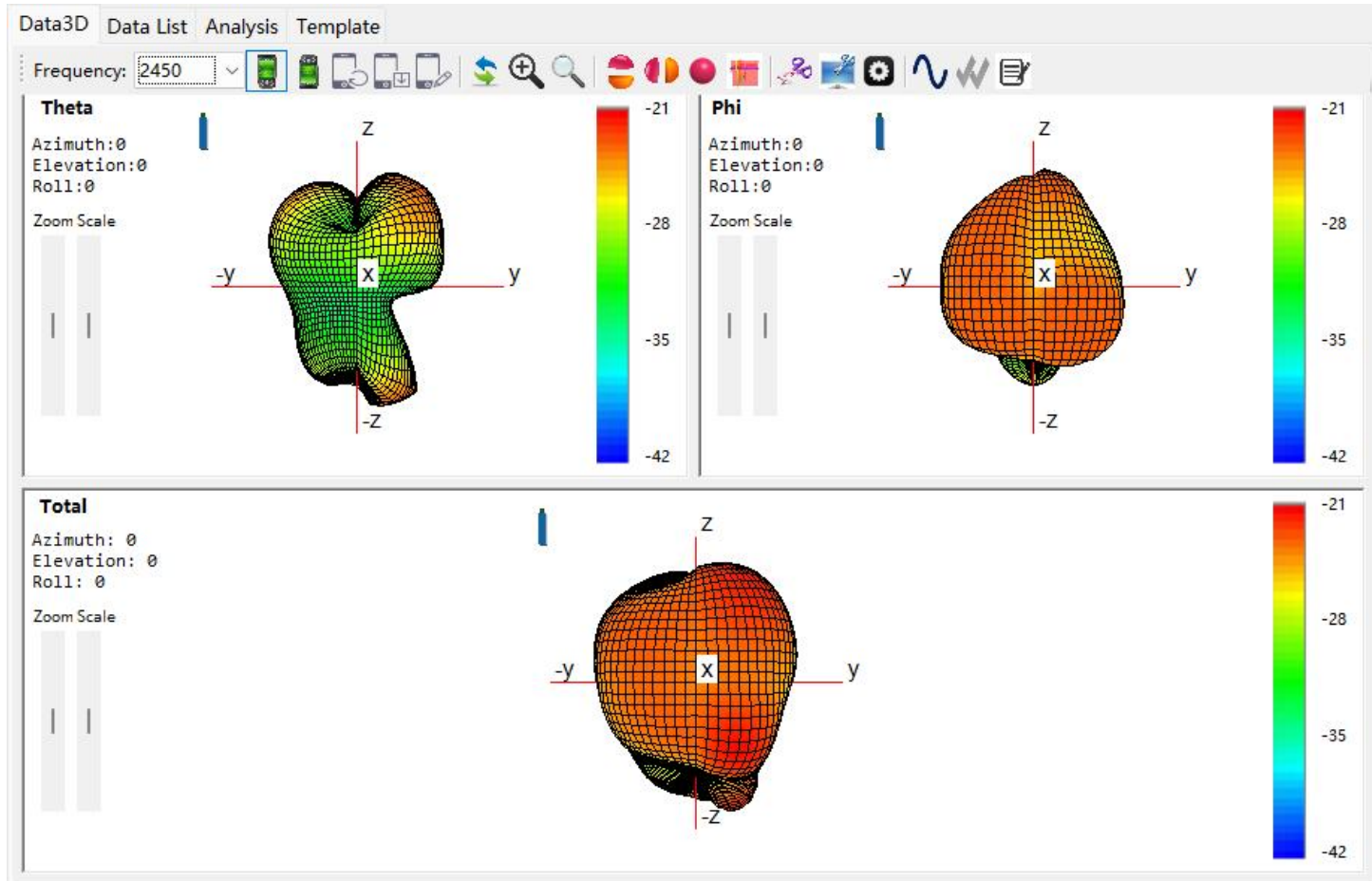
R



L

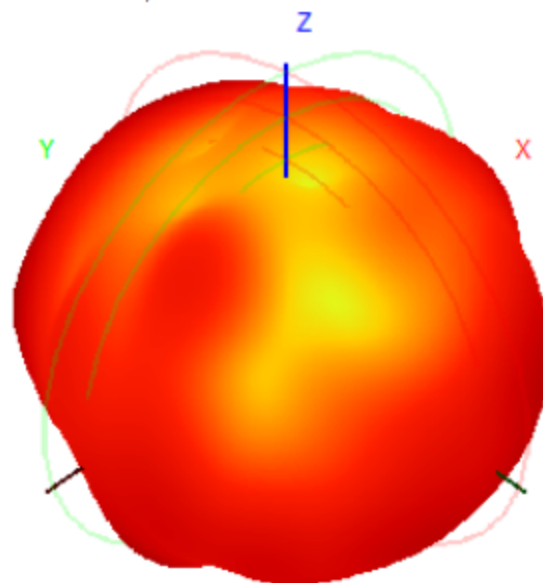


Apple logo on the right side



3D Radiation Pattern Left

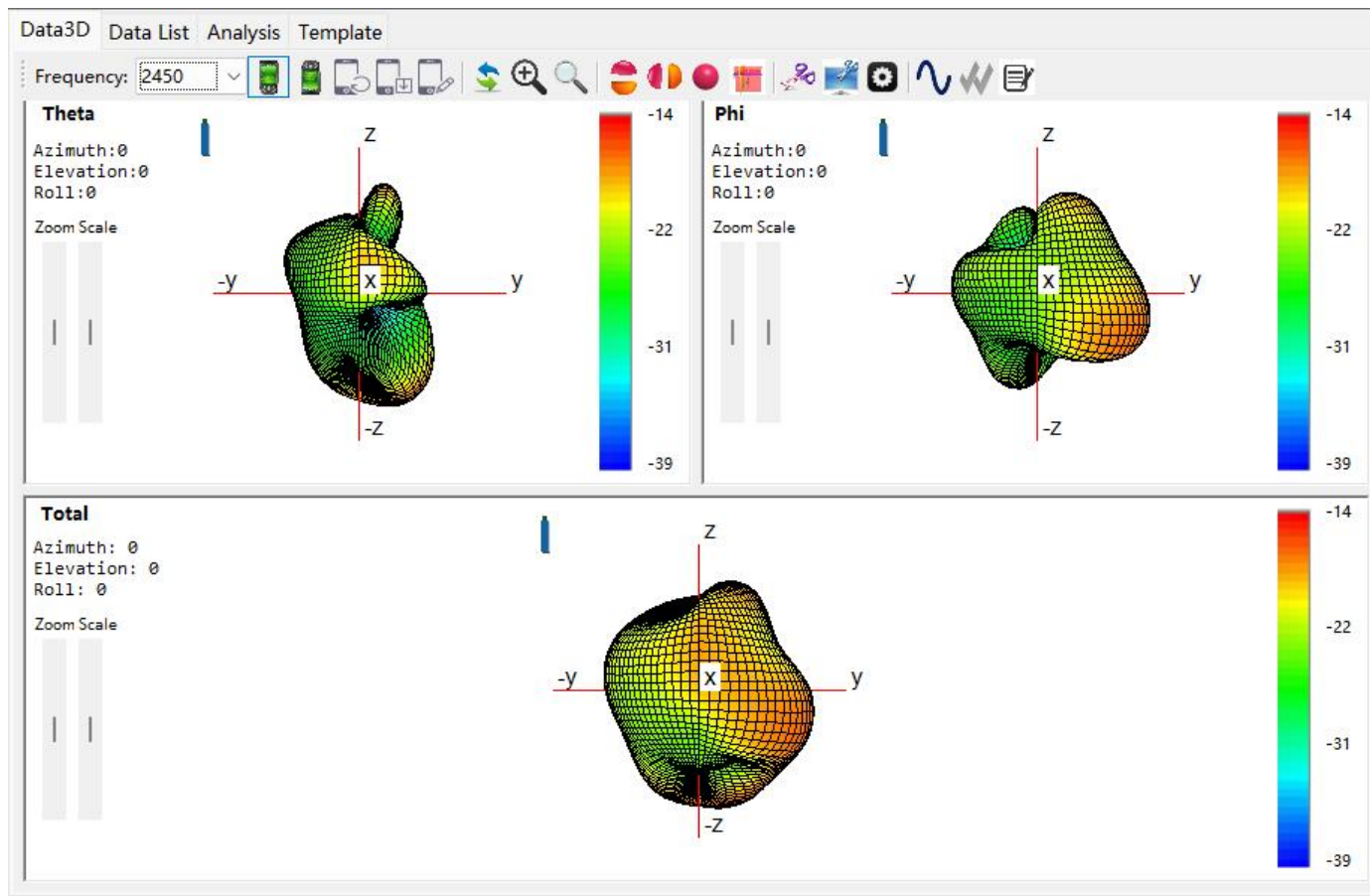
2430.0MHz H+V, Eff: 23.7%



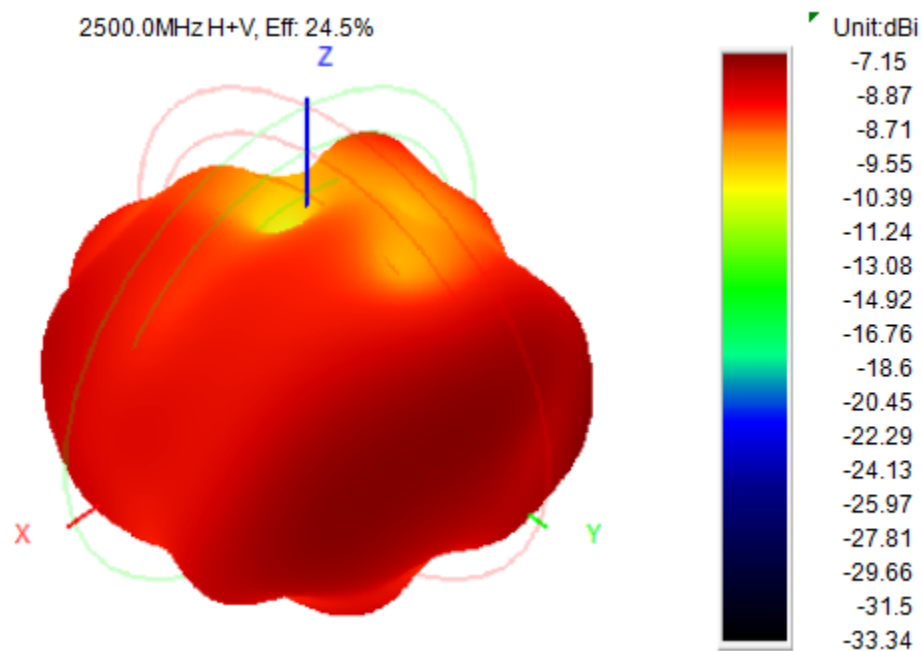
Unit:dBi

-7.44
-8.01
-9.85
-10.69
-11.53
-11.38
-13.22
-15.06
-16.9
-18.74
-20.59
-22.43
-24.27
-26.11
-27.96
-29.8
-31.64
-33.48

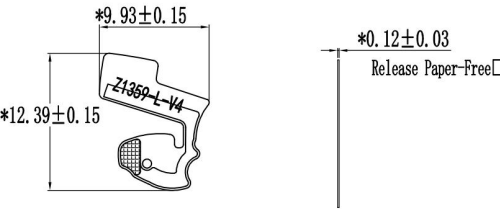
Apple illustration on the left



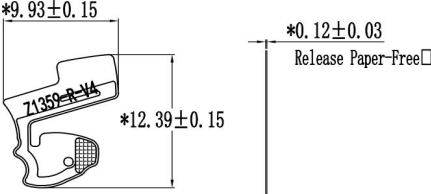
3D Radiation Pattern Right



Left antenna diagram file

	1	2	3	4	5	6	7	8																																			
A	 *9.93±0.15 *12.39±0.15 Z1359-L-V4 *0.12±0.03 Release Paper-Free□								A																																		
B	skills requirement: <table border="1"><tr><td>1.FPC substrate specifications:</td><td>PI substrate: 0.5 mil</td></tr><tr><td></td><td>Electrolytic copper: 0.5oz(20)</td></tr><tr><td></td><td>Double-sided tape: 3M-9471LS8</td></tr><tr><td>2.Electroplating specifications:</td><td>Nickel plated: 3'8um; Au: 0.05um;</td></tr><tr><td>3.Surface ink requirements:</td><td>Surface ink color: 27.5um Polyimide Coverlay</td></tr><tr><td></td><td>Printing font color: White</td></tr><tr><td></td><td>Printing font height: According to drawings</td></tr></table> 4.Reliability requirements: - Reliability test: salt spray test/rubber friction test/alcohol resistance test/100 grid test. - The front ink, the surface of the ink is required to be folded in half without cracking, scratching, etc. 5.Tolerance requirements: - Shape tolerance ±0.15; - Copper foil circuit tolerance ±0.05; - The position of the copper foil to the shape is ±0.15; - Hole-to-hole position tolerance ±0.10; hole-to-shape position tolerance ±0.15; - The size tolerance of gold finger is ±0.20. - For other unmarked dimensions, refer to 2D drawings. 6.Key control size: The dimensions marked with numbers are regarded as important dimensions, and the others refer to 2D drawings 7.Environmental requirements: Parts meet ROHS2.0/REACH/GP environmental protection requirements 8.Packaging requirements: Full page without release paper packaging <td>B</td>								1.FPC substrate specifications:	PI substrate: 0.5 mil		Electrolytic copper: 0.5oz(20)		Double-sided tape: 3M-9471LS8	2.Electroplating specifications:	Nickel plated: 3'8um; Au: 0.05um;	3.Surface ink requirements:	Surface ink color: 27.5um Polyimide Coverlay		Printing font color: White		Printing font height: According to drawings	B																				
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Right antenna diagram file

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Thank you!



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