2025

昆山睿翔讯通通信技术有限公司

KUNSHAN INNOWAVE COMMUNICATION TECHNOLOGY CO., LTD.

You Feng Tap-10-US Test Report

Kunshan R&D Department

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V1.0

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Company Profile and Testing Environment

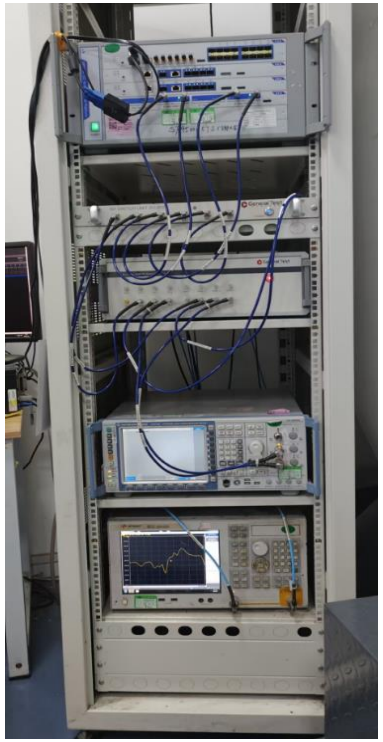
Kunshan Ruixiang was founded in 2012, with its headquarters located in Kunshan City, Jiangsu Province. It provides leading RF front-end and antenna module solutions for mobile communication terminals such as mobile phones, tablets, laptops, and smart wearables, as well as IoT fields including automobiles, routers, drones, set-top boxes, TVs, and PON integration.

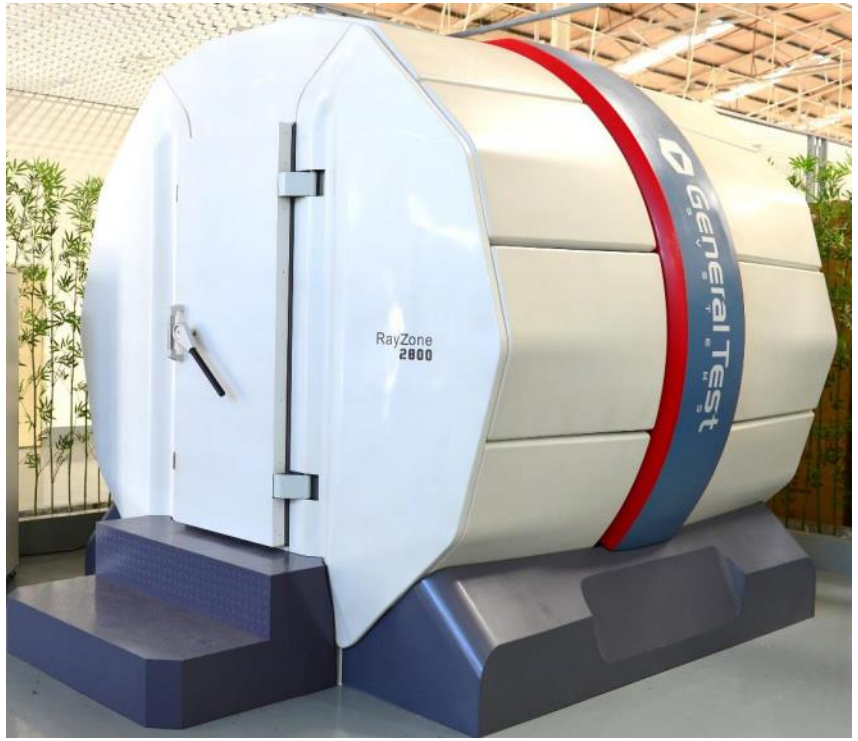
Office and R&D space: over 10,000 square meters

Independent production space: 50,000 square meters

Number of employees: over 1,000

Cumulative sales revenue: over 2 billion RMB





Project Overview

Prototype Status	New prototypes received in December 2025
Product Type	Shared power bank cabinet
Number of Antennas	3
Network	T-Mobile: B2 (1900), B4 (1700/2100), B5 (850), B12 (700), B66 (1700/2100), B71 (600) AT&T: B2 (1900), B4 (1700), B5 (850), B12 (700), B17 (700), B41 (2600) Verizon: B13 (700), B4 (1700) Wi-Fi 802.11b/g/n/ac
Antenna Version	Main antenna T01, diversity antenna T01 and WiFi antenna T01
Structural Form	Cable + FPC + 1st generation IPX connector
Environmental Treatment	No modification
Matching Circuit	No modification

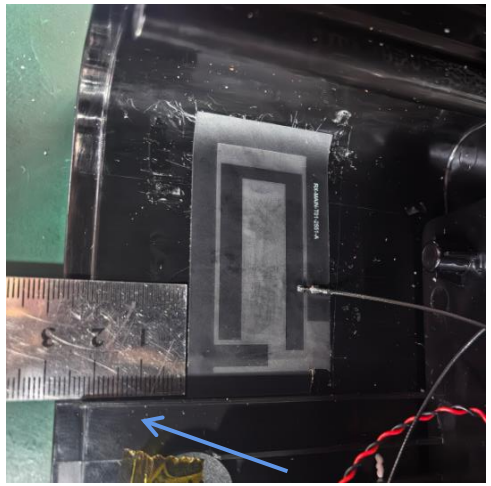
Prototype Pictures

Antenna matching remains unchanged.

Antenna Assembly

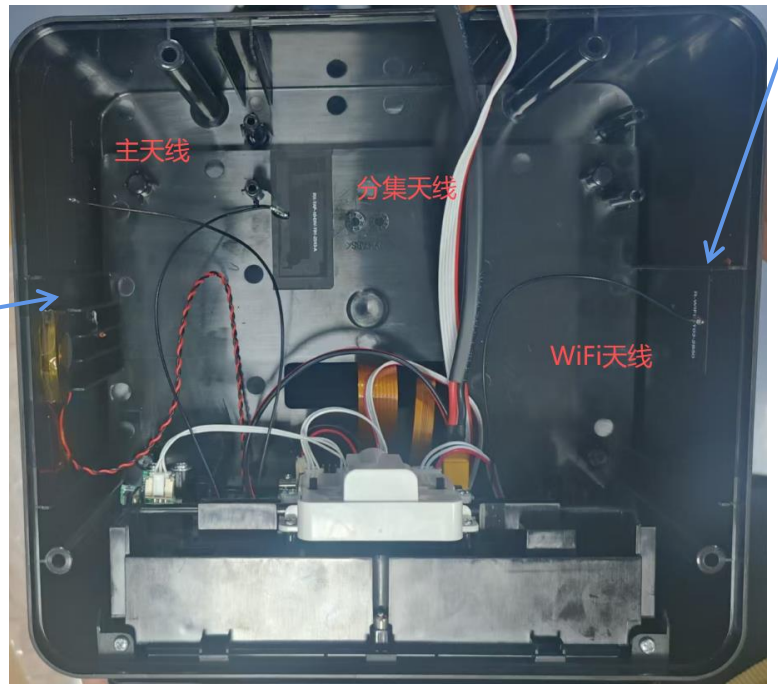
Screw boss

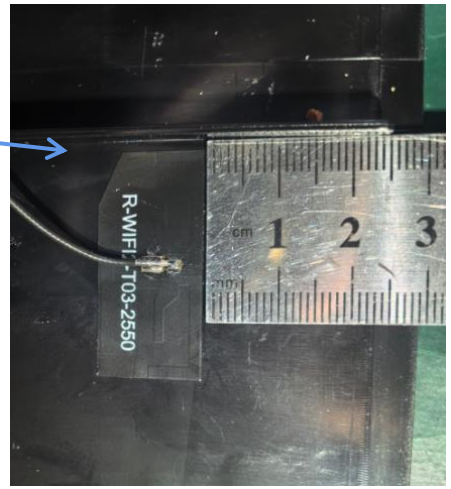
Diversity Antenna Mounting:
Align with the screw hole,
and align the other side
with the housing edge.



Structural rib

Structural rib



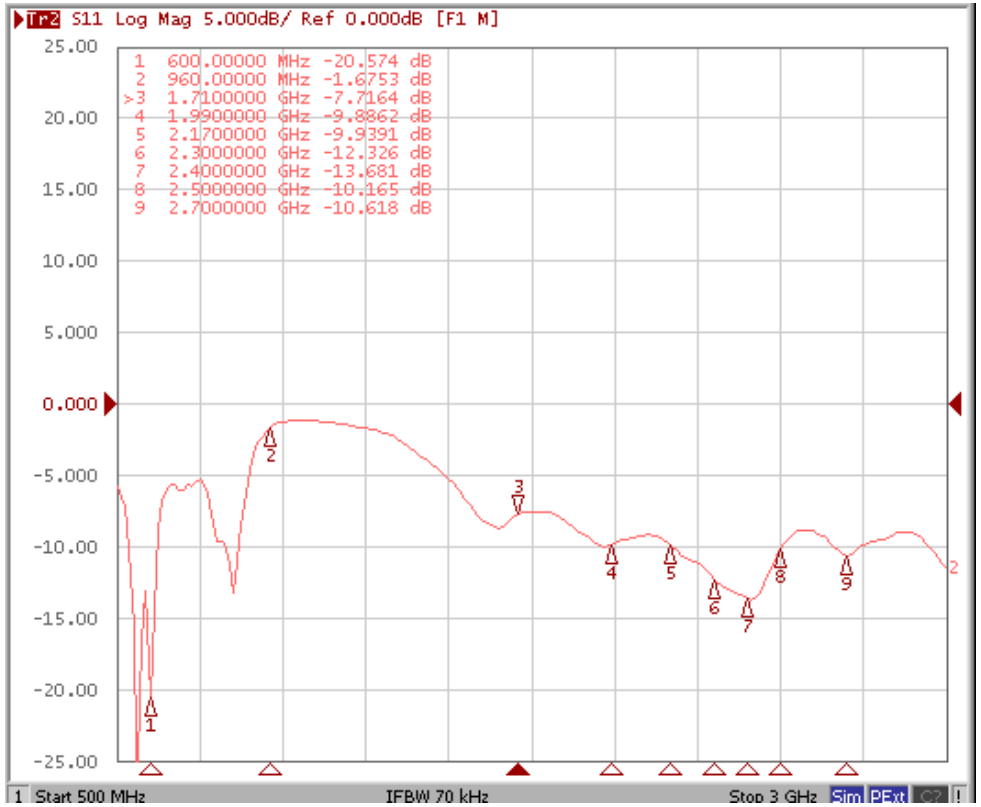


Main Antenna Mounting:
Align with the structural
ribs, approximately 27mm
from the top.

WiFi Antenna Mounting:
Align with the structural
ribs, approximately 29mm
from the top.

Main Antenna Test Results

Main Antenna S11

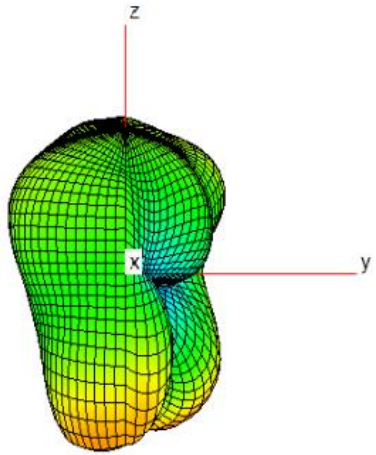


Main Antenna Passive Efficiency

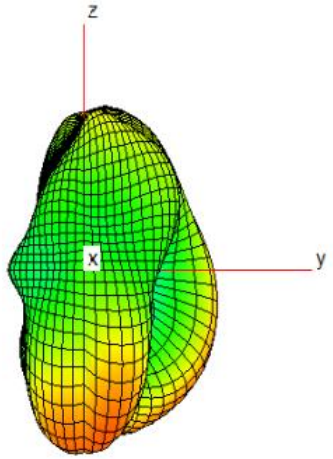
Fre.MHz	Eff.dB	Gain	Fre.MHz	Eff.dB	Gain	Fre.MHz	Eff.dB	Gain
600	-3.7	0.8	1700	-2.7	1.1	2220	-2.6	2.3
610	-3.6	0.7	1720	-2.8	1.3	2240	-2.2	2.6
620	-3.0	1.4	1740	-3.0	0.9	2260	-2.2	3.5
630	-3.4	0.8	1760	-3.5	0.9	2280	-2.6	3.2
640	-2.8	1.0	1780	-2.8	1.4	2300	-3.0	3.0
650	-2.4	1.6	1800	-2.4	2.2	2320	-2.4	3.4
660	-2.9	1.1	1820	-2.9	1.5	2340	-2.4	3.3
670	-2.6	1.2	1840	-2.5	2.3	2360	-2.4	3.1
680	-2.2	2.3	1860	-2.0	2.3	2380	-2.5	2.9
690	-2.5	2.7	1880	-2.3	2.0	2400	-2.1	2.7
700	-2.5	2.6	1900	-2.3	2.1	2420	-2.2	2.7
710	-2.8	2.0	1920	-2.0	2.2	2440	-2.2	2.5
720	-3.1	1.5	1940	-1.9	2.4	2460	-2.6	2.3
730	-3.2	2.0	1960	-2.1	2.5	2480	-2.8	2.0
740	-3.5	1.9	1980	-2.0	2.5	2500	-3.0	1.5
750	-3.5	1.3	2000	-2.0	2.6	2520	-3.5	1.3
760	-3.9	0.6	2020	-2.1	2.7	2540	-3.6	1.0
770	-4.2	0.6	2040	-2.1	2.8	2560	-3.4	1.2
780	-4.6	0.3	2060	-2.0	3.0	2580	-3.4	1.3
790	-4.7	0.1	2080	-1.7	3.4	2600	-3.8	1.1
800	-4.4	0.5	2100	-1.8	3.5	2620	-3.8	1.3
810	-4.1	0.8	2120	-1.9	3.1	2640	-3.4	2.0
820	-3.8	0.9	2140	-2.3	2.5	2660	-3.5	1.7
830	-3.4	1.6	2160	-2.5	2.1	2680	-3.1	2.0
840	-3.0	1.9	2180	-2.5	2.0	2700	-2.6	2.0
850	-2.8	2.1	2200	-2.4	1.8			
860	-2.9	1.9						
870	-3.0	1.9						
880	-3.3	1.8						
890	-3.2	1.2						
900	-3.7	1.0						
910	-4.4	1.0						
920	-4.4	0.4						
930	-4.5	-0.3						
940	-4.6	-1.6						
950	-5.0	-2.0						
960	-5.1	-2.1						

Main Antenna 3D radiation pattern

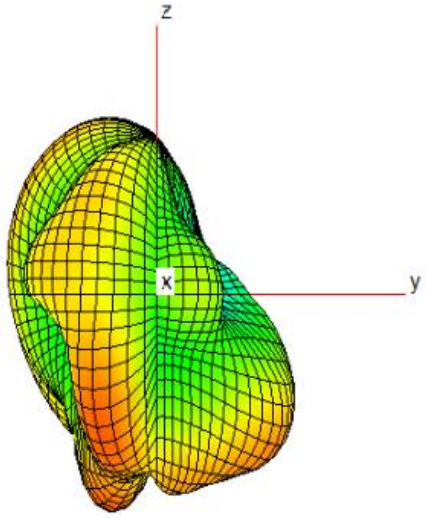
650MHz



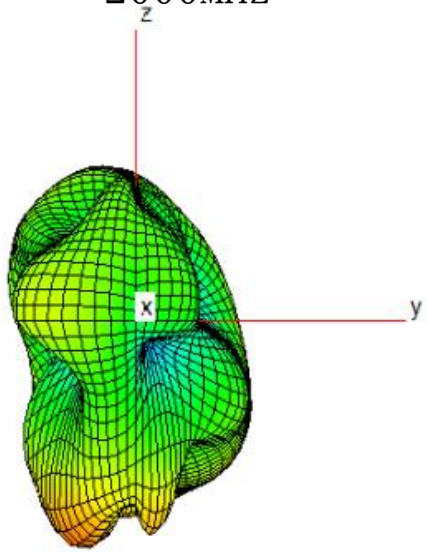
800MHz



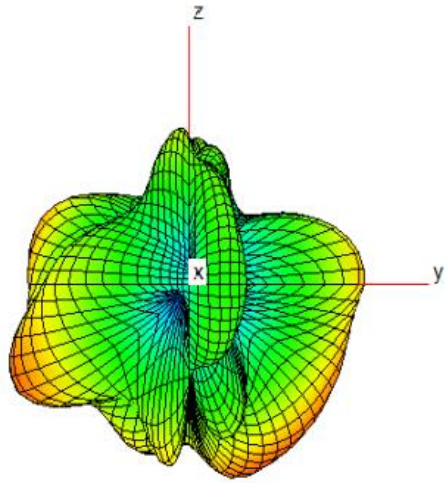
1720MHz



2000MHz

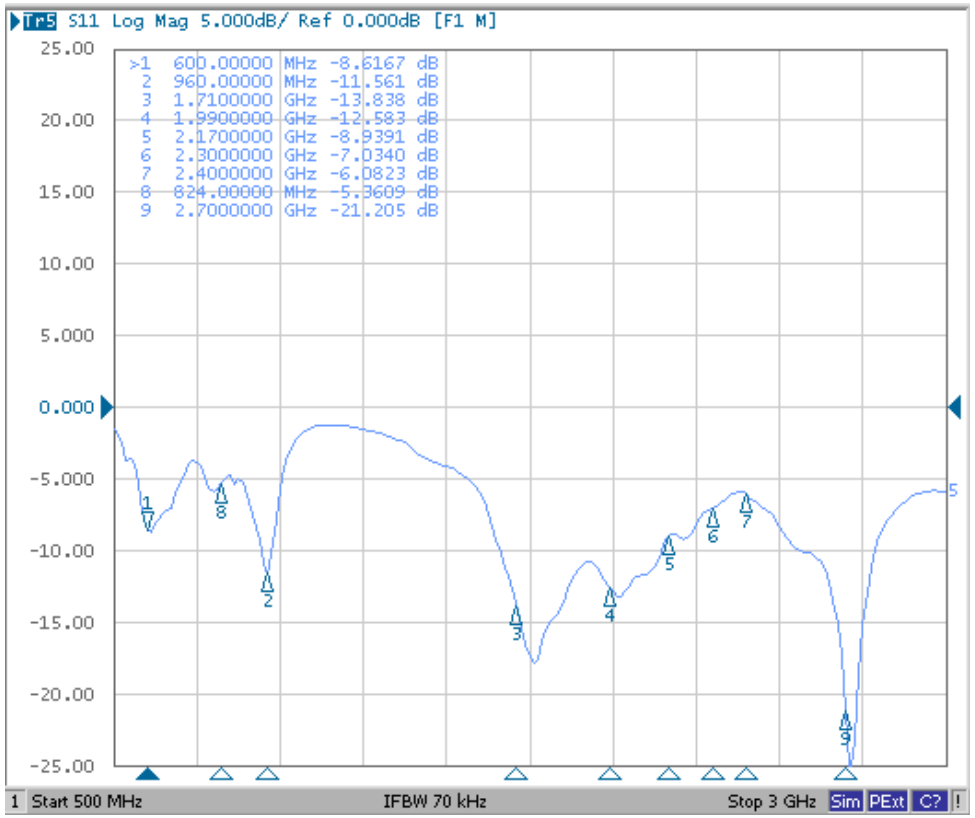


2600MHz



Diversity Antenna Test Results

Diversity Antenna S11

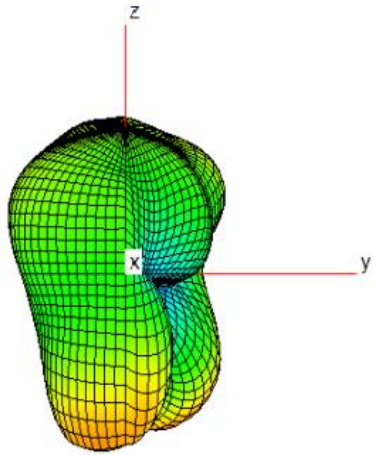


Diversity Antenna Passive Efficiency

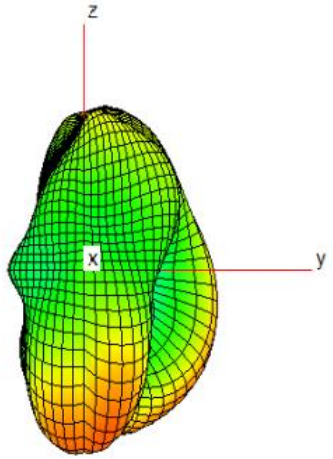
Fre. MHz	Eff. dB	Gain	Fre. MHz	Eff. dB	Gain	Fre. MHz	Eff. dB	Gain
600	-4.5	-0.8	1700	-2.9	2.1	2220	-1.8	2.8
610	-3.7	-0.3	1720	-2.5	2.4	2240	-1.8	2.8
620	-3.2	0.5	1740	-2.3	2.3	2260	-2.5	1.9
630	-3.8	0.3	1760	-2.6	2.1	2280	-3.1	2.2
640	-2.9	0.8	1780	-2.0	2.9	2300	-3.3	2.2
650	-2.3	1.3	1800	-1.5	2.8	2320	-3.0	1.8
660	-2.3	1.7	1820	-1.9	1.9	2340	-3.2	2.4
670	-2.6	1.6	1840	-1.8	2.8	2360	-3.1	2.5
680	-2.4	1.4	1860	-1.6	2.7	2380	-3.1	2.2
690	-2.9	1.4	1880	-2.0	2.5	2400	-3.1	2.1
700	-3.4	1.0	1900	-2.2	2.5	2420	-2.9	1.7
710	-4.0	0.9	1920	-2.0	2.6	2440	-2.5	1.8
720	-4.0	1.6	1940	-2.0	2.9	2460	-2.6	2.4
730	-3.9	2.3	1960	-2.2	2.9	2480	-2.7	2.6
740	-4.1	2.3	1980	-2.5	2.0	2500	-2.7	2.8
750	-3.9	1.9	2000	-2.3	2.5	2520	-2.8	2.9
760	-4.0	1.3	2020	-2.3	2.6	2540	-2.4	2.7
770	-4.0	0.7	2040	-2.6	2.1	2560	-2.2	2.7
780	-4.3	0.7	2060	-2.9	1.5	2580	-2.1	2.7
790	-4.3	0.9	2080	-2.6	1.8	2600	-2.3	2.2
800	-4.3	1.0	2100	-2.6	2.1	2620	-2.7	1.6
810	-4.2	1.1	2120	-2.6	2.7	2640	-2.7	1.7
820	-4.0	1.5	2140	-2.5	2.7	2660	-2.5	1.8
830	-3.7	1.7	2160	-2.6	2.6	2680	-2.3	2.0
840	-3.4	1.4	2180	-2.6	3.3	2700	-1.6	2.9
850	-3.1	2.0	2200	-2.7	3.0			
860	-3.0	2.3						
870	-2.7	2.3						
880	-2.6	2.1						
890	-2.7	2.0						
900	-3.2	1.3						
910	-3.5	0.5						
920	-3.2	1.0						
930	-2.6	1.2						
940	-2.0	2.2						
950	-1.9	1.8						
960	-1.8	1.4						

Diversity Antenna 3D radiation pattern

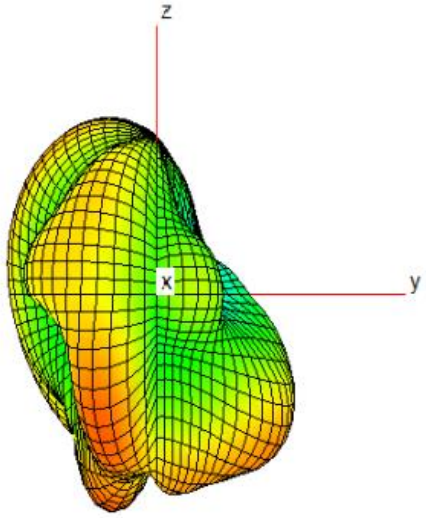
650MHz



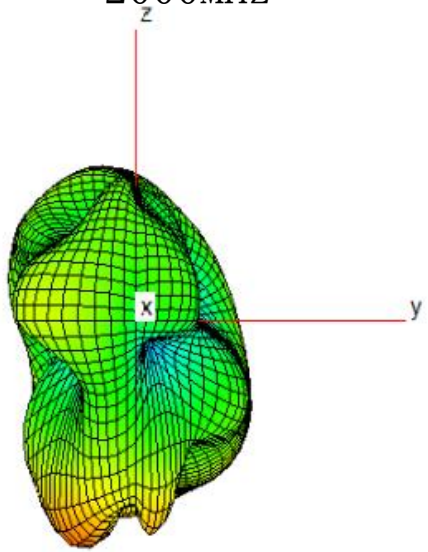
800MHz



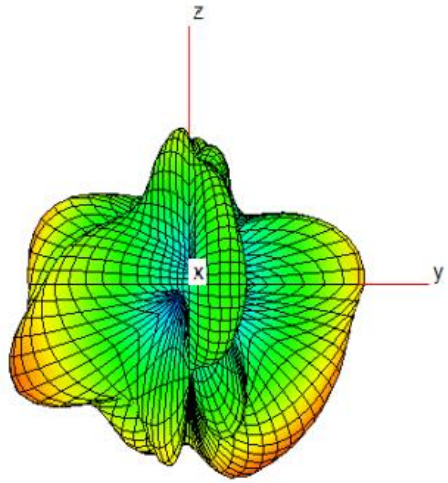
1720MHz



2000MHz

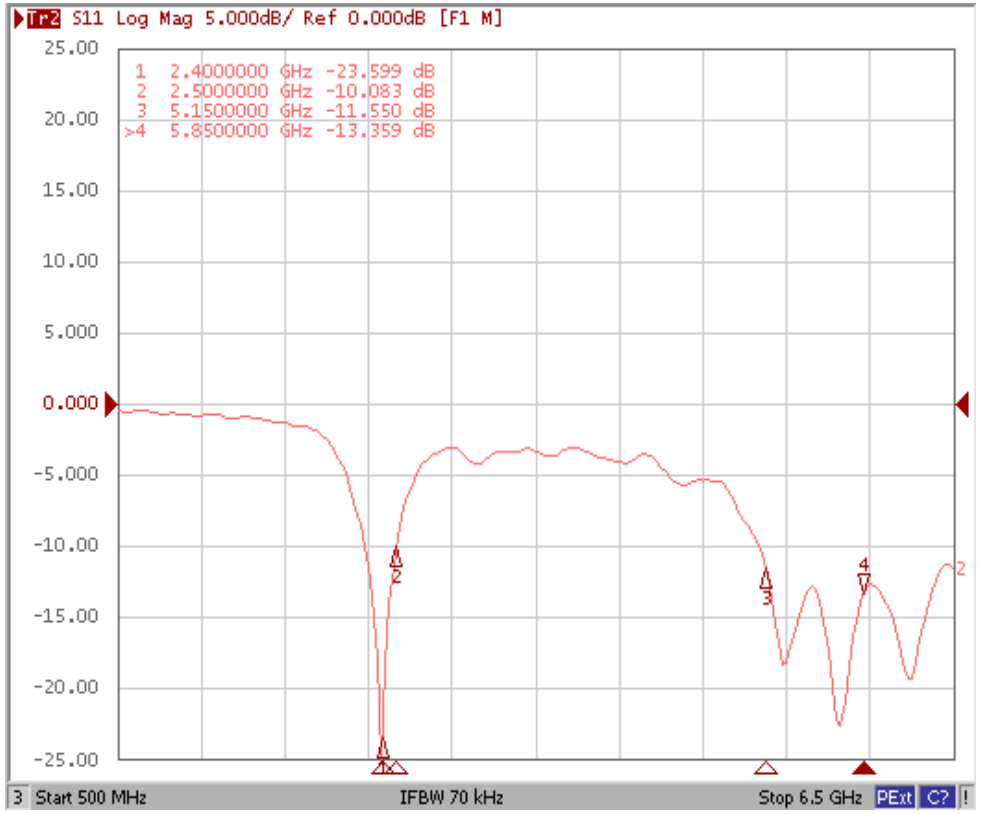


2600MHz



WiFi Antenna Test Results

WiFi Antenna S11

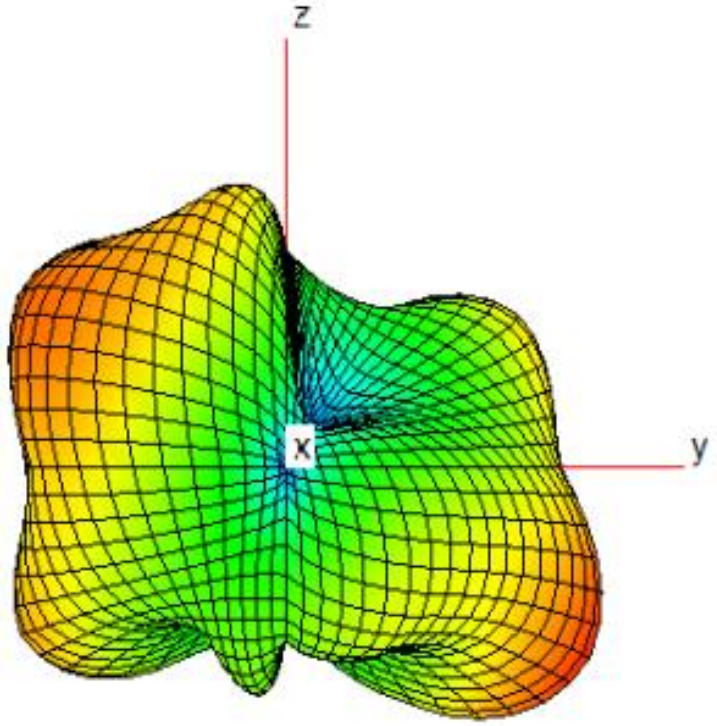


WiFi Antenna Passive Efficiency

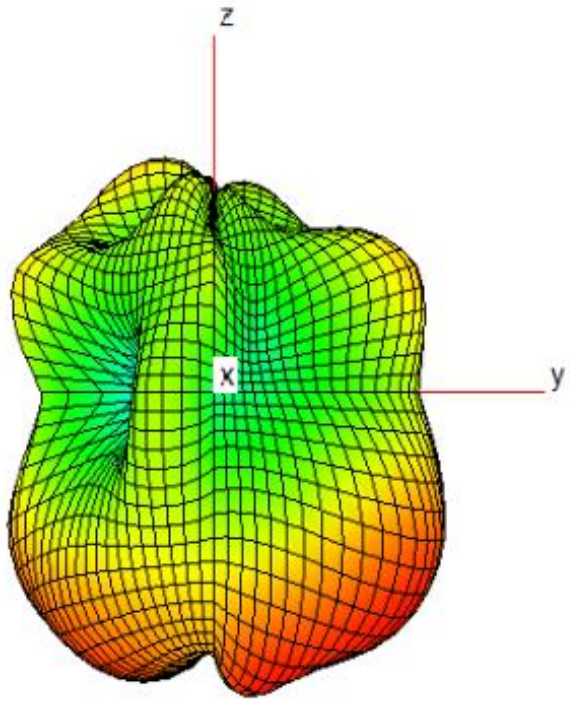
Fre.MHz	Eff.dB	Gain	Fre.MHz	Eff.dB	Gain
2400	-2.3	2.9	5150	-3.8	1.3
2410	-2.3	2.8	5200	-4.1	1.4
2420	-2.4	2.6	5250	-4.1	0.5
2430	-2.4	2.4	5300	-3.8	0.9
2440	-2.5	2.4	5350	-4.7	0.5
2450	-2.7	2.4	5400	-3.7	1.9
2460	-2.6	2.6	5450	-4.1	1.1
2470	-2.8	2.4	5500	-3.8	2.1
2480	-2.7	2.6	5550	-4.0	1.4
2490	-2.9	2.5	5600	-3.3	2.5
2500	-3.1	2.2	5650	-2.5	2.8
			5700	-3.7	2.5
			5750	-4.5	1.8
			5800	-4.7	2.6
			5850	-5.0	1.6

WiFi Antenna 3D radiation pattern

2450MHz



5500MHz

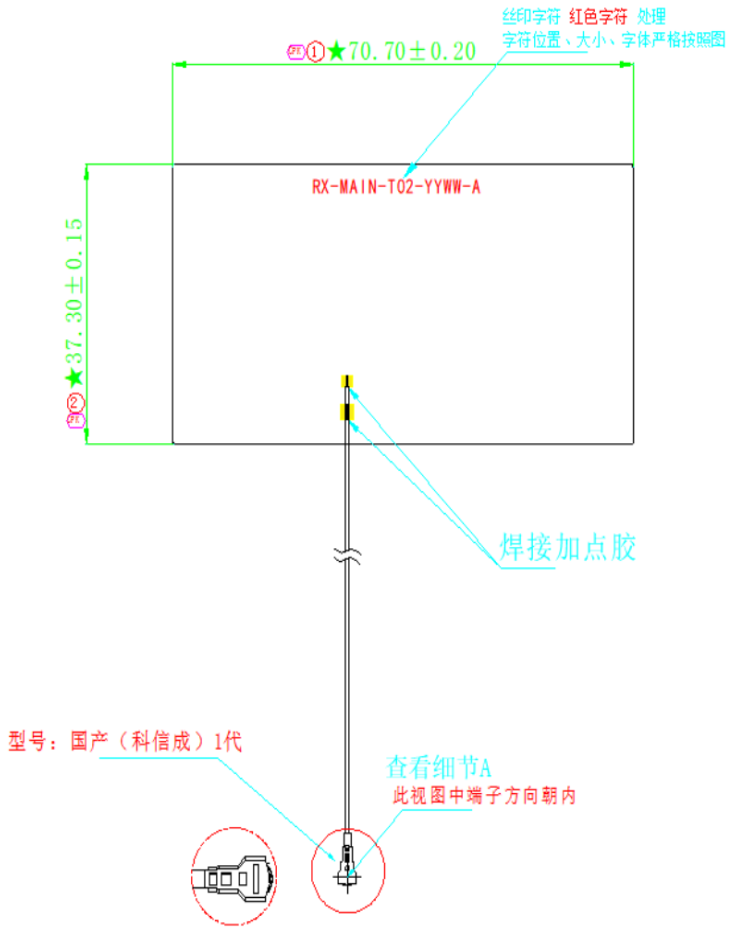


Active Testing

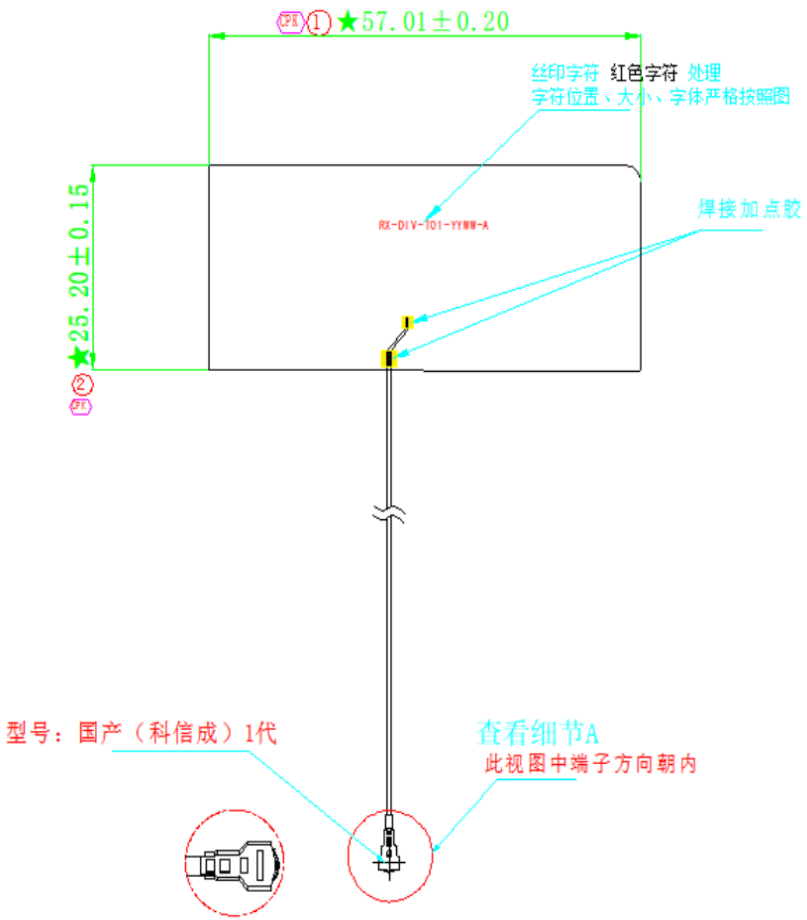
BAND	CHA	TRP	TIS
B2	18650	18.8	
	18900	18.6	
	19150	18.3	-95.8
B4	20000	18.3	
	20175	18.5	
	20350	18.8	-92.0
B5	20450	19.5	
	20525	19.6	
	20600	19.8	-90.1
B12	23035	18.6	
	23095	18.5	
	23155	18.7	-88.9
B13			
	23230	18.1	-88.6
B17	23780	18.2	
	23790	18.4	
	23800	18.5	-89.7
B66	132022	18.2	
	132322	18.5	
	132622	18.7	-91.7
B71	133172	18.4	
	133297	18.7	
	133422	18.3	-88.9
B41	39750	19.5	
	40620	19.3	
	41490	19.5	-91.9

Antenna Drawings

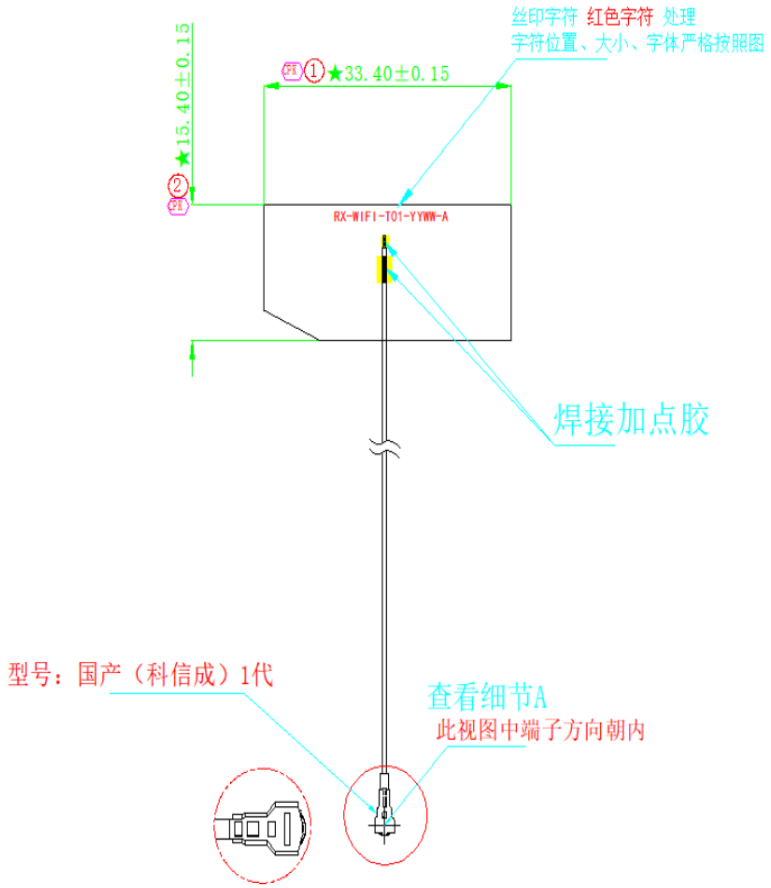
Main Antenna Drawings



Diversity Antenna Drawings



WiFi Antenna Drawings



This debugging was performed on the prototype received in December 2025:

1. The antenna is equipped with B71 (600MHz) and has been re-tuned.
2. All antennas used in the test report are prototype antennas.
3. The antenna position has been redefined. To ensure mounting consistency, it is recommended to make a mark on the housing (see the example in the figure).

Before Mounting
(Positioning Assisted by Structural Ribs)

After Mounting

Thanks
感谢观看