



TX900-XPL7-100RP

Antenna Specification

900MHz Suction Cup Antenna

RP-SMA-J Connector (SMA female internal thread, inner pin)

Chengdu Ziisor Technology Co.,Ltd

Chapter 1 Product Introduction

The TX900-XPL7-100RP is a 868/915 MHz dual-band suction cup antenna. The overall height of the antenna is approximately 99 mm, with an RP-SMA-J connector (SMA female internal thread, inner pin). It features top loading and a strong magnetic base, allowing it to be firmly attached to metal surfaces without falling off easily. It is suitable for various 868/915 MHz dual-band wireless devices such as wireless modules, data transmission radios, and vehicle-mounted radios.



Fig. 1 TX900-XPL7-100RP antenna outline

Chapter 2 Specifications

Electrical Parameters

Antenna Bandwidth	860M - 960MHz
Antenna Gain	3 dBi
Voltage Standing Wave Ratio (VSWR)	≤2.0
Polarization	Vertical
Radiation Pattern	Omnidirectional
Input Impedance	50Ω
Power Handling	20 W

Other Parameters

Product Dimensions	99 mm
Suction Cup Diameter	30 mm
Overall Weight	25 g
Antenna Material	Carbon steel, ABS
Cable Length	1 m (customizable)
Cable Material	RG174
Connector Type	RP-SMA-J (SMA female internal thread, inner pin)
Operating Temperature	-40℃ ~ +85℃
Storage Temperature	-40℃ ~ +85℃

Chapter 3 Antenna Characteristics

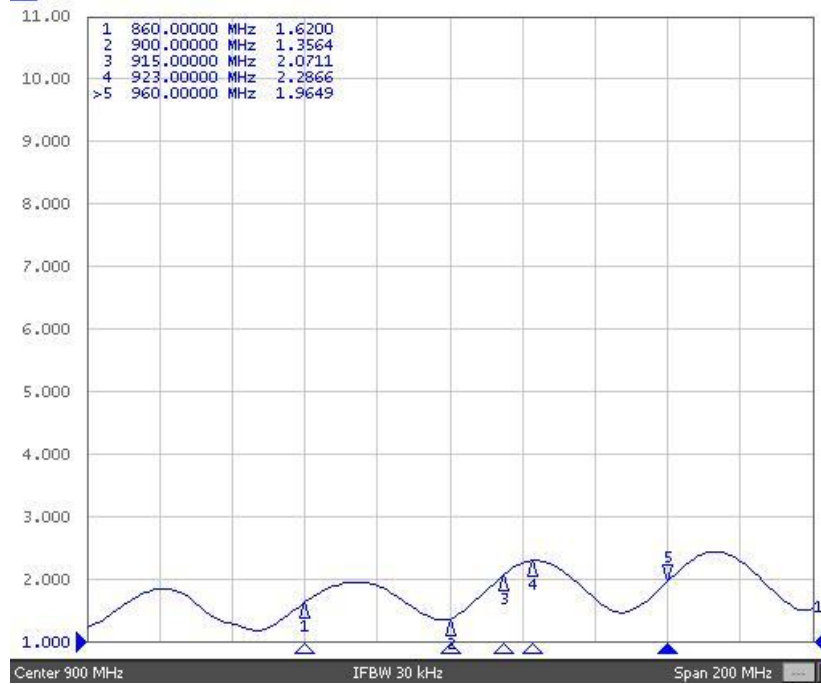
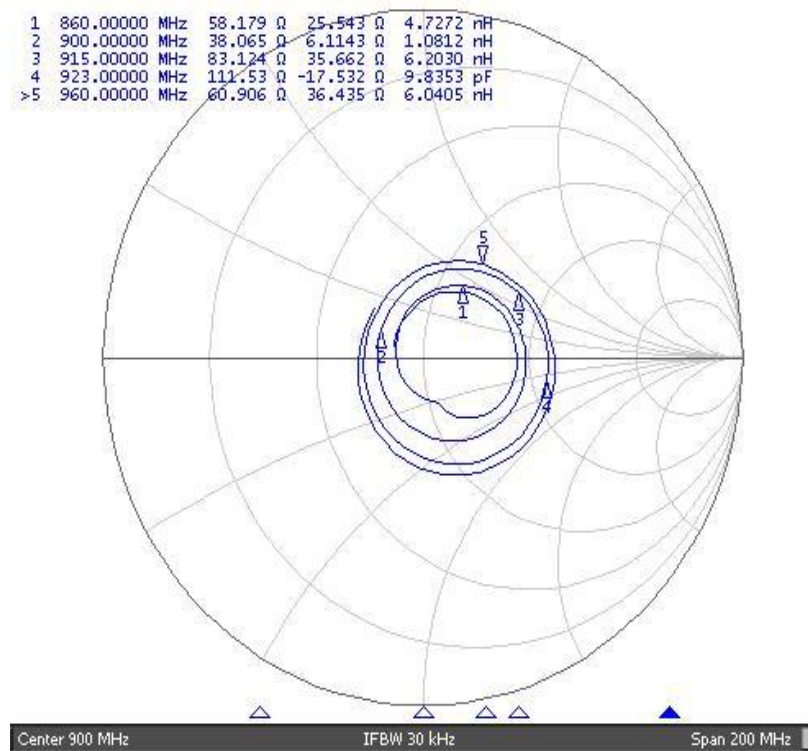


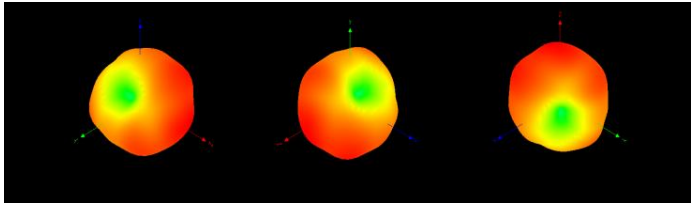
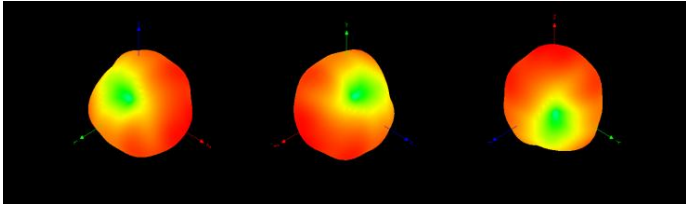
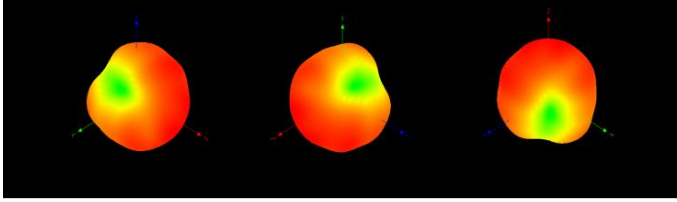
Fig. 2 Voltage Standing Wave Ratio (VSWR)



Efficiency、gain

Frequency/Mhz	Efficiency/ %	MaxGain/dBi
860	54.64	1.04
865	56.03	1.47
870	55.16	1.88
875	53.79	2.12
880	59.98	2.32
885	60.79	1.87
890	56.07	2.11
895	55.46	2.24
900	50.26	2.61
905	57.15	3.0
910	54.58	2.98
915	53.09	2.45
920	55.72	2.23
925	51.52	1.87
930	53.10	1.33
935	50.87	1.26
940	50.12	1.09
AVG	54.6	1.99

Radiation Pattern

868MHz	
900MHz	
915MHz	

Chapter 4 Common Questions

1. The antenna frequency must match the frequency of the wireless device; otherwise, the communication performance will be poor.
2. The lower the communication frequency, the longer the wavelength and the better the diffraction (bending) performance.
3. When there are obstacles in the line-of-sight path, the communication distance will be attenuated accordingly.
4. Pay attention to the antenna radiation direction. Incorrect antenna installation direction will lead to a shorter transmission distance.
5. The ground absorbs radio waves. Testing near the ground will result in poor performance; it is recommended to increase the height.
6. Seawater has a strong ability to absorb radio waves, so testing near the sea will result in poor performance.
7. If there are metal objects near the antenna or the antenna is placed inside a metal enclosure, the signal attenuation will be very severe.
8. Poor impedance matching between the antenna and the communication device will lead to poor communication performance.

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