

Antenna Datasheet

Spring Antenna

Model:

BW915SNX17-5W2

Description:

Bent Spring Antenna

Length Features:

915MHz

360° Omnidirectional Radiation

Dimensions: 17mm x 5mm x 2mm

Compliant with RoHS & REACH Regulations

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BW915SNX17-5W2

Part Number Explanation

BW	Company	Bat Wireless
915	Frequency	915MHz
S	Name	Spring Antenna
N	Type	Internal
X	Constant	X
17-5	Dimensions	17-5mm
W	Feature	Bent
2	Length	2

1. Description

Bat Wireless **BW915SNX17-5W2** is a compact antenna specifically designed for 915MHz wireless communication. Featuring a spring-like spiral structure, it combines mechanical flexibility with electrical performance, offering vibration resistance and bend tolerance, making it ideal for automotive or mobile devices. Its small size and light weight support PCB soldering, facilitating integration into smart home devices and wireless modules. The spiral design reduces multipath interference, enhancing signal stability in complex environments.

Typical Application Scenarios:

Vehicle & Mobile Devices: ETC terminals, in-car Wi-Fi, logistics trackers

IoT Terminals: Smart home sensors, industrial wireless modules

Intelligent Transportation: Rail contact network monitoring

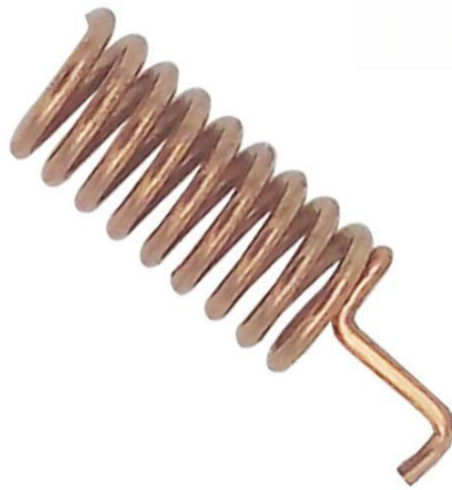
Bat Wireless provides customized services to optimize your equipment. We have a mature R&D team that can respond quickly to meet your needs. If you have any requirements, please contact our sales and FAE.



2. Specification

Parameters	Typ.	Unites	Notes
Electrical Characteristics			
Antenna Type	Spring Antenna		
Frequency Range	915	MHz	
Input Impedence	50	Ω	
V.S.W.R	< 2.6		
Gain	2.4	dBi	
Polarization Type	Vertical		
Power Capacity	50	W	
Lightning Protection	-		
DC Voltage	-	V	
Radiator	-		
Mechanical Characteristics			
Dimensions	17 x 5 x 2	mm	
Connector Type	-		
Cable Type	-		
Cable Length	-	mm	
Mount way	-		
Color	Copper		
Meterial	-		
Weight	0.72	g	
Environmental Characteristics			
Waterproof Rating	-		
ROHS Compliant	Compliant		
Operating Temperature	-45~ +85	$^{\circ}\text{C}$	
Storage Temperature	-45~ +85	$^{\circ}\text{C}$	

3. Product Picture



4. Mechanical Drawing

PARTS DRAWING			ROHS Compliant		
REV	PRODUCT NO.	DATE	NAME	DESCRIPTION	


Requirements:

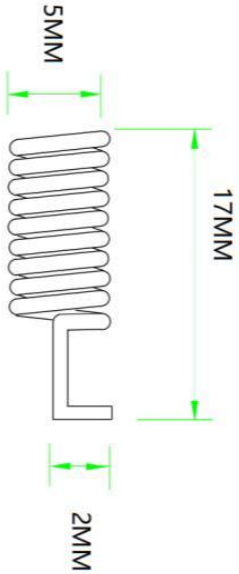
1. The wire jacket shall be free from cuts or damage.
2. 100% continuity testing shall be performed, and all products must pass.
3. 100% full inspection is required, and all products must meet specifications.
4. Eco-friendly manufacturing processes shall be adopted, and finished products must comply with ROHS requirements.
5. Unless otherwise specified, general tolerances shall apply.

NO	Code	Name	Description	Q'ty
3	N	Spring Outer Ring	91±0.125T	1
2		Spring Outer Wire	5.0±0.1	1
1			0.5 Phosphor Bronze	1

Frequency	915MHz
Gain	2.4
VSWR	<2.6
Polarization	Vertical
Impedance	50Ω

Operating Temperature: -45°C~85°C
Storage Temperature: -45°C~85°C

ANGLE PROJECTION 	GENERAL TOLERANCES 100~200: ± 0.30 50~100: ± 0.20 20~50: ± 0.15 1~10: ± 0.10
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PRODUCT NAME				
Spring Antenna-915MHz-L=17MM				
UNIT	MM	SIZE	1:3	
PAGE	1 OF 1	FORNMT	A4	

5. Test Equipment



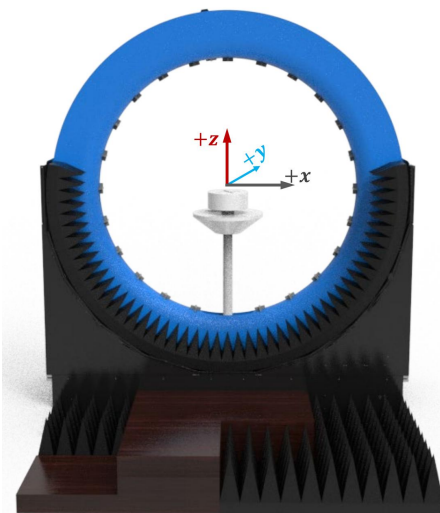
Keysight/E5071C Network Analyzer



R&S/CMW500 Comprehensive Tester



R&S/SMBV100B Signal Generator



DT-3500 Datasheet

Specification:

Specification:	Description
Test Frequency	400MHz-8.5GHz
System Size	L*W*H=4*3.5*3.5m
Number of Probes	23 (Probe) + 1 (link)
Interval Angle	15°
Sampling Diameter	2200mm
Carring Capacity	≤40kg

Testing Capability

Description

Active measurement

Capability : TRP、TIS、EIRP、EIS,. etc
Mode : 2G/3G/4G/5G、Wi-Fi b/g/n/a/ac/ax、BT、NB-IOT、Cat-M (eMTC)、GPS/BEIDOU/GLONASS、ZigBee、LoRa(Non-Signaling),.etc

Passive measurement

Test category : Gain、Efficiency、2D pattern、3D pattern、Pattern roundness、Axial Ratio、ECC,Phase center,. etc
Polarization : Circular polarization, linear polarization, elliptical polarization



RF Link diaram of multi probe spherical near-field testing system

RF Link Overview



RF Link of Passive measurement



RF Link Overview

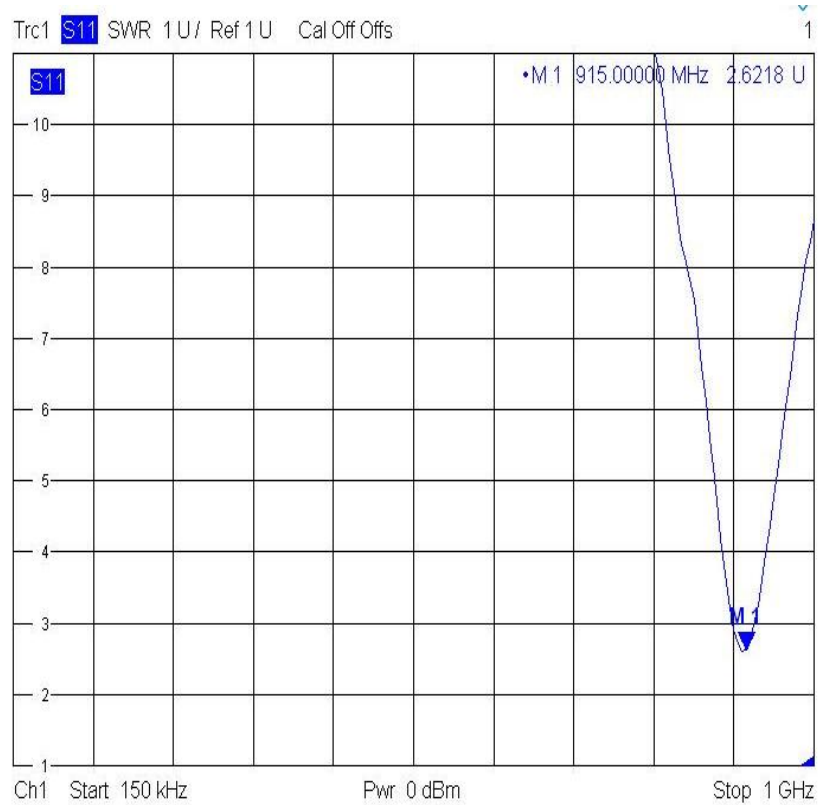


RF Link of Passive measurement

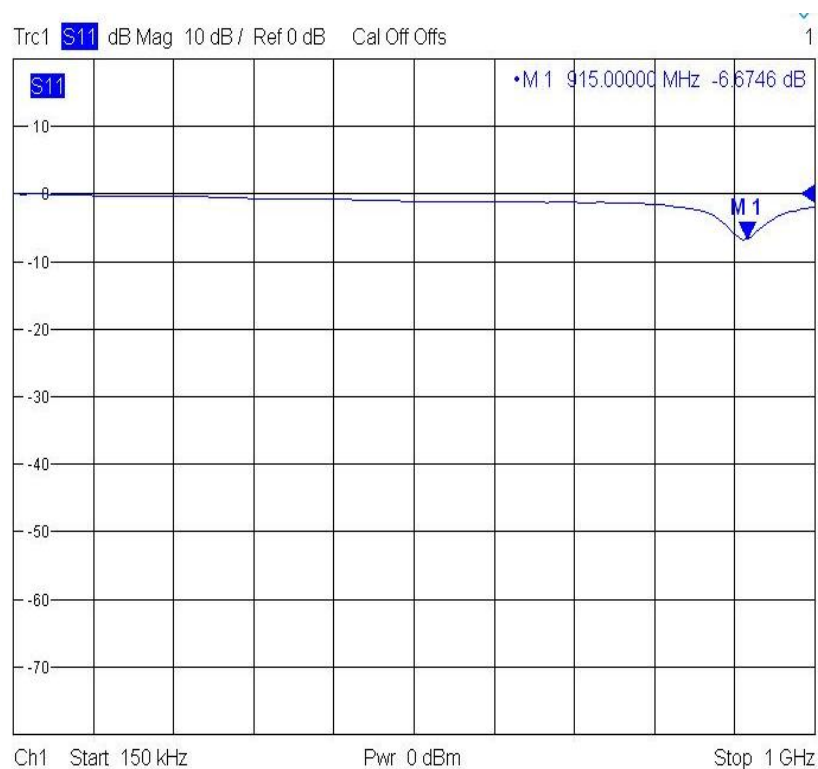


6. Performance Data

6.1 VSWR

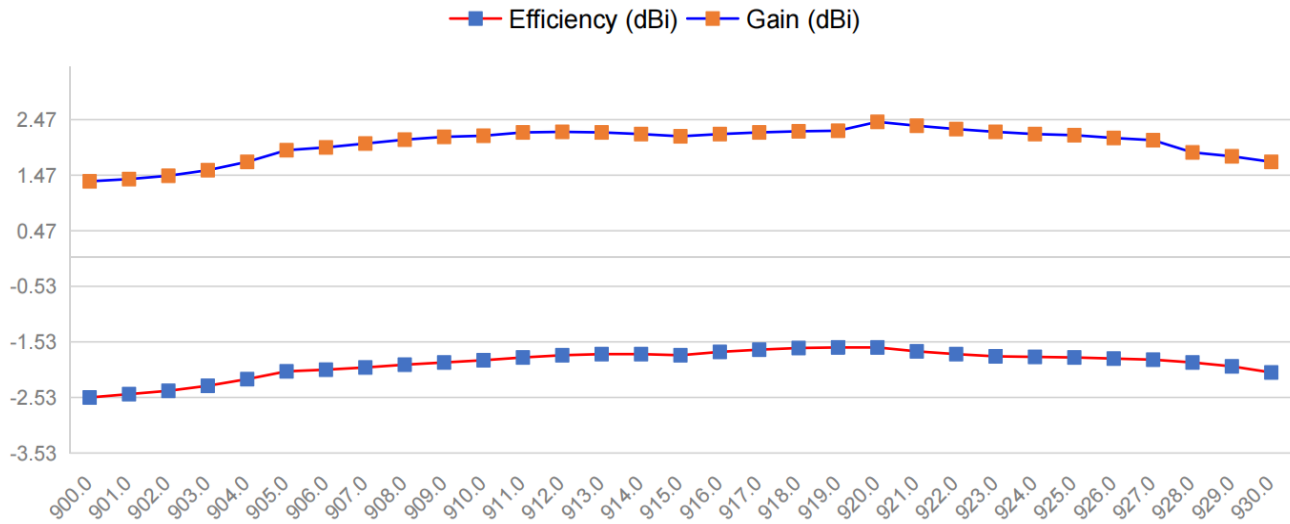


6.2 Return Loss

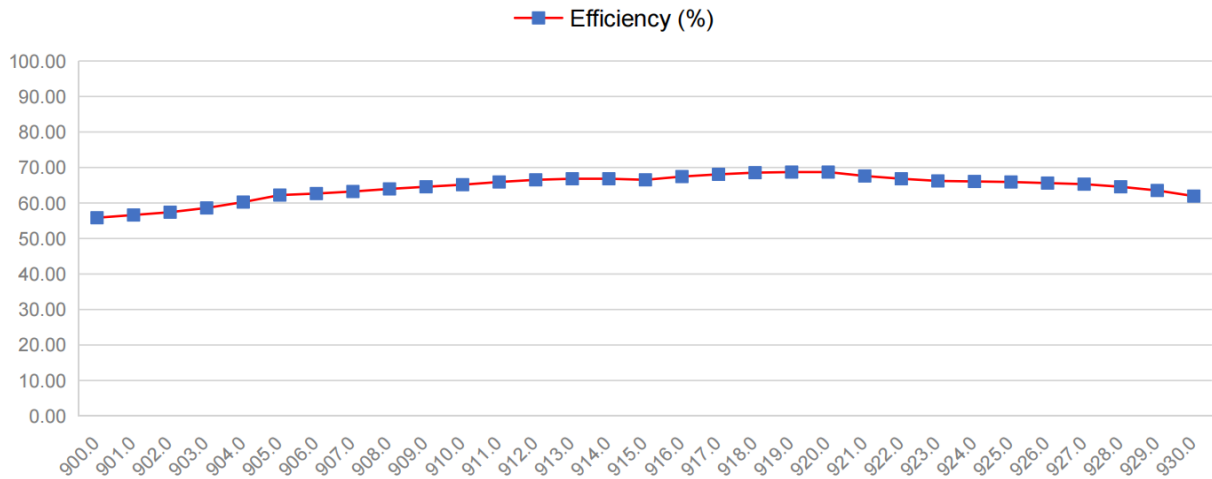


6. Performance Data

6.3 Gain



6.4 Efficiency

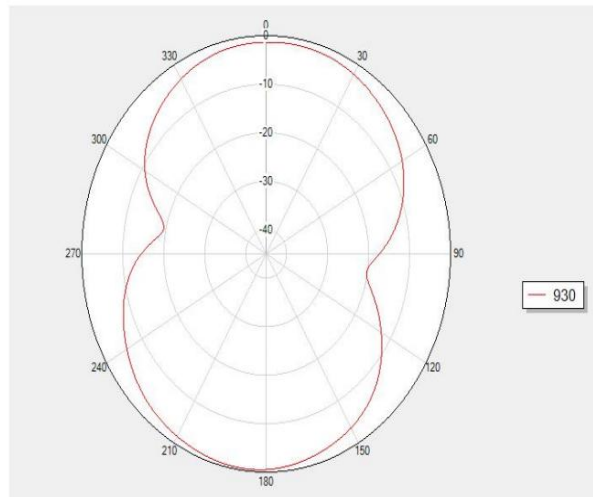
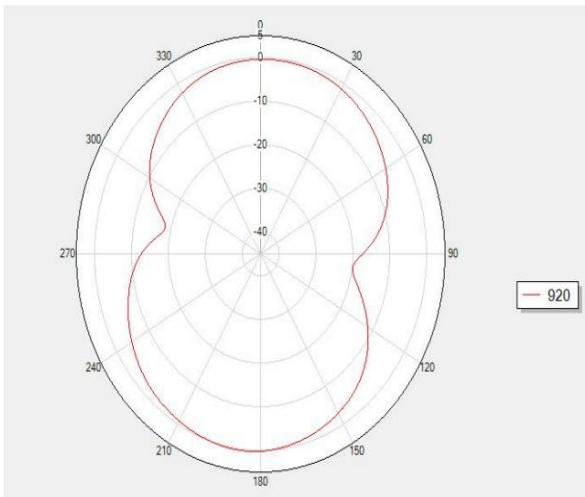
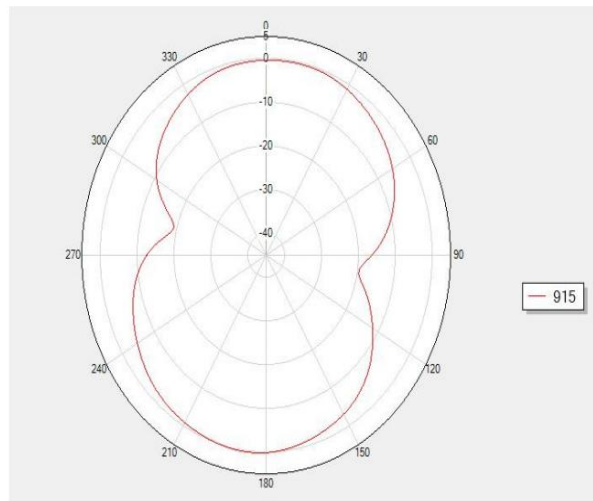
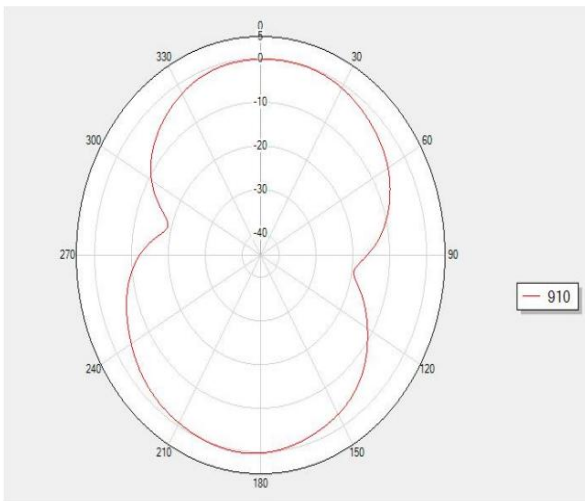


6.5 Gain and Efficiency

Frequency (MHz)	910	915	920
Gain (dBi)	2.18	2.17	2.43
Efficiency (%)	65.16	66.53	68.71

7. Radiation Patterns

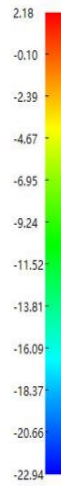
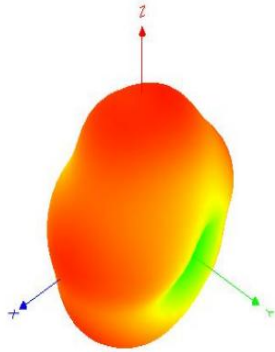
7.1 2 D Radiation Patterns



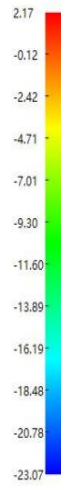
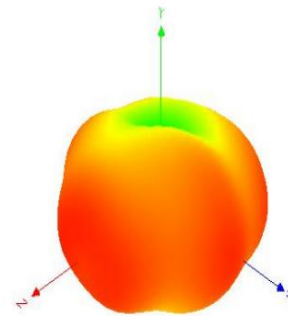


7.2 3D Radiation Patterns

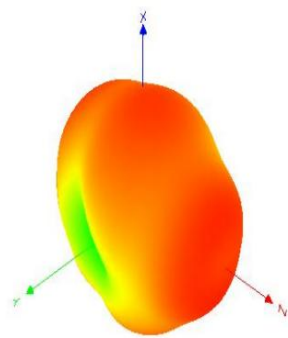
Frequency (MHz) :910



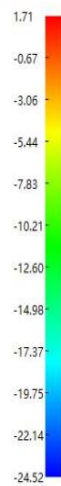
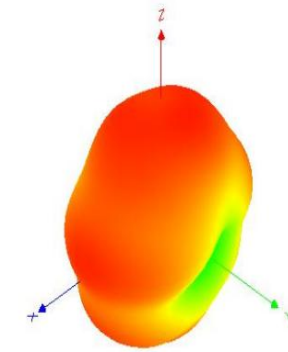
Frequency (MHz) :915



Frequency (MHz) :920



Frequency (MHz) :930





DECLARATION:

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Documentation

Version :	August-21-2025-A01
Date :	2025-8-21
Remarks :	First update
Author:	Carly

Change Log
