

# Antenna Datasheet

## 315MHz Rubber Antenna

Model:

BW315JWX105-10KJ

Description:

315MHz Rubber Antenna with SMA Male Connector

Features:

315MHz Frequency Range

SMA Male (Inner Thread, Inner Pin) Connector

Structure: Foldable

360° Omnidirectional Radiation

Dimensions: 105mm x 10mm

Compliant with RoHS & REACH Regulations

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## BW315JWX105-10KJ

### Part Number Explanation

BW	Company	Bat Wireless
315	Frequency	315MHz
J	Name	Rubber Antenna
W	Type	External
X	Constant	X
105-10	Dimensions	105-10mm
K	Feature	Foldable
J	Connector	SMA Male

### Selection Table

Connector	IPEX-1	IPEX-2	IPEX-3	IPEX-4	IPEX-5	SMA	Customizable
Cable Length	100	150	200	250	300	500	Customizable
Cable Type	RG1.13	RG1.13	RG1.37	RG0.81	RG0.81	RG316	Customizable

## 1. Description

Bat Wireless BW315JWX105-10KJ is a high-performance omnidirectional antenna commonly used in short-range communication applications such as wireless remote control, security alarms, and smart home systems. It features a high-quality plastic housing, is foldable, and offers excellent signal reception and transmission capabilities, providing stable and reliable support for device connectivity. Its compact and lightweight rod-shaped design makes it easy to install and transport.

#### Typical Application Scenarios:

Wireless remote control: garage door remote control, car keys, industrial equipment control

Security systems: wireless alarm sensors, door magnets, infrared detectors

IoT devices: smart home sensors (temperature and humidity, smoke alarms), low-power wireless transmission

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
<b>Electrical Characteristics</b>			
Antenna Type	Rubber Antenna		
Frequency Range	315	MHz	
Input Impedence	50	$\Omega$	
V.S.W.R	<2.2		
Gain	--1	dBi	
Polarization Type	Vertical		
Power Capacity	50	W	
Lightning Protection	-		
DC Voltage	-	V	
Radiator	-		
<b>Mechanical Characteristics</b>			
Dimensions	105 x 10	mm	
Connector Type	SMA-J Male (Customizable)		
Cable Type	-		
Cable Length	-	mm	
Mount way	Screw-on		
Color	Black		
Meterial	ABS		
Weight	7	g	
<b>Environmental Characteristics</b>			
Waterproof Rating	-		
ROHS Compliant	Compliant		
Operating Temperature	-45~ +85	$^{\circ}\text{C}$	
Storage Temperature	-45~ +85	$^{\circ}\text{C}$	

\*Note: The above data is for reference only. Since the antenna function is relatively sensitive, please inform us for evaluation if there are any changes to the structural components around the main body of the antenna.

3. Product Picture



\* Product images are for reference only

# 4. Mechanical Drawing

**PARTS DRAWING**

**ROHS Compliant**

REV	PRODUCT NO.	DATE	NAME	DESCRIPTION

**Requirements:**

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

NO	Code	Name	Description	Qty
7		SMA	Male Black Zinc Alloy	1
6		Spring	50P11.5700P04.4MM 39N Nickel-Plated Carbon Steel	1
5		Heat Shrink Tubing	L=18MM Black	1
4		Down Base	12*9.3MM Black	1
3		Up Base	20*9.3MM Black	1
2		Rubber Shell	67*49.3MM Black	1
1		Wire	RG178 Double-sh Plated Wire Brown L=52MM	1

<b>Frequency</b>	3.15MHz
<b>Gain</b>	2.2DBI
<b>VSWR</b>	<-1
<b>Polarization</b>	Vertical
<b>Impedance</b>	50Ω
<b>Operating Temperature</b>	-45°C~85°C
<b>Storage Temperature</b>	-45°C~85°C

<b>ANGLE PROJECTION</b>			
<b>PRODUCT NAME</b>			
Rubber Antenna-3.15MHz-SMA Male-L=105MM			
<b>UNIT</b>	<b>MM</b>	<b>SIZE</b>	<b>1:3</b>
<b>PAGE</b>	<b>1 OF 1</b>	<b>FORNMT</b>	<b>A4</b>

## 5. Test Equipment



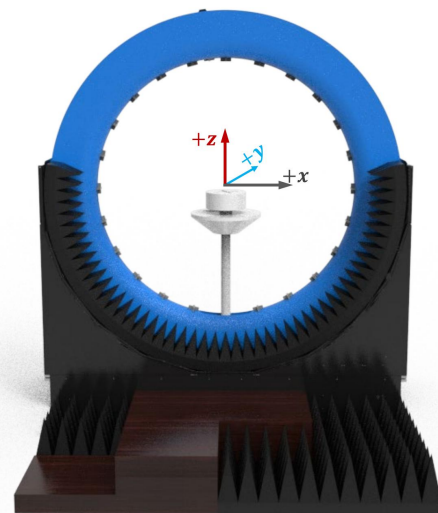
Keysight/E5071C Network Analyzer



R&amp;S/CMW500 Comprehensive Tester



R&amp;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

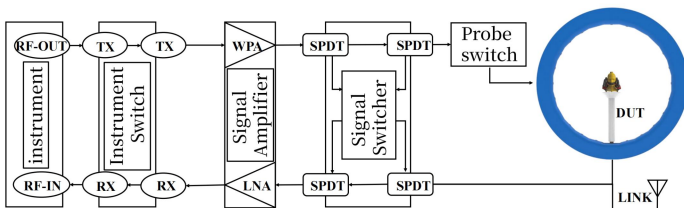
##### Passive measurement

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

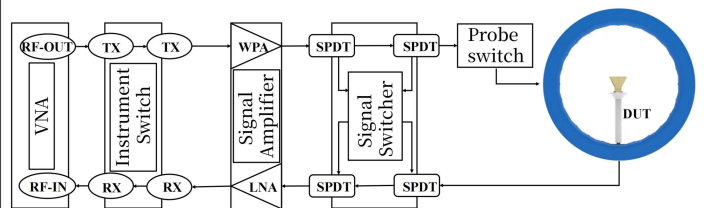


## RF Link diaram of multi probe spherical near-field testing system

RF Link Overview



RF Link of Passive measurement



RF Link Overview

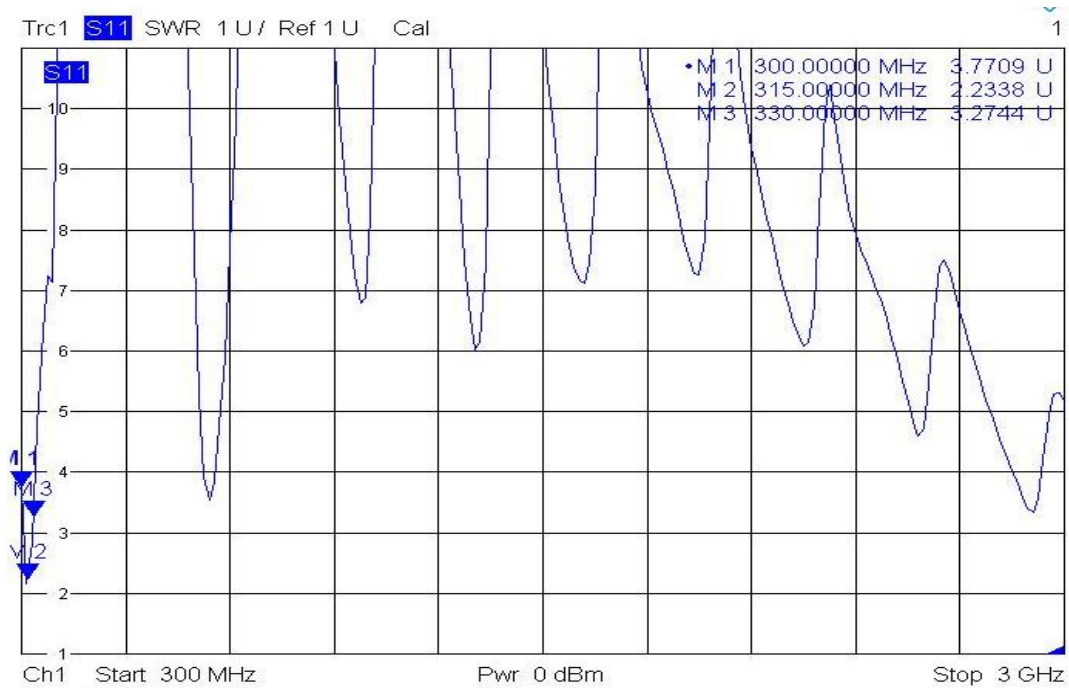


RF Link of Passive measurement

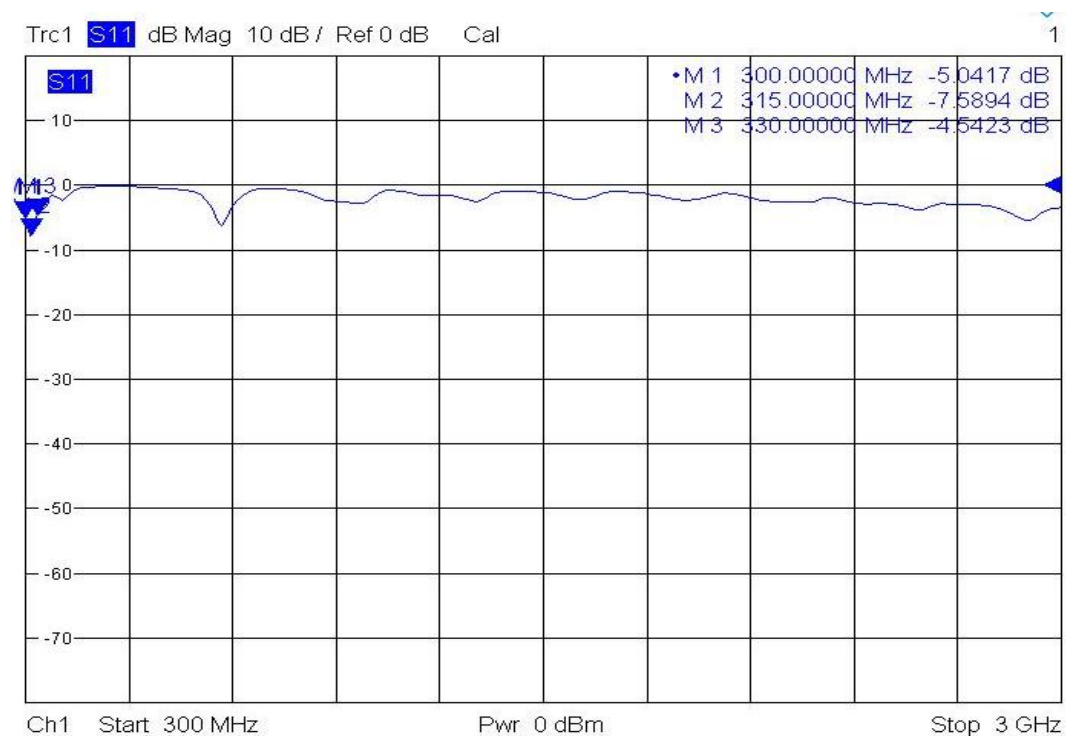


## 6. Performance Data

### 6.1 VSWR



### 6.2 Return Loss





## DECLARATION:

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## Shenzhen Bat Wireless Technology Co.,Ltd

Office Add: Room 1301, 13th Floor, No. 8 Langhua Road, Xinshi Community, Dalang Street, Longhua District, Shenzhen

Email: [marketing@batwireless.com](mailto:marketing@batwireless.com)

Tel: 0755-21031236



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