



Datasheet

SMA Antenna Connector

Model No:

BWSMA-JKW

Description:

SMA PCB-end Straight & Vertical Pin Connector

Features :

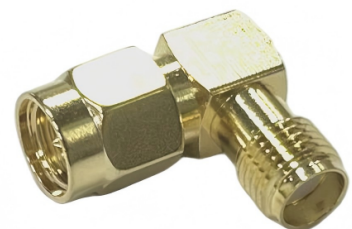
0-6000MHz

With Inner Thread and Inner Pin

PCB-end connection

Size:16.7mm x 15mm

RoHS & REACH Complaint



CONTENTS

1.	Product Description	3
2.	Product Specification	4
3.	Product Picture	5
4.	Mechanical Drawing	6
5.	Test Equipment	7-8



BWSMA-JKW

Part Number Description

BW	Company	Bat Wireless
SMA	Name	SMA Type
J	Connector	J (Inner pin)
K	Type	K(Inner hole)
W	Feature	Angeled

1. Description

Bat Wireless **BWSMA-JKW** is a common RF coaxial connector, typically operating within a frequency range of 0 to 6 GHz. It finds extensive application in high-frequency scenarios such as wireless communications, test equipment, and radar systems. Its core characteristics include high-frequency support, robust durability, and vertical mounting, making it suitable for PCB-mounted antennas or RF signal connections. Vertically soldered onto the PCB, the signal transmission direction is perpendicular to the board surface. This configuration is suitable for top-side connections to antennas or RF cables. Featuring a straight-head design, its simpler structure accommodates applications with less stringent space constraints. The interface type is an internal pin, designed for pairing with a female connector. Its low-loss design, optimised manufacturing processes, and coaxial structure ensure minimal insertion loss during signal transmission.

Classic Application Scenarios:

Wireless Communication Modules: GPS/BeiDou positioning terminals, 4G/5G modules, Wi-Fi/Bluetooth modules

Test and Measurement Equipment: Connection interfaces for RF test probes, spectrum analysers, antenna ports for signal generators

Consumer Electronics and Industrial Equipment: Walkie-talkies, RFID readers/writers, medical monitoring devices

Bat Wireless provides customized services to optimize your device, 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			
Product Type	SMA Antenna Connector		
Frequency Range	0-6000	MHz	
Input Impedence	50	Ω	
Contact resistance	IC<3, OC<2	m Ω	
Insulation resistance	>5000	M Ω	
Insert Loss	0.15	dB(6GHz)	
RF leakage	1000	V	
Durability	500	Cycles	
PLUG ID/JACK OD	-	mm	
DC Voltage	-	V	
Mechanical Characteristics			
Dimensions	16.7 x 15	mm	
Connector Type	J (Inner Pin) to K(Inner hole)		
Cable Type	-		
Cable Length	-	mm	
Mount way	Screw-on		
Color	Gold		
Material	Phosphor bronze plated with hard gold		
Weight	4.71	g	
Environmental Characteristics			
Waterproof Rating	-		
ROHS Complaint	YES		
Operating Temperature	-45~ +85	°C	
Storage Temperature	-45~ +85	°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.

Material Requirements:

1. Housing : HPB59-1, Gold-Plated
2. Insulator : PTFE
3. Inner Conductor : HPB59-1
4. Threaded Insert : HPB59-1
5. Sealing Ring : Silicone Rubber
6. Retaining Ring : Phosphor Bronze, Nickel-Plated

PRODUCT NAME				PAGE			
BFSMA-JKW				1 OF 1			
UNIT				MM			
PAGE				FORNMT			
SIZE				A4			
1:3							

4 . Test Equipment



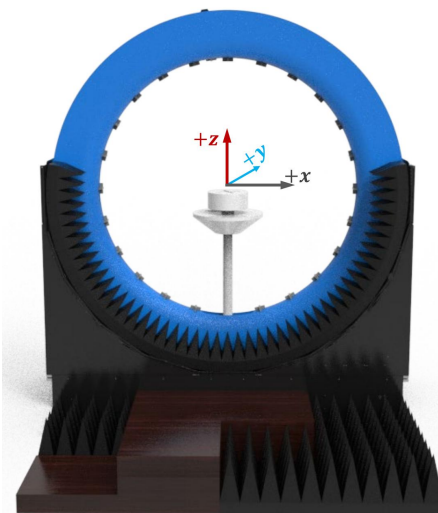
Keysight/E5071C Network Analyzer



R&S/CMW500 Comprehensive tester



R&S/SMBV100B Signal Source



DT-3500 Datasheet / System Specifications

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 :	≤40 kg

Testing Capability

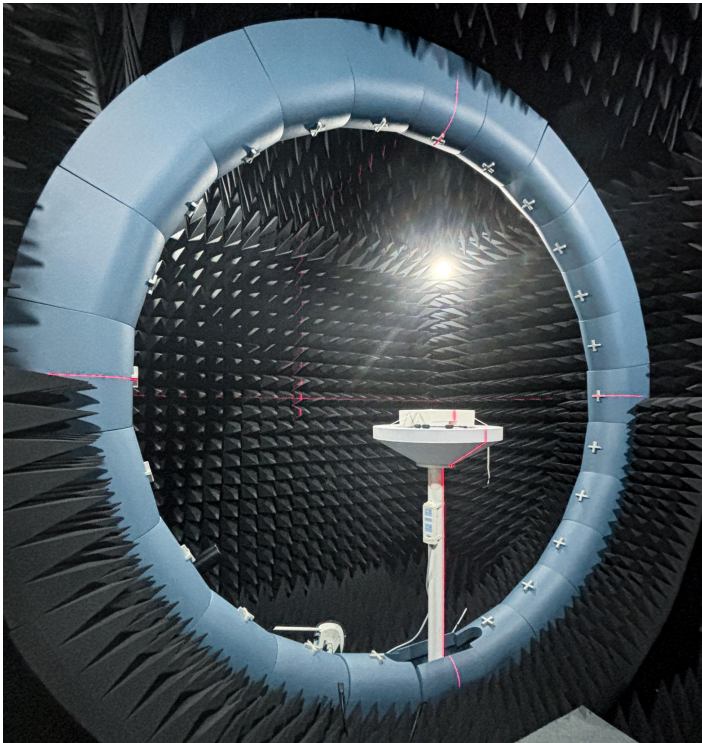
Description

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

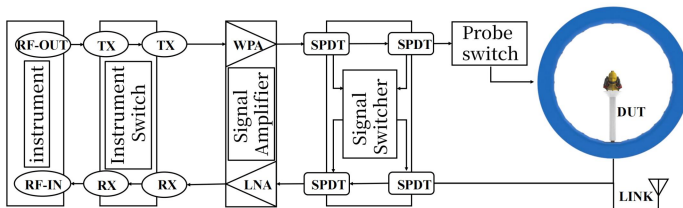
Passive measurement

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

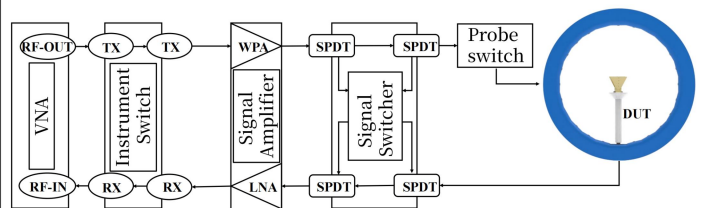


RF Link diagram of multi probe spherical near-field testing system

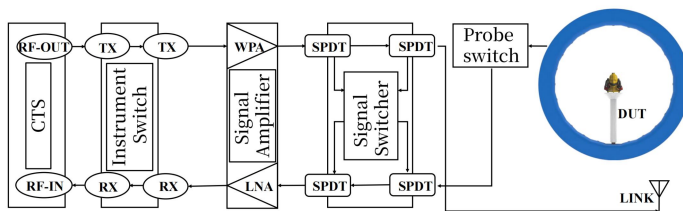
RF Link Overview



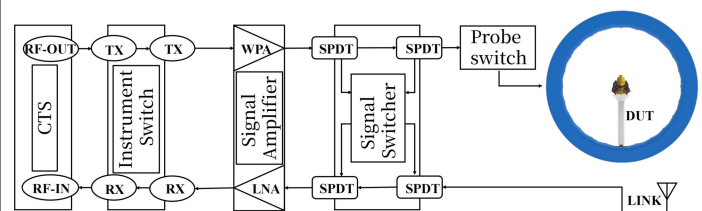
RF Link of Passivemeasurement



RF Link Overview



RF Link of Passivemeasurement





DECLARATION:

Legal Notice: In order to provide users with better service, Shenzhen Bat Wireless Technology Co., Ltd. (hereinafter referred to as ' Bat Wireless ') will endeavour to present users with detailed and accurate product information in this manual. However, due to the time-sensitive nature of the content in this manual, Bat Wireless cannot guarantee the timeliness and applicability of this document at all times. Bat Wireless reserves the right to update the content of this manual without prior notice. To obtain the latest information, we kindly request users to regularly visit the Bat Wireless official website or contact Bat Wireless staff. Thank you for your understanding and support!

Copyright Notice: All content in this product manual (including text, charts, logos, and designs) is protected by copyright law and international copyright treaties. No entity or individual may reproduce, modify, distribute, or use any part or all of this manual in any form (including electronic, mechanical, photocopying, etc.) without prior written authorisation from our company. Infringers will be held legally liable. All rights reserved.

Trademark Notice: All product names and corporate logos of Bat Wireless mentioned in this manual are the lawful property of our company (including affiliated companies). Unauthorised use, reproduction, or imitation is strictly prohibited. Third-party trademarks referenced in this manual are the property of their respective owners, and their use is solely for illustrative purposes and does not imply any commercial affiliation or authorisation. Our company reserves all rights to pursue legal action against any infringement.

Disclaimer: The product information contained in this manual is for reference only. Actual product performance may vary depending on the usage environment and configuration differences. Our company makes no express or implied warranties regarding the accuracy, completeness, or applicability of the content of this manual and shall not be liable for any direct or indirect losses arising from the use or inability to use the content of this manual. Users should assess the applicability of the product and follow actual operating procedures. The final interpretation of this manual is reserved by our company.

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

Tel: 0755-21031236

Documentation	
Version:	July-2-2025-A01
Date:	2025-07-02
Note:	First released
Author:	Carly

Change Log	
