

DATASHEET

Antenna Pin

Model No:

BWCD-L5.0W2.0H2.5

Description:

Size: 5.0mmx2.0mmx2.5mm

RoHS & REACH Complaint



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BWCD-L5.0W2.0H2.5

Part Number Description

BW	Company	BAT WIRELESS
CD	Name	Antenna pin
-	Constant	Constant
L	Length	Length
5.0	Length	5.0mm
W	Width	Width
2.0	Width	2mm
H	Height	Height
2.5	Height	2.5mm

1. Description

Bat Wireless BWCD-L5.0W2.0H2.5 antenna pin is a key component for antenna signal transmission in electronic devices. It is designed to ensure stable electrical connection and high-frequency signal transmission performance. Its spring structure incorporates a precision spring, providing constant spring force and ensuring long-term, stable contact between the antenna and the PCB or module. Suitable for mobile devices, it maintains connection reliability even in vibration environments. Its low-loss design, optimized process, and coaxial structure ensure low insertion loss. Its high conductivity, high elasticity, wear resistance, and high-frequency performance make it an ideal choice for antenna connections in modern wireless devices, particularly for applications such as 5G and the Internet of Things, which require stringent signal stability.

Typical Applications:

Consumer Electronics: Smartphones, TWS Earphones, Smartwatches

Automotive Electronics: In-Vehicle T-Boxes, GPS Antenna Connections

Industrial Equipment: RFID Readers, Drone Communication Modules

IoT: NB-IoT/LoRa Modules, Smart Home 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

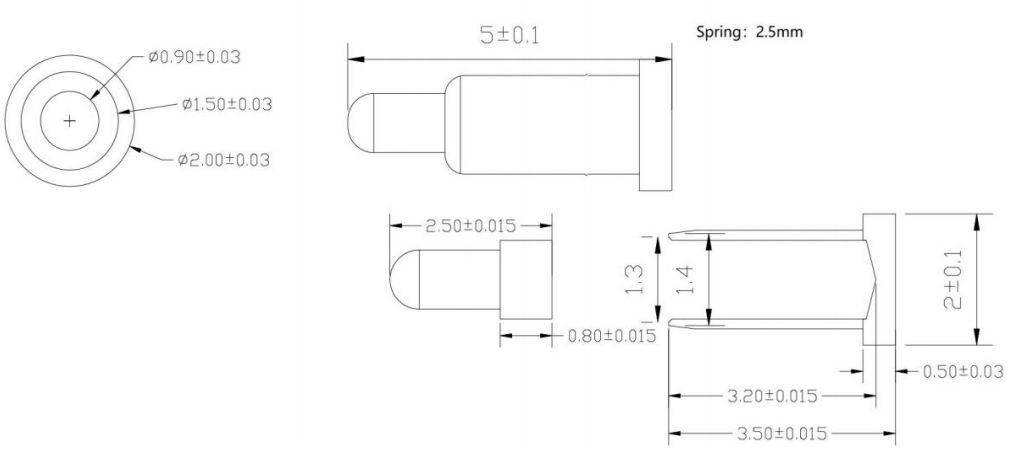
Parameters	Typ.	Unites	Notes
Electrical Characteristics			
Antenna Type	Antenna pin		
Frequency Range	0-6000	MHz	
Input Impedence	50	Ω	
Contact resistance	30	m Ω	
Insert Loss	0.15	dB(6GHz)	
Voltage rating	36	V	
Current rating	1.5	A	
Mechanical Characteristics			
Dimensions	5.0 x 2.0 x 2.5	mm	
Durability	75 $\pm$ 20	g	
Durability	10000	Times	
Mount way	SMD		
Color	Gold		
Material	Gold-Plated Brass		
Weight	0.09	g	
Environmental Characteristics			
Waterproof Rating	-		
ROHS Complaint	Yes		
Operating Temperature	-45~ +85	$^{\circ}\text{C}$	
Storage Temperature	-45~ +85	$^{\circ}\text{C}$	

3. Dimensions

3.1 Actual Picture



3.2 Parts Drawing

PARTS DRAWING		ROHS Compliant		REV	PRODUCT NO.	DATE	NAME	DESCRIPTION
1. Material: Contact: Brass Spring: Stainless steel wire plunger: Brass 2. Plating Body: Min 3u" Gold plating over Plunger: Min 3u" Gold plating over 3. Mechanical properties Elastic at working height 75g±20g Durability: 10000 cycle min 4. Electrical performance: Voltage rating: 30V DC MAX Current rating: 1.5A Impedance: <30mΩ:1.5A 5. Unspecified tolerance: ±0.03 mm 6. All dimensions marked with "*" are tested.  Top View Dimensions: $\phi 0.90 \pm 0.03$, $\phi 1.50 \pm 0.03$, $\phi 2.00 \pm 0.03$ Side View Dimensions: 5 ± 0.1 Cross-section View Dimensions: 2.50 ± 0.015, 0.80 ± 0.015, 1.3, 1.4, 3.20 ± 0.015, 3.50 ± 0.015, 2 ± 0.1, 0.50 ± 0.03 Spring: 2.5mm								

NO	Code	Name	Description	Qty	Frequency	Gain	VSWR	Polarization	Impedance	Operating Temperature: -45°C ~ 85°C	Storage Temperature: -45°C ~ 85°C

ANGLE PROJECTION



GENERAL TOLERANCES

100-200 : ± 3.00

50-100 : ± 2.00

25-50 : ± 0.20

10-25 : ± 0.15

1-10 : ± 0.10

PRODUCT NAME				
Antenna Pin-BFCD-BWCD-L5.0W2.0H2.5				
UNIT	MM	SIZE	1:3	
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4 . Test Equipment



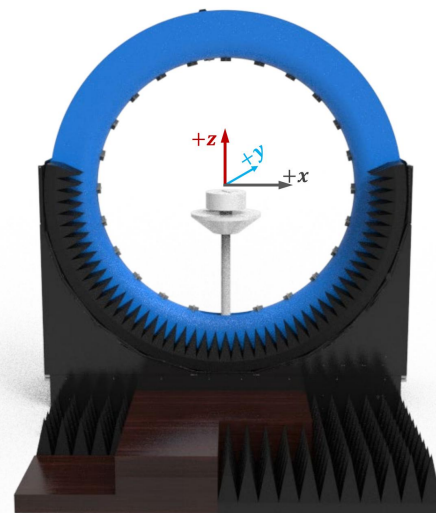
Keysight/E5071C Network Analyzer



R&S/CMW500 Comprehensive tester



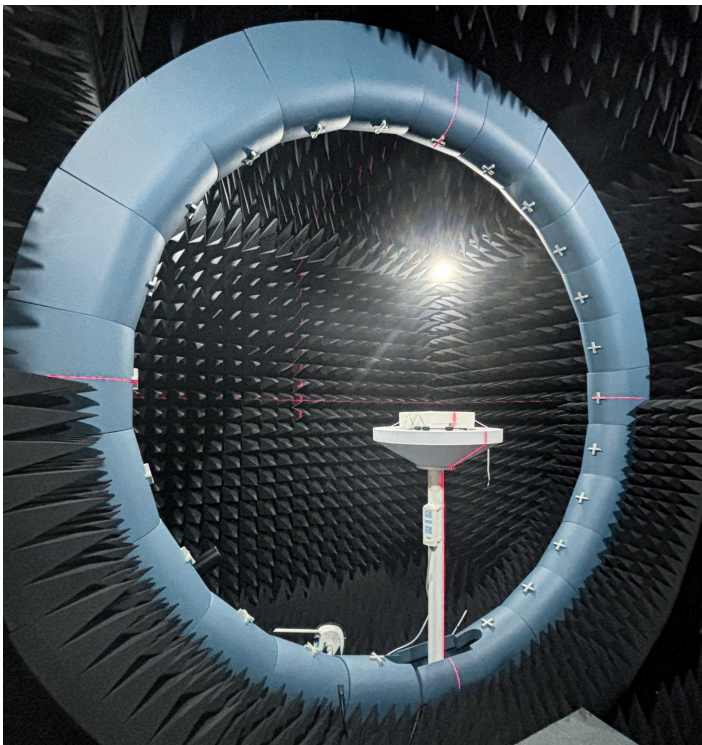
R&S/SMBV100B Signal Source



DT-3500 Datasheet / System Specifications

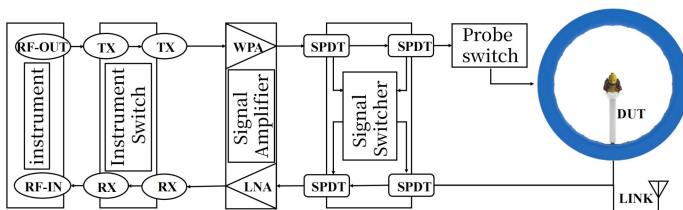
Specification:	Description
Test Frequency :	400MHz-8.5GHz
System Size :	L*W*H=4*3.5*3.5m
Number of Probes :	23 (Probe) + 1 (link)
Interval Angle :	15°
Sampling Diameter :	2200mm
Carring Capacity :	≤40 kg

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

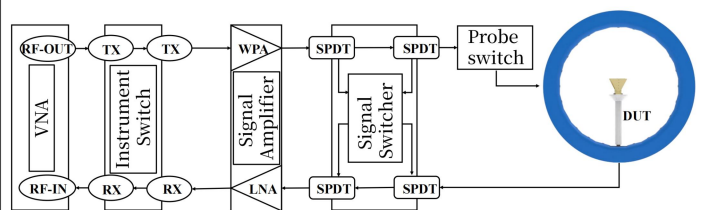


RF Link diagram of multi probe spherical near-field testing system

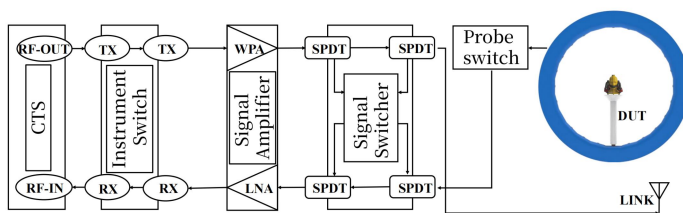
RF Link Overview



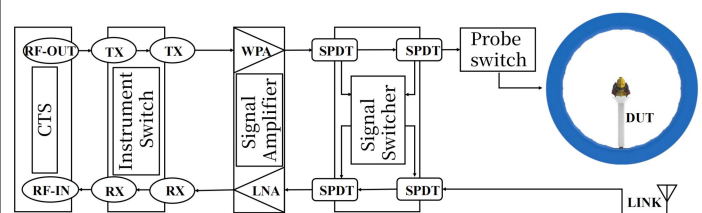
RF Link of Passivemeasurement



RF Link Overview



RF Link of Passivemeasurement





DECLARATION:

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Documentation

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Change Log
