

# DATASHEET

## Coaxial Cable

**Model No:**

BWNJ-MCXWJ-RG58L1000

**Description:**

N Type-J to MCX-WJ adapter cable

**Features:**

0-6000MHz

**Structure:**

Cable: RG58 x 1m

Connector: N Male to MCX Right-angle Male

**RoHS & REACH Complaint**





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## BWNJ-MCXWJ-RG58L1000

### Part Number Description

BW	Company	BAT WIRELESS
NJ	Connector	N-J
-	Constant	Constant
MCXWJ	Connector	MCX-WJ
-	Constant	Constant
RG58	Cable	RG58
L	Long	Length
1000	Cable Length	1000mm

### Selection Table

Connector	SMA	N	TNC	BNC	SMB	MCX	Customizable
Connector	RG174	RG178	RG316	RG58			Customizable
Cable Length	1000mm	1500mm	2000mm	2500mm	1000mm	1500mm	Customizable

### 1. Description

Bat Wireless BWNJ-MCXWJ-RG58L1000 is a high-performance RF coaxial adapter cable, typically operating in the 0-6 GHz frequency range. Designed specifically for wireless communication devices, it connects various interfaces and ensures stable, low-loss signal transmission. It is suitable for use in applications such as Wi-Fi modules, 4G/5G devices, GPS antennas, drones, and IoT terminals, resolving compatibility issues between different interfaces. It can connect to both N and MCX interfaces or device ports. High-purity coaxial cable minimizes signal attenuation, and optimized processing and coaxial structure ensure low insertion loss.

Classic application scenarios:

Wireless communication modules: GPS/Beidou positioning terminals, 4G/5G modules, Wi-Fi/Bluetooth modules

Test and measurement equipment: RF test probe connection ports, spectrum analyzers, signal generator antenna ports

IoT terminals: Signal enhancement for smart homes, drones, and wearable 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. Specifications

Parameters	Typ.	Units	Notes
Electrical Characteristics			
Product Type	Adapter Cable		
Frequency Range	0-6000	MHz	
Input Impedance	50	Ω	
Contact resistance	IC < 1, OC < 0.2	MΩ	
Insulation resistance	>5000	MΩ	
Insert Loss	0.5	dB(6GHz)	
RF leakage	1500	V	
Durability	500	Times	
ID of Plug / OD of Jack	-	mm	
DC Voltage	-	V	
Mechanical Characteristics			
Connector Type	N-J		
Connector Type	MCX-WJ		
Cable Type	RG58		
Cable Length	1000	mm	
Mount way	MCX Plug-in / N Screw-on		
Color	-		
Material	Copper		
Weight	-	g	
Environmental Characteristics			
Waterproof Rating	-		
ROHS Complaint	Yes		
Operating Temperature	-45~+85	°C	
Storage Temperature	-45~+85	°C	



### 3. Specification

Parameters	Parameters	Typ.	Units	Notes
Electrical Characteristics				
Inner Conductor	Material	Copper		
	Construction	$1/0.8 \pm 0.05$	mm	
	Nom.Dia	0.503	mm <sup>2</sup>	
Insulation	Material	FEP		
	Average Thickness	1.05	mm	
	Nom.Dia	$2.95 \pm 0.20$	mm	
Outer Conductor	Material	Copper		
	Nom.Dia	$0.08 \pm 0.003$	mm	
	Nom.Dia	$3.4 \pm 0.10$	mm	
Jacket	Material	FEP		
	Nom.Dia	$5.0 \pm 0.20$	mm	
Mechanical Characteristics				
Impedanc	-	50 $\pm$ 5	Pf/m	
Capacitance	-	100 $\pm$ 10	$\Omega$	
20°C Max Attenuation	100 MHz	0.187	dB/m	
	400 MHz	0.378	dB/m	
	800 MHz	0.58	dB/m	
	1000 MHz	0.617	dB/m	
	1800 MHz	1.76	dB/m	
	2000 MHz	2.69	dB/m	
Structure Drawing				

## 4 . Demensions

### 4.1 Actual Picture



\* Product images are for reference only.

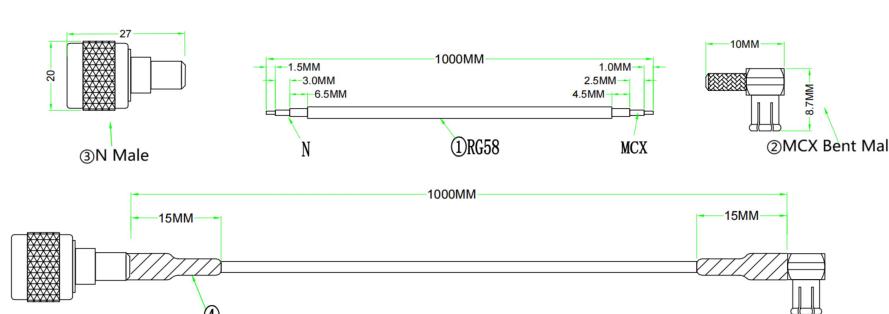
### 4.1 Parts Drawing

PARTS DRAWING	ROHS Compliant

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.

REV	PRODUCT NO.	DATE	NAME	DESCRIPTION	

NO	Code	Name	Description	O'ty
4	Heat Shrink Tubing	3.5*15MM Black		2
3	N	Male		1
2	MCX	Bent Male		1
1	Wire	RG58 L=1000MM		1

Frequency	ANGLE PROJECTION	PRODUCT NAME			
Gain		Connector-N Male-MCX Bent Male-RG58-L=1000MM			
VSWR		UNIT	MM	SIZE	1:3
Polarization					
Impedance		PAGE	1 OF 1	FORNMNT	A4
GENERAL TOLERANCE					
100~200 : $\pm 3.00$					
50~100 : $\pm 2.00$					
25~50 : $\pm 0.20$					
10~25 : $\pm 0.15$					
1~10 : $\pm 0.10$					

## 5 . Test Equipment



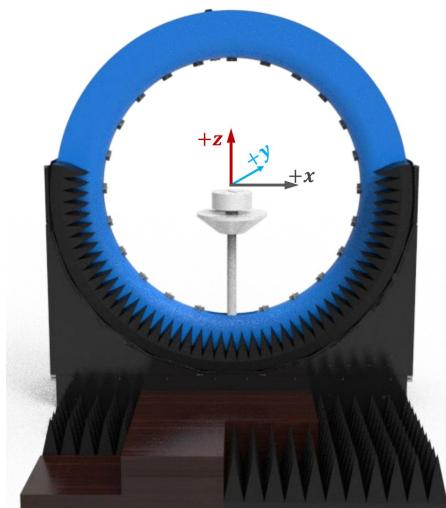
Keysight/E5071C Network Analyzer



R&amp;S/CMW500 Comprehensive tester



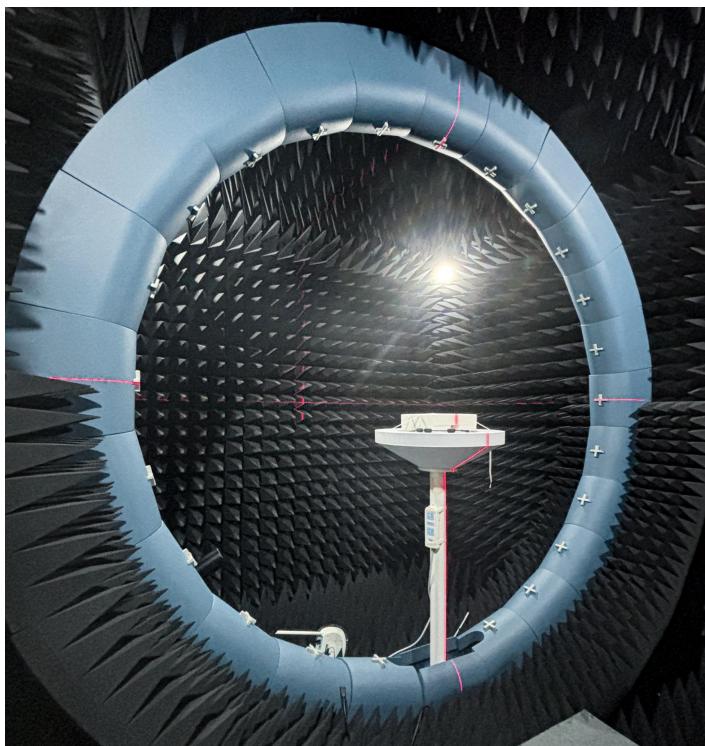
R&amp;S/SMBV100B Signal Source



### DT-3500 Datasheet / System Specifications

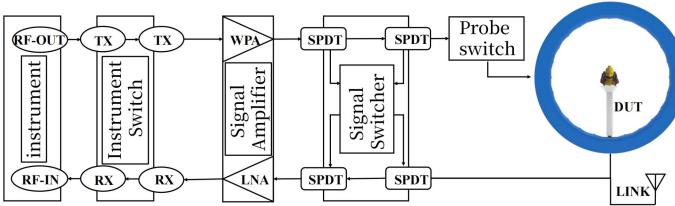
Specification:	Description
Test Frequency :	400MHz-8.5GHz
System Size :	$L \times W \times H = 4 \times 3.5 \times 3.5\text{m}$
Number of Probes :	23 (Probe) + 1 (link)
Interval Angle :	15°
Sampling Diameter :	2200mm
Carring Capacity :	$\leq 40\text{kg}$

Testing Capability	Description
Active measurement	<p><b>Capability :</b> TRP、TIS、EIRP、EIS,. etc</p> <p><b>Mode :</b> 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</p>
Pasive measurement	<p><b>Test category :</b> Gain、Efficiency、2D pattern、3D pattern、Pattern roundness、Axial Ratio, ECC, Phase center,. etc</p> <p><b>Polarization :</b> Circular polarization, linear polarization, elliptical polarization</p>

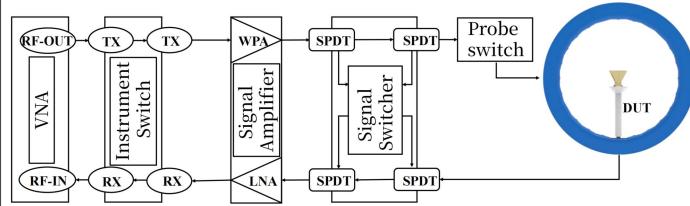


## RF Link diagram of multi probe spherical near-field testing system

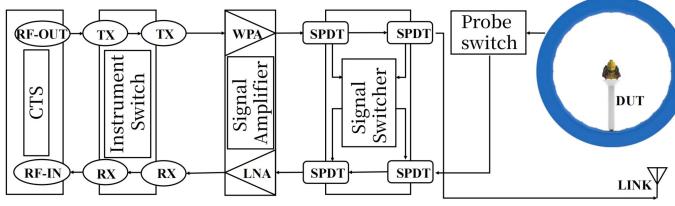
RF Link Overview



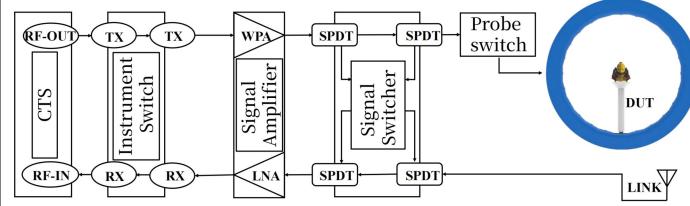
RF Link of Passivemeasurement



RF Link Overview



RF Link of Passivemeasurement





## DECLARATION:

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## Documentation

Version:	Aug-21-2025-A01
Date:	2025-08-21
Note:	First released
Author:	Carly

## Change Log
