

# ADAPTER DATASHEET

## Adapter Cable

**Model No:**

BWNJ-FAKRAC-RG58L1000

**Description:**

N-type male to Fakra-C type adapter cable

**Features:**

0-6000MHz

**Structure:**

Cable: RG58 x 1m

Connector: N-type male to Fakra-type connector

RoHS & REACH Complaint





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## BWNJ-FAKRAC-RG58L1000

### Part Number Description

BW	Company	BAT WIRELESS
NJ	Connector	N-type male
-	Constant	Constant
FAKRA	Connector	Fakra-typr connector
-	Constant	Constant
RG58	Cable	RG58
L	Long	Length
1000	Cable Length	1000mm

### Selection Table

Connector	SMA	N	TNC	BNC	SMB	MCX	Customizable
Cable Type	RG174	RG178	RG316	RG58			Customizable
Cable Length	100mm	200mm	300mm	500mm	1000mm	1500mm	Customizable

### 1. Description

Bat Wireless BWNJ-FAKRAC-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 N-type and Fakra 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

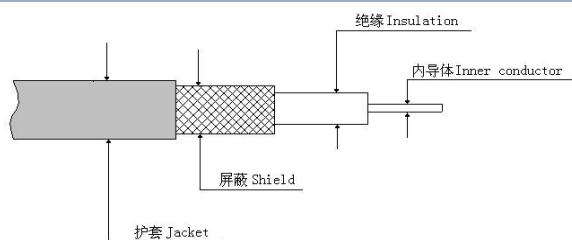
Bat Wireless provides customized services to optimize your device, we have a mature R&D team that can respond quickly to meet your needs. If you have any requirements, please contact our sales and FAE.



## 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	
InsertLoss	0.5	dB(6GHz)	
RF leakage	1500	V	
Durability	500	Times	
ID of Plug / OD of Jack	-	mm	
DCVoltage	-	V	
Mechanical Characteristics			
Connector Type	N-type Male		
Connector Type	Fakra-C Type		
Cable Type	RG58		
Cable Length	1000	mm	
Mount way	Screw type		
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
<b>Electrical Characteristics</b>				
Inner Conductor	Material	Copper		
	Construction	$1/0.8 \pm 0.05$	mm	
	Nom.Dia	0.503	mm <sup>2</sup>	
Insulation	Material	Low-density Polyethylene		
	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	Polyvinyl Chloride		
	Nom.Dia	$5.0 \pm 0.20$	mm	
<b>Mechanical Characteristics</b>				
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	
<b>Structure Drawing</b>				
				

## 4 . Demensions

### 4.1 Actual Picture



( \* Note: The picture is for reference only. Due to the sensitive nature of the antenna, please notify us of any changes to the surrounding structure for evaluation. )

### 4.1 Parts 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	O'ty	Frequency	Gain	ANGLE PROJECTION	PRODUCT NAME				
								Connector-N Male-Fakrac Blue C-RG58-L=1000MM				
								UNIT	MM	SIZE	1:3	
								PAGE	1 OF 1	FORNMNT	A4	
4		Heat Shrink Tubing	3.5*15MM Black	2				GENERAL TOLERANCE 100-200 : ± 3.00 50-100 : ± 2.00 25-50 : ± 0.20 10-25 : ± 0.15 1-10 : ± 0.10				
3		N	Male	1								
2		Fakrac	Blue C Type	1								
1		Wire	RG58 L=1000MM	1								

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

## 5 . Test Equipment



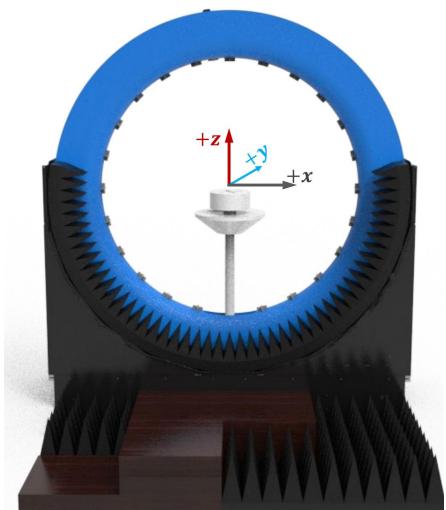
Keysight/E5071C Network Analyzer



R&amp;S/CMW500 Comprehensive tester



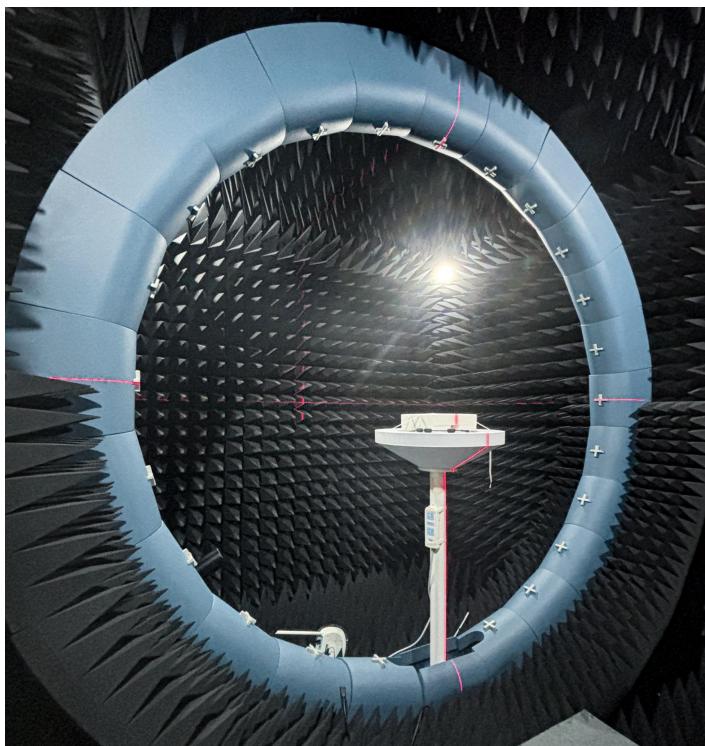
R&amp;S/SMBV100B Signal Source



### DT-3500 Datasheet / System Specifications

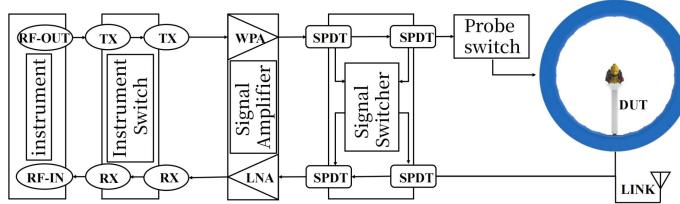
Specification:	Description
Test Frequency :	400MHz-8.5GHz
System Size :	$L \times W \times H = 4 \times 3.5 \times 3.5\text{m}$
Number of Probes :	23 (Probe) + 1 (link)
Interval Angle :	15°
Sampling Diameter :	2200mm
Carring Capacity :	$\leq 40\text{kg}$

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>

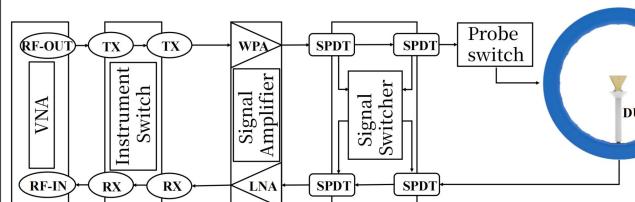


## RF Link diagram of multi probe spherical near-field testing system

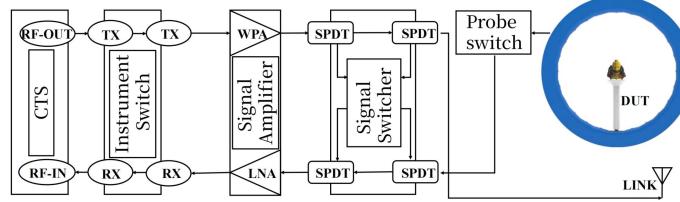
RF Link Overview



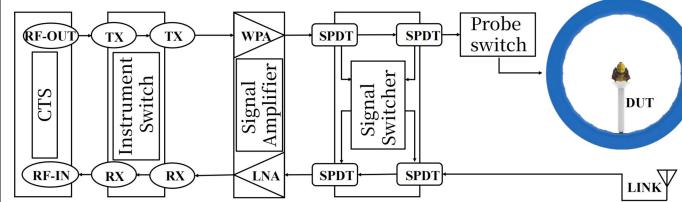
RF Link of Passivemeasurement



RF Link Overview



RF Link of Passivemeasurement





## DECLARATION:

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