

# ADAPTER DATASHEET

## Adapter Cable

**Model No:**

BWNJ-BNCJ-RG58L1000

**Description:**

N-type male to BNC male adapter cable

**Features:**

0-6000MHz

**Structure:**

Cable: RG58 x 1m

Connector: N-type male to BNC male

RoHS & REACH Complaint



# CONTENTS

|     |                              |     |
|-----|------------------------------|-----|
| 1.  | Description                  | 3   |
| 2.  | Specifications               | 4   |
| 3.  | Coaxial Cable Specifications | 5   |
| 4.  | Dimensions                   | 6   |
| 4.1 | Actual Picture               | 6   |
| 4.2 | Parts Drawing                | 6   |
| 5.  | Test Equipment               | 7-8 |

## BWNJ-BNCJ-RG58L1000

### Part Number Description

|      |              |              |
|------|--------------|--------------|
| BW   | Company      | BAT WIRELESS |
| NJ   | Connector    | N-type male  |
| -    | Constant     | Constant     |
| BNCJ | Connector    | BNC male     |
| -    | 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-BNCJ-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 connects to N-type and BNC interfaces or device ports. High-purity coaxial cable minimizes signal attenuation, and optimized craftsmanship 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

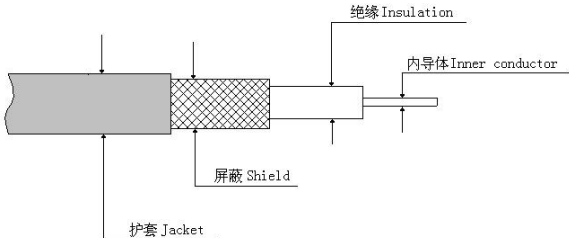
Bat Wireless provides customized services to optimize your device, we have a mature R&D team that can respond quickly to meet your needs. If you have any requirements, please contact our sales and FAE.

## 2. Specifications

| Parameters                    | Typ.            | Unites             | Notes |
|-------------------------------|-----------------|--------------------|-------|
| Electrical Characteristics    |                 |                    |       |
| Product Type                  | Adapter Cable   |                    |       |
| Frequency Range               | 0-6000          | MHz                |       |
| Input Impedence               | 50              | $\Omega$           |       |
| Contact resistance            | IC < 1,OC < 0.2 | M $\Omega$         |       |
| Insulation resistance         | >5000           | M $\Omega$         |       |
| 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                | BNC male        |                    |       |
| Cable Type                    | RG58            |                    |       |
| Cable Length                  | 1000            | mm                 |       |
| Mount way                     | Screw type      |                    |       |
| Color                         | -               |                    |       |
| Meterial                      | Copper          |                    |       |
| Weight                        | -               | g                  |       |
| Environmental Characteristics |                 |                    |       |
| Waterproof Rating             | -               |                    |       |
| ROHS Complaint                | Yes             |                    |       |
| Operating Temperature         | -45~ +85        | $^{\circ}\text{C}$ |       |
| Storage Temperature           | -45~ +85        | $^{\circ}\text{C}$ |       |



3. Specification

| Parameters                                                                           | Parameters        | Typ.                     | Unites          | Notes |
|--------------------------------------------------------------------------------------|-------------------|--------------------------|-----------------|-------|
| Electrical Characteristics                                                           |                   |                          |                 |       |
| Inner Conductor                                                                      | Material          | Copper                   |                 |       |
|                                                                                      | Construction      | 1/0.8±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±0.20                | mm              |       |
| Outer Conductor                                                                      | Material          | Copper                   |                 |       |
|                                                                                      | Nom.Dia           | 0.08±0.003               | mm              |       |
|                                                                                      | Nom.Dia           | 3.4±0.10                 | mm              |       |
| Jacket                                                                               | Material          | Polyvinyl Chloride       |                 |       |
|                                                                                      | Nom.Dia           | 5.0±0.20                 | mm              |       |
| Mechanical Characteristics                                                           |                   |                          |                 |       |
| Impedanc                                                                             | -                 | 50±5                     | Pf/m            |       |
| Capacitance                                                                          | -                 | 100±10                   | Ω               |       |
| 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                                                                    |                   |                          |                 |       |
|  |                   |                          |                 |       |

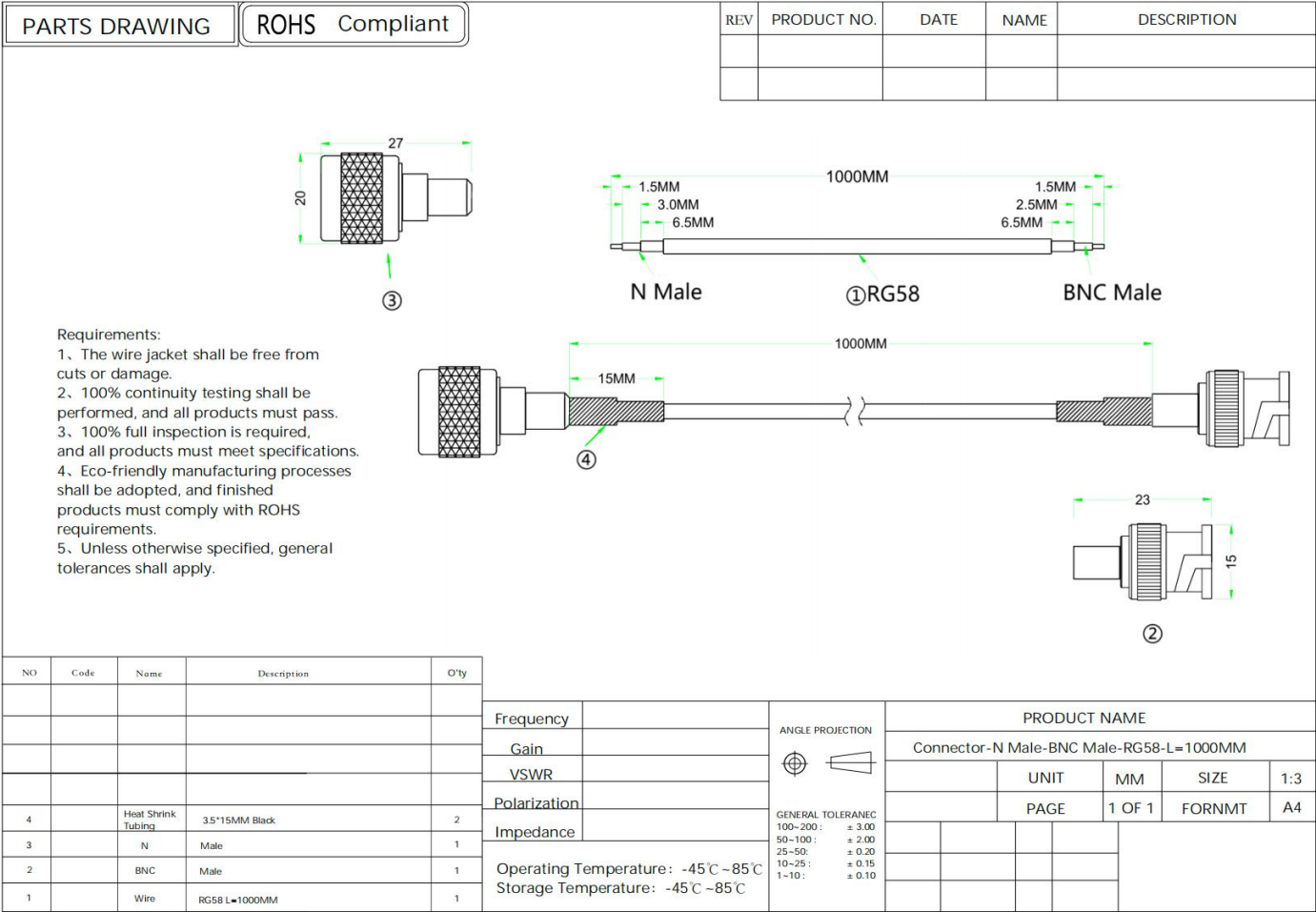
4 . Dimensions

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



## 5 . Test Equipment



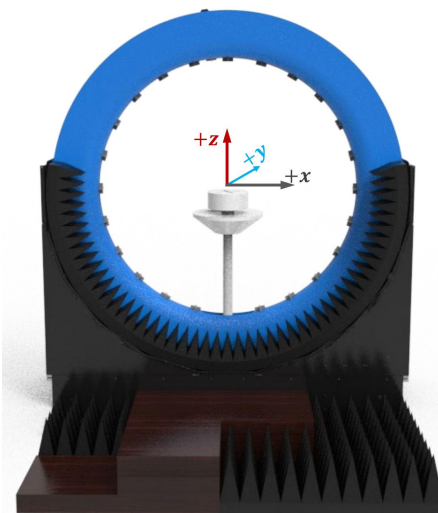
Keysight/E5071C Network Analyzer



R&amp;S/CMW500 Comprehensive tester



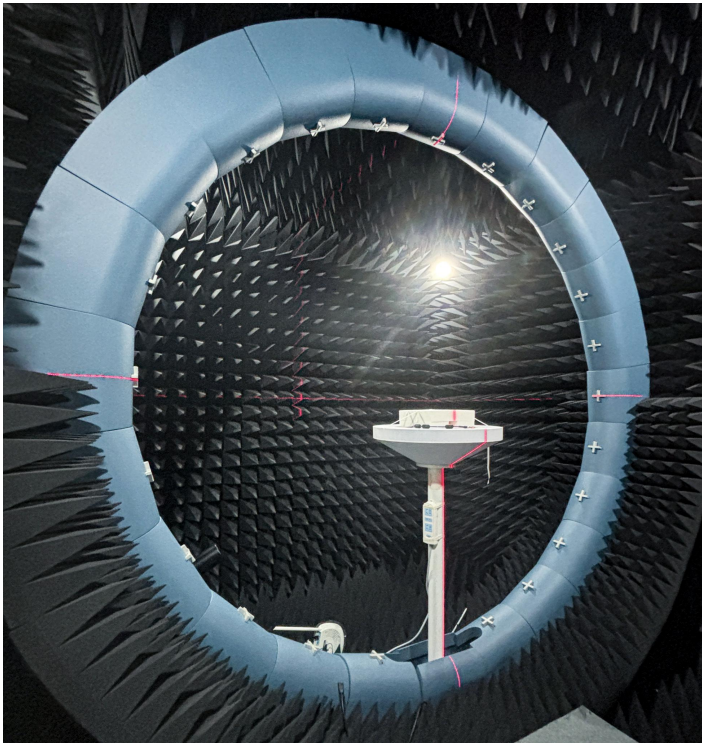
R&amp;S/SMBV100B Signal Source



### DT-3500 Datasheet / System Specifications

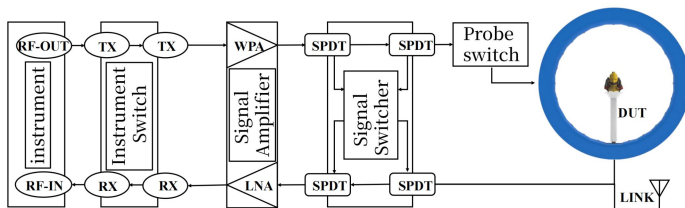
| Specification:      | Description           |
|---------------------|-----------------------|
| Test Frequency :    | 400MHz-8.5GHz         |
| System Size :       | L*W*H=4*3.5*3.5m      |
| Number of Probes :  | 23 (Probe) + 1 (link) |
| Interval Angle :    | 15°                   |
| Sampling Diameter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

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

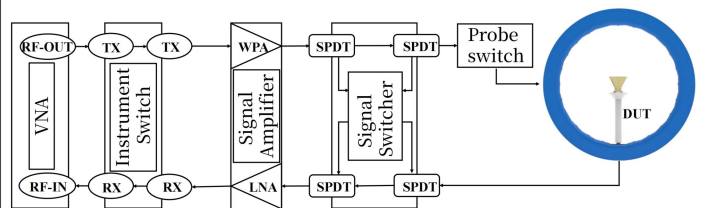


## RF Link diagram of multi probe spherical near-field testing system

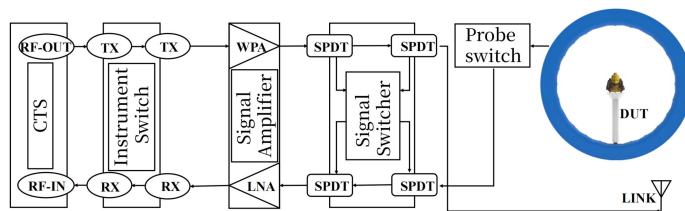
### RF Link Overview



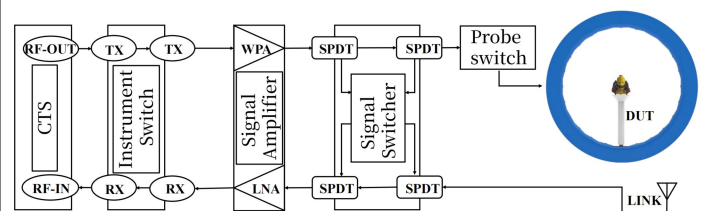
### RF Link of Passivemeasurement



### 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: [sales@batwireless.com](mailto:sales@batwireless.com)

Tel: 0755-21031236

Documentation

|          |                 |
|----------|-----------------|
| Version: | Aug-21-2025-A01 |
| Date:    | 2025-08-21      |
| Note:    | First released  |
| Author:  | Lisa / Cathy    |

Change Log

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |