

DATASHEET

Coaxial Cable

Model No:

BWSMAJ-MMCXWJ-RG316L500

Description:

SMA Male to Right-angle MMCX adapter cable

Features:

0-6000MHz

Structure:

Cable: RG316 x 500mm

Connector: SMA Male to Right-angle MMCX

RoHS & REACH Complaint



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BWSMAJ-MMCXWJ-RG316L500

Part Number Description

| | | |
|--------|--------------|-----------------------|
| BW | Company | BAT WIRELESS |
| SMAJ | Connector | SMA Male |
| - | Constant | Constant |
| MMCXWJ | Connector | Right-angle MMCX Male |
| - | Constant | Constant |
| RG316 | Cable | RG316 |
| L | Long | Length |
| 500 | Cable Length | 500mm |

Selection Table

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

1. Description

Bat Wireless BWSMAJ-MMCXWJ-RG316L500 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 SMA and MMCX interface 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

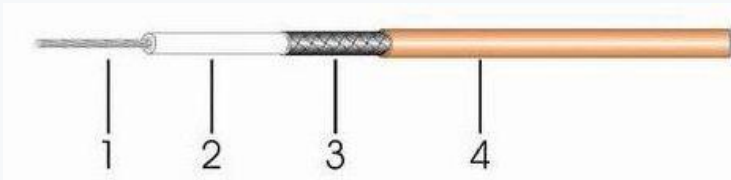
Bat Wireless provides customized services to optimize your device, we have a mature R&D team that can respond quickly to meet your needs. If you have any requirements, please contact our sales and FAE.

2. Specifications

| Parameters | Typ. | Unites | Notes |
|-------------------------------|-------------------------------------|--------------------|-------|
| Electrical Characteristics | | | |
| Product Type | Adapter Cable | | |
| 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 | |
| ID of Plug / OD of Jack | - | mm | |
| DCVoltage | - | V | |
| Mechanical Characteristics | | | |
| Connector Type | SMA-Male(Customizable) | | |
| Connector Type | Right-angle MMCX Male(Customizable) | | |
| Cable Type | RG316(Customizable) | | |
| Cable Length | 500(Customizable) | mm | |
| Mount way | Screw-on & Plug-in | | |
| 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 | Silver-plated copper wire | | |
| | Construction | 7/0.17 | mm | |
| | Nom.Dia | 0.51±0.02 | mm | |
| Insulation | Material | FEP | | |
| | Average Thickness | - | mm | |
| | Nom.Dia | 1.52±0.05 | mm | |
| Outer Conductor | Material | Tinned wire 16*5/0.10 | | |
| | Nom.Dia | 1.95±0.05 | mm | |
| | Coverage Ratio | 90±5 | % | |
| Jacket | Material | FEP | | |
| | Nom.Dia | 2.50±0.10 | mm | |
| Mechanical Characteristics | | | | |
| Impedanc | - | 50±2 | Pf/m | |
| Capacitance | - | 95 | Ω | |
| 20°C Attenuation | 0.1GHz | 0.262 | dB/m | |
| | 0.4GHz | 0.531 | dB/m | |
| | 1GHz | 0.860 | dB/m | |
| | 3GHz | 1.650 | dB/m | |
| | - | - | dB/m | |
| | - | - | dB/m | |
| Structure Drawing | | | | |
|  | | | | |

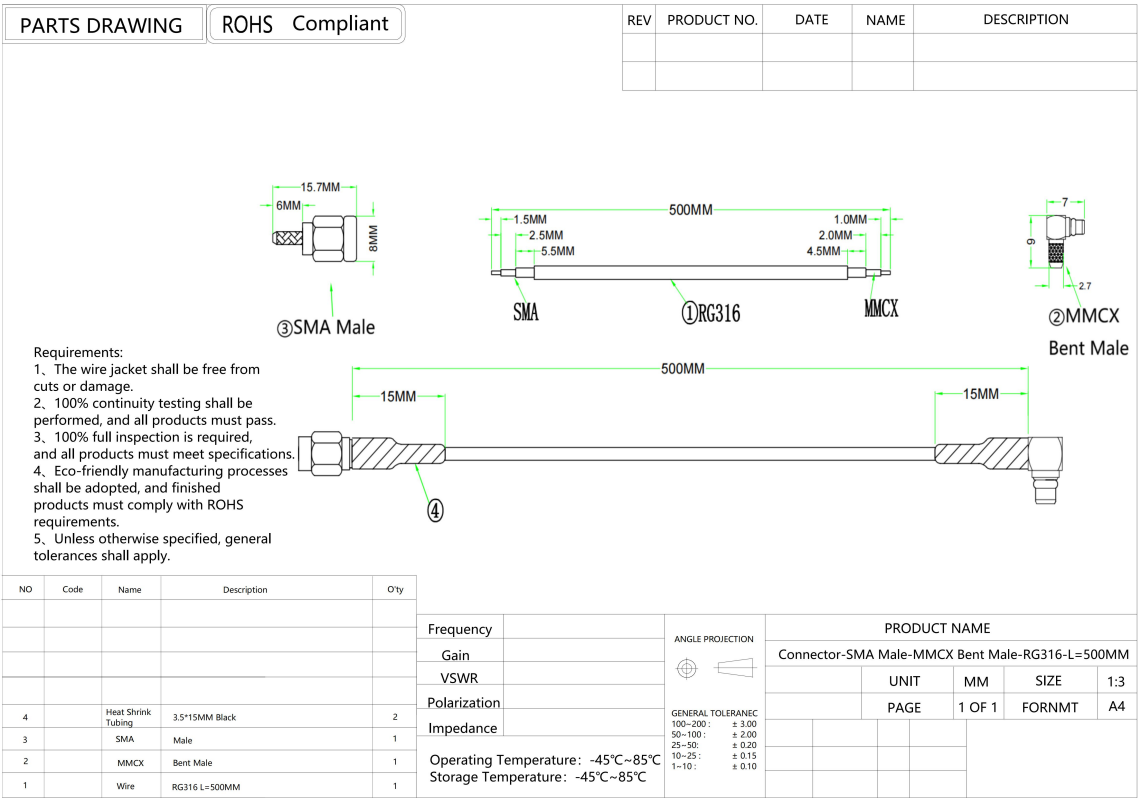
4 . Dimensions

4.1 Actual Picture



* Product images are for reference only.

4.1 Parts Drawing



5 . Test Equipment



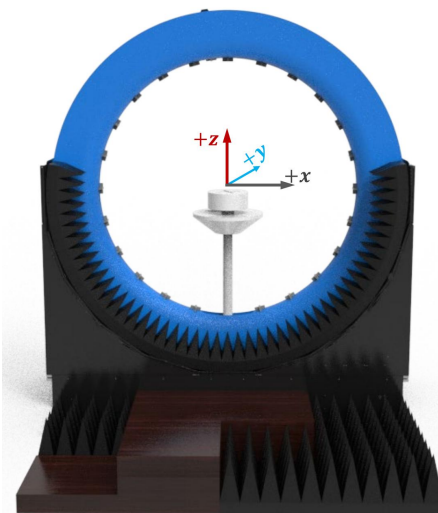
Keysight/E5071C Network Analyzer



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

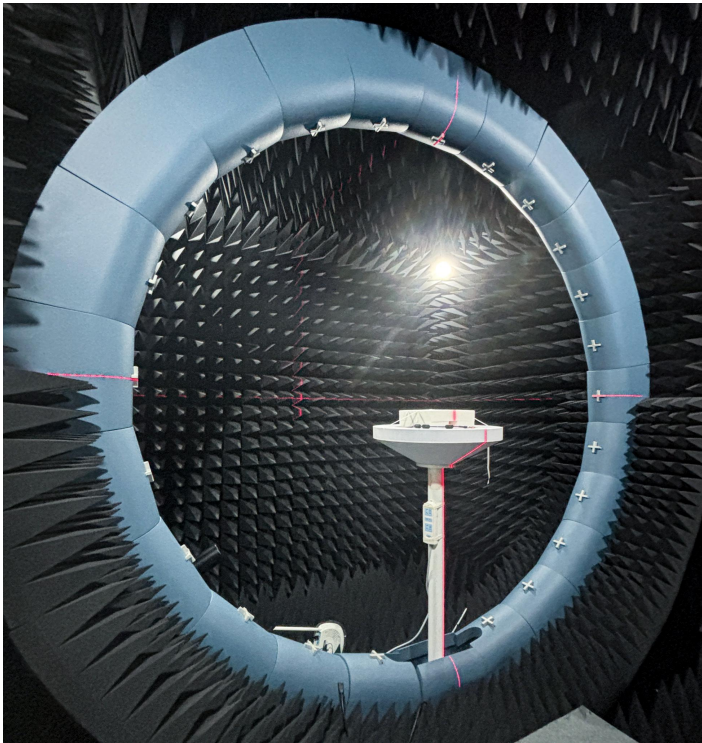
Description

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

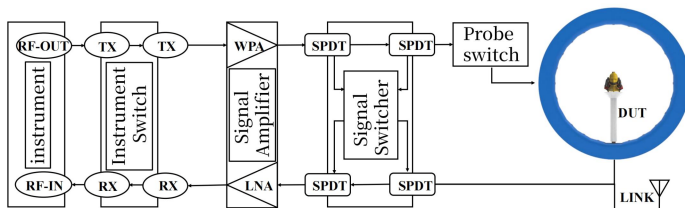
Passive measurement

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

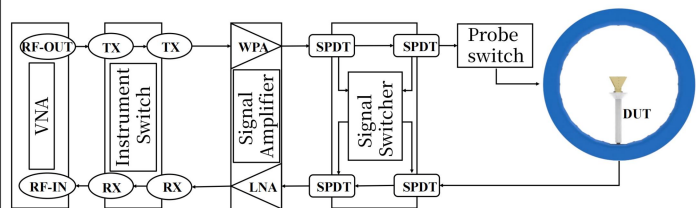


RF Link diagram of multi probe spherical near-field testing system

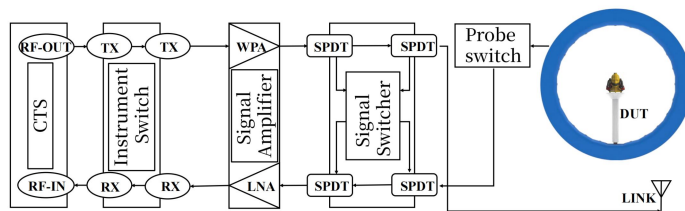
RF Link Overview



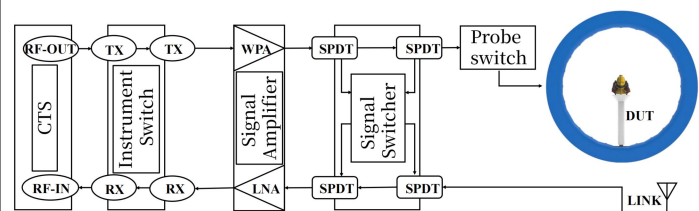
RF Link of Passivemeasurement



RF Link Overview



RF Link of Passivemeasurement





DECLARATION:

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