



# Datasheet

## MCX Antenna Connector

**Model No:**

BWMCX-KEF

**Description:**

MCX PCB-end Straight & Vertical Pin Connector

**Features :**

0-6000MHz

With inner hole

PCB-end connection

SMD Patch type

Size:9.5mm x 6.7mm x 5mm

RoHS & REACH Complaint

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## BWMCX-KEF

## Part Number Description

|     |           |                   |
|-----|-----------|-------------------|
| BW  | Company   | Bat Wireless      |
| MCX | Name      | MCX               |
| K   | Connector | K                 |
| E   | Type      | PCB-End Connector |
| F   | Feature   | --                |

## 1. Description

Bat Wireless BWMCX-KEF is a compact RF coaxial connector with a typical frequency range of 0 to 6 GHz. It finds extensive application in high-frequency domains such as communications, network equipment, and test instrumentation. Lightweight and space-saving, its dimensions are more compact than SMA or SMB connectors, making it suitable for high-density installation scenarios. Featuring a straight-through design, it allows antennas or cables to run parallel to the PCB board, conserving vertical space. The interface type is female, designed for pairing with male connectors. Its low-loss design, optimised manufacturing processes, and coaxial structure ensure minimal insertion loss during signal transmission.

## Classic Application Scenarios:

Wireless Communication Modules: GPS/BeiDou positioning terminals, 4G/5G modules, Wi-Fi/Bluetooth modules

Test and Measurement Equipment: Connection interfaces for RF test probes, spectrum analysers, antenna ports for signal generators

Consumer Electronics and Industrial Equipment: Walkie-talkies, RFID readers/writers, medical monitoring 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    |                                       |            |       |
| Product Type                  | MCX Antenna Connector                 |            |       |
| Frequency Range               | 0-6000                                | MHz        |       |
| Input Impedence               | 50                                    | $\Omega$   |       |
| Contact resistance            | 20                                    | m $\Omega$ |       |
| Insulation resistance         | 500                                   | M $\Omega$ |       |
| Insert Loss                   | 0.15                                  | dB(6GHz)   |       |
| RF leakage                    | 200                                   | V          |       |
| Durability                    | 500                                   | Cycles     |       |
| PLUG ID/JACK OD               | -                                     | mm         |       |
| DC Voltage                    | -                                     | V          |       |
| Mechanical Characteristics    |                                       |            |       |
| Dimensions                    | 9.5 x 6.7 x 5                         | mm         |       |
| Connector Type                | K ( Inner hole )                      |            |       |
| Cable Type                    | -                                     |            |       |
| Cable Length                  | -                                     | mm         |       |
| Mount way                     | Plug-in                               |            |       |
| Color                         | Gold                                  |            |       |
| Material                      | Phosphor bronze plated with hard gold |            |       |
| Weight                        | 1.21                                  | g          |       |
| Environmental Characteristics |                                       |            |       |
| Waterproof Rating             | -                                     |            |       |
| ROHS Complaint                | YES                                   |            |       |
| Operating Temperature         | -45~ +85                              | °C         |       |
| Storage Temperature           | -45~ +85                              | °C         |       |

\*Note: The above data is for reference only

### 3. Product Picture



\* Product images are for reference only

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## 4 . Test Equipment



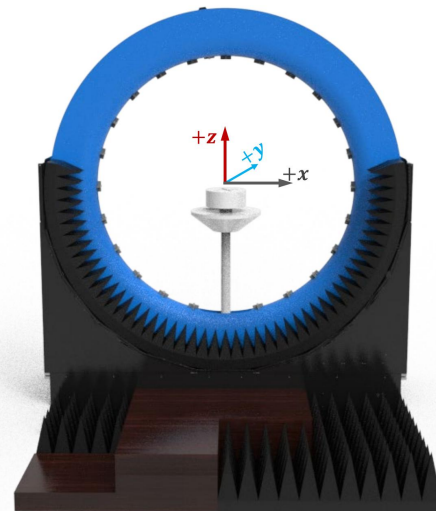
Keysight/E5071C Network Analyzer



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 :  | ≤40kg                 |

### Testing Capability

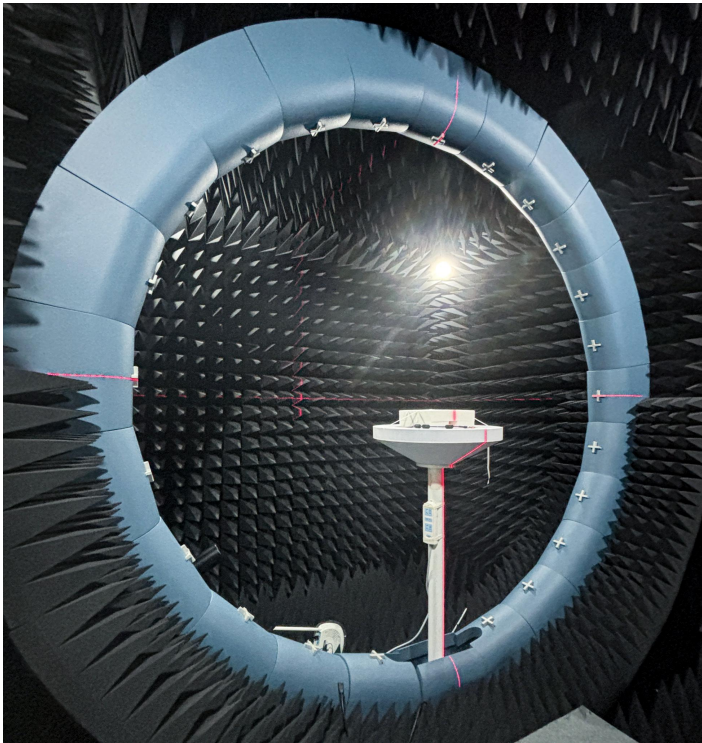
### Description

#### 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

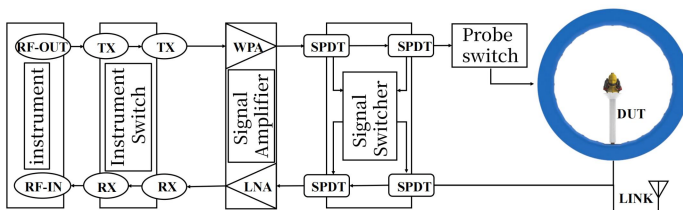
#### Passive measurement

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

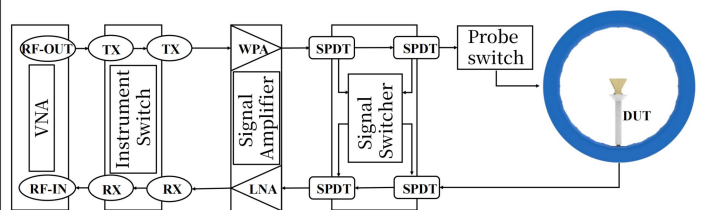


## RF Link diaram of multi probe spherical near-field testing system

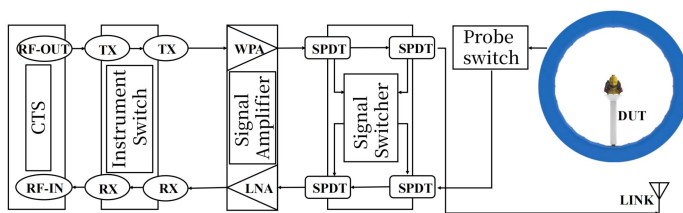
### RF Link Overview



### RF Link of Passivemeasurement



### RF Link Overview



### RF Link of Passivemeasurement





## DECLARATION:

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