

# DATASHEET

## FAKRA Antenna Connector

**Model No:**

BWFAK-JE-IB

**Description:**

FAKRA straight plate end I-type connector

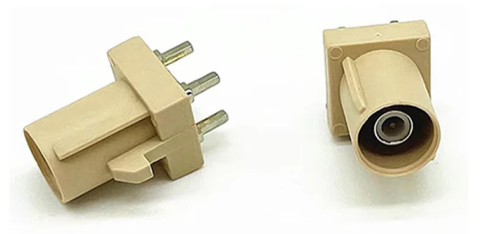
**Features :**

0-4000MHz

Board-End male connector

Size: 17.2mmx11mmx9.4mm

**RoHS & REACH Complaint**



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## BWFAK-JE-IB

### Part Number Description

|     |                 |                     |
|-----|-----------------|---------------------|
| BW  | Company         | BAT WIRELESS        |
| FAK | Name            | FAKRA Connector     |
| -   | Constant        | Constant            |
| J   | Connector       | Jack / Male         |
| E   | Type            | Board-End Connector |
| -   | Constant        | Constant            |
| I   | Type            | I-Type              |
| B   | Structural Type | Semi-Covered        |

## 1. Description

Bat Wireless BWFAK-JE-IB is a RF coaxial connector primarily used for wireless communications in vehicles, such as Bluetooth, GPS navigation, and Wi-Fi. This I-type straight connector is commonly used for AM/FM radios and other radio communications. It is black and typically operates in the 0-6 GHz frequency range. Its unique shape and construction ensure proper connection and signal transmission. It features a quick-connect design for easy installation and maintenance. The connector features a male connector with a center pin that mates with a female connector. Its low-loss design, optimized process, and coaxial construction ensure low insertion loss.

### Typical Applications:

In-vehicle multimedia systems: AM/FM radio antennas, satellite radios

In-vehicle communications and navigation: 3G/4G LTE in-vehicle communication modules, telematics

Industrial and test equipment: Industrial and test equipment

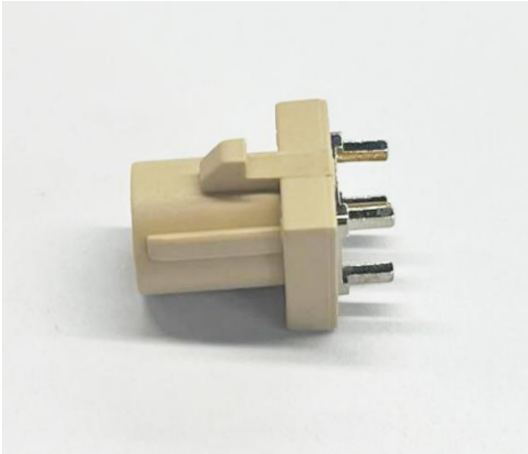
Bat Wireless provides customized services to optimize your device, we have a mature R&D team that can respond quickly to meet your needs. If you have any requirements, please contact our sales and FAE.

## 2. Specification

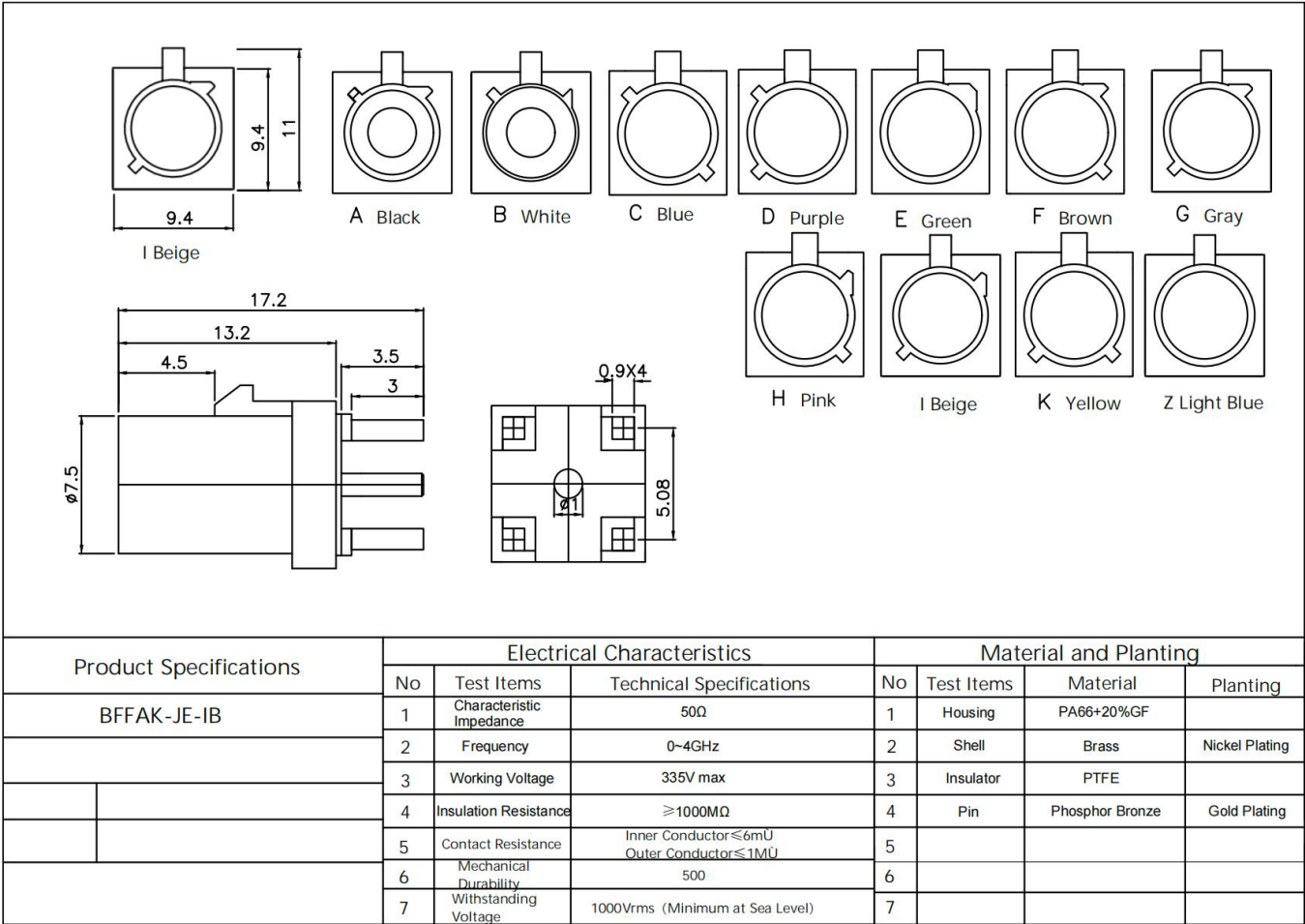
| Parameters                    | Typ.                      | Unites             | Notes |
|-------------------------------|---------------------------|--------------------|-------|
| Electrical Characteristics    |                           |                    |       |
| Antenna Type                  | FAKRA Antenna Connector   |                    |       |
| Frequency Range               | 0-4000                    | MHz                |       |
| Input Impedence               | 50                        | $\Omega$           |       |
| Contact resistance            | IC $\leq 6$ , OC $\leq 1$ | m $\Omega$         |       |
| Insulation resistance         | 1000                      | M $\Omega$         |       |
| Insert Loss                   | 0.15                      | dB(6GHz)           |       |
| RF leakage                    | 1000                      | V                  |       |
| Durability                    | 500                       | Times              |       |
| PLUG / JACK                   | -                         | mm                 |       |
| DC Voltage                    | -                         | V                  |       |
| Mechanical Characteristics    |                           |                    |       |
| Dimensions                    | 17.2 x 11 x 9.4           | mm                 |       |
| Connector Type                | Male                      |                    |       |
| Cable Type                    | -                         |                    |       |
| Cable Length                  | -                         | mm                 |       |
| Mount way                     | Plug-in snap-on type      |                    |       |
| Color                         | Pale-yellow               |                    |       |
| Material                      | PA66 + 20%GF              |                    |       |
| Weight                        | 1.77                      | g                  |       |
| Environmental Characteristics |                           |                    |       |
| Waterproof Rating             | -                         |                    |       |
| ROHS Complaint                | Yes                       |                    |       |
| Operating Temperature         | -45~ +85                  | $^{\circ}\text{C}$ |       |
| Storage Temperature           | -45~ +85                  | $^{\circ}\text{C}$ |       |

3 . Dimensions

3.1 Actual Picture



3.2 Parts Drawing



## 4 . Test Equipment



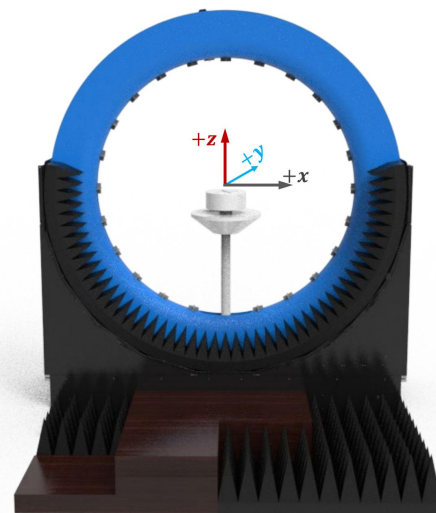
Keysight/E5071C Network Analyzer



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 :  | ≤40 kg                |

### Testing Capability

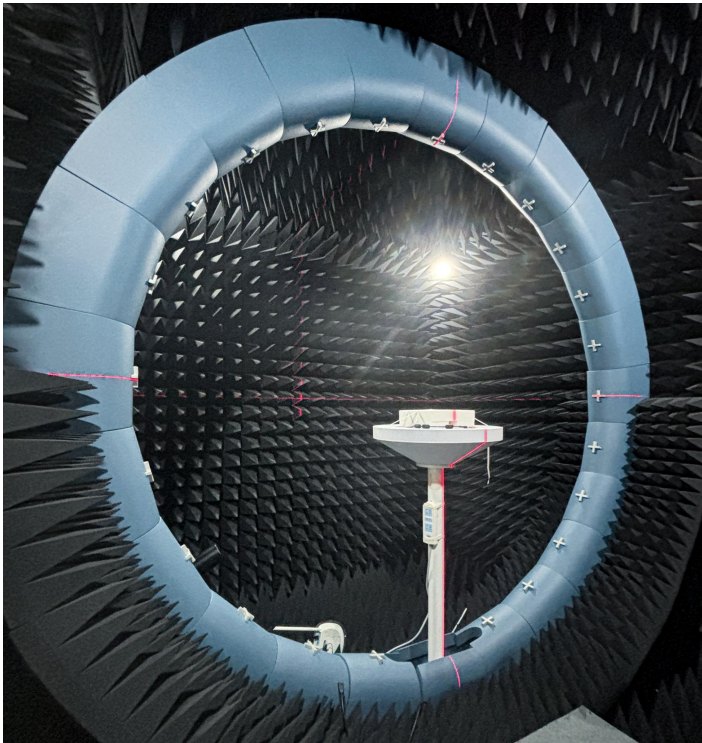
### Description

#### 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

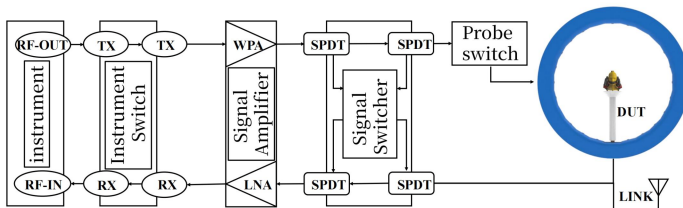
#### Passive measurement

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

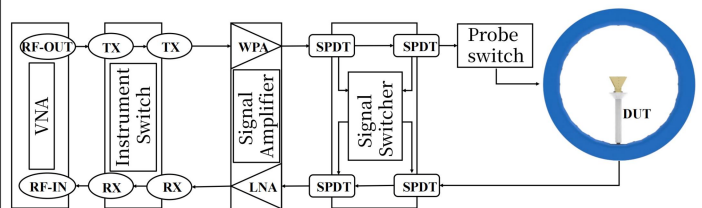


## RF Link diagram of multi probe spherical near-field testing system

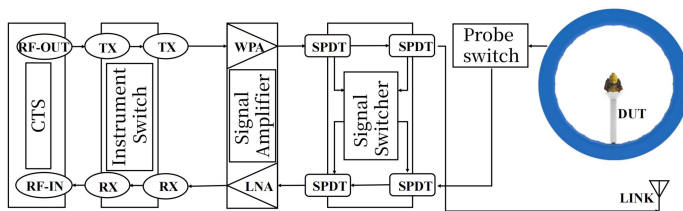
### RF Link Overview



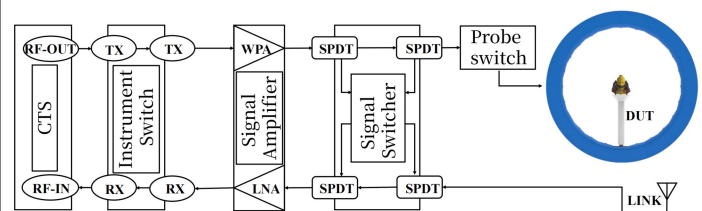
### RF Link of Passivemeasurement



### RF Link Overview



### RF Link of Passivemeasurement





## DECLARATION:

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Documentation

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|----------|-----------------|
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| Author:  | Carly / Lisa    |

Change Log

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