

# DATASHEET

## FAKRA Antenna Connector

**Model No:**

BWFAK-JE-GB

**Description:**

FAKRA straight plate end G-type connector

**Features :**

0-4000MHz

Board-End male connector

Size: 17.2mmx11mmx9.4mm

**RoHS & REACH Complaint**



## CONTENTS

1.	Description	3
2.	Specifications	4
3.	Dimensions	5
3.1	Actual Picture	5
3.2	Parts Drawing	5
4.	Test Equipment	6-7

## BWFAK-JE-GB

### Part Number Description

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

## 1. Description

Bat Wireless BWFAK-JE-GB is a RF coaxial connector primarily used for wireless communications in vehicles, such as Bluetooth, GPS navigation, and Wi-Fi. This G-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

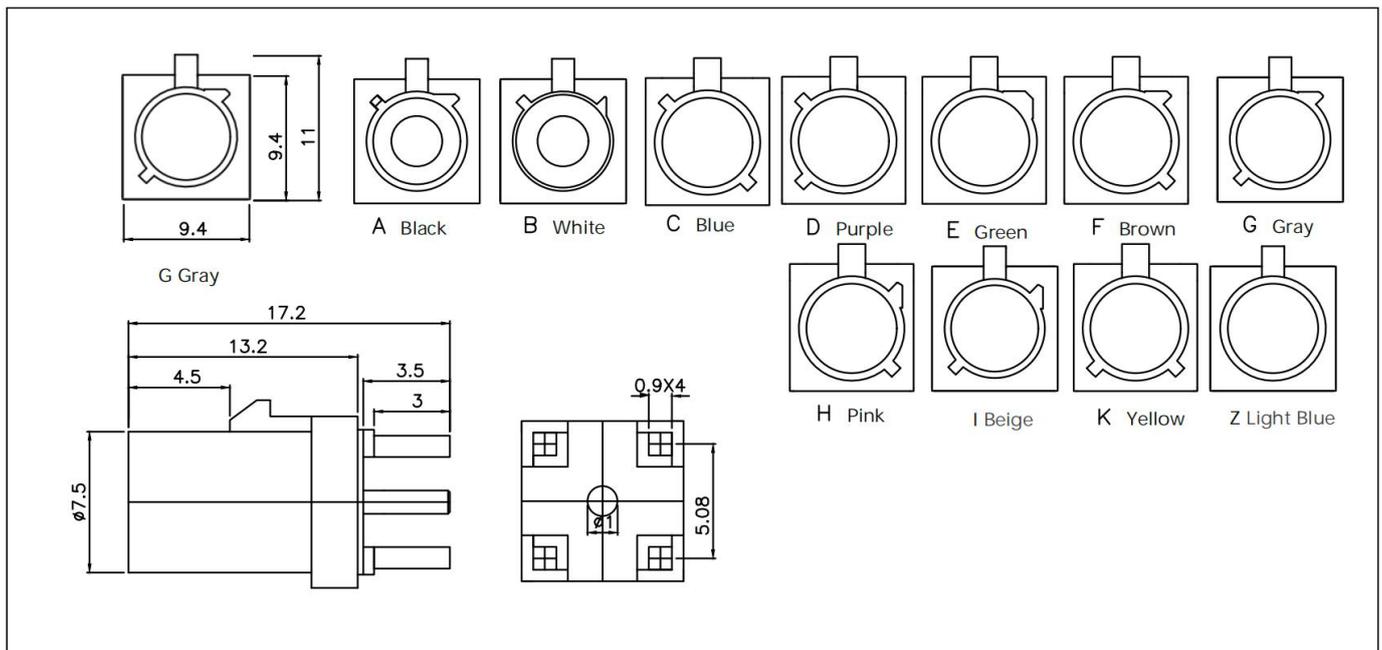
Parameters	Typ.	Unites	Notes
<b>Electrical Characteristics</b>			
Antenna Type	FAKRA Antenna Connector		
Frequency Range	0-4000	MHz	
Input Impedence	50	$\Omega$	
Contact resistance	IC $\leq$ 6, OC $\leq$ 1	m $\Omega$	
Insulation resistance	1000	M $\Omega$	
Insert Loss	0.15	dB(6GHz)	
RF leakage	1000	V	
Durability	500	Times	
PLUG / JACK	-	mm	
DC Voltage	-	V	
<b>Mechanical Characteristics</b>			
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	Grey		
Material	PA66 + 20%GF		
Weight	1.77	g	
<b>Environmental Characteristics</b>			
Waterproof Rating	-		
ROHS Complaint	Yes		
Operating Temperature	-45~ +85	$^{\circ}$ C	
Storage Temperature	-45~ +85	$^{\circ}$ C	

### 3. Dimensions

#### 3.1 Actual Picture



#### 3.2 Parts Drawing



Product Specifications	Electrical Characteristics			Material and Planting			
	No	Test Items	Technical Specifications	No	Test Items	Material	Planting
BFFAK-JE-GB	1	Characteristic Impedance	50Ω	1	Housing	PA66+20%GF	
	2	Frequency	0-4GHz	2	Shell	Brass	Nickel Plating
	3	Working Voltage	335V max	3	Insulator	PTFE	
	4	Insulation Resistance	≥1000MΩ	4	Pin	Phosphor Bronze	Gold Plating
	5	Contact Resistance	Inner Conductor≤6mΩ Outer Conductor≤1mΩ	5			
	6	Mechanical Durability	500	6			
	7	Withstanding Voltage	1000Vrms (Minimum at Sea Level)	7			

## 4 . Test Equipment



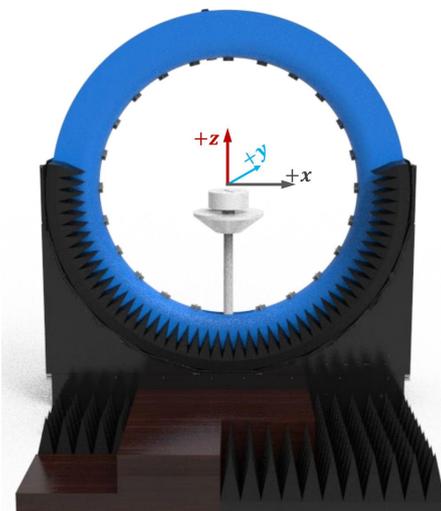
Keysight/E5071C Network Analyzer



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

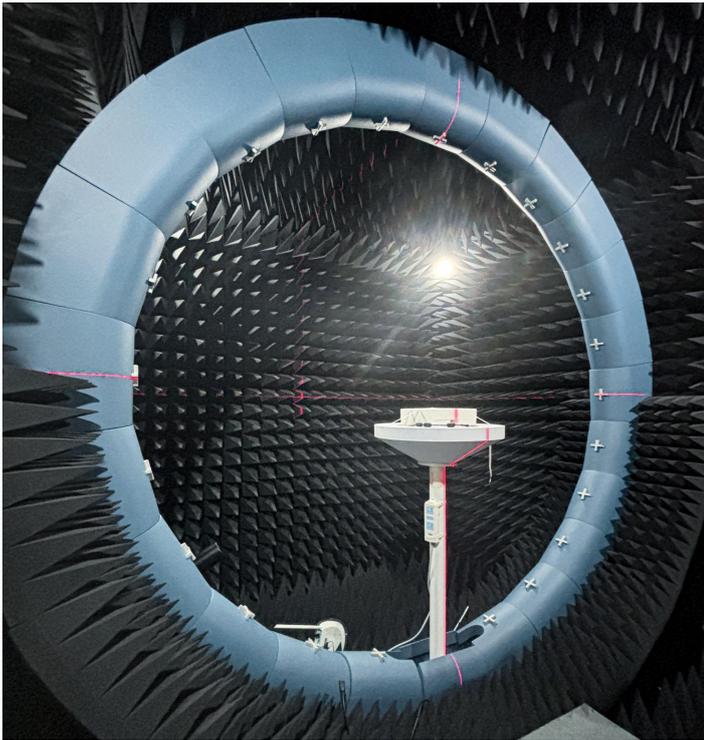
### Description

#### 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

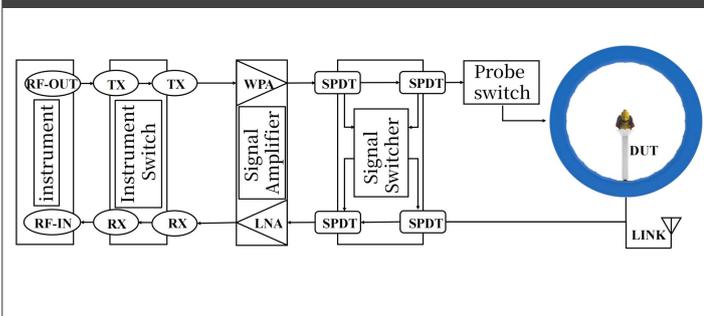
#### Passive measurement

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

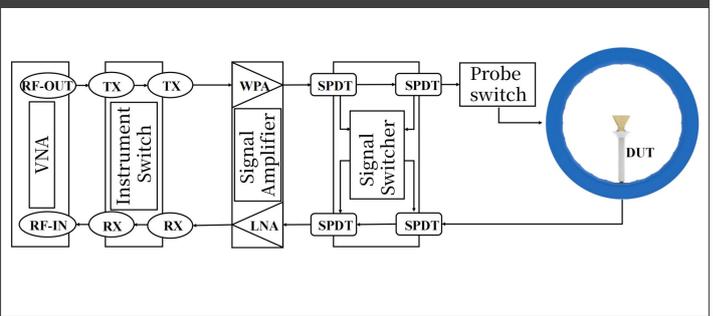


## RF Link diaram of multi probe spherical near-field testing system

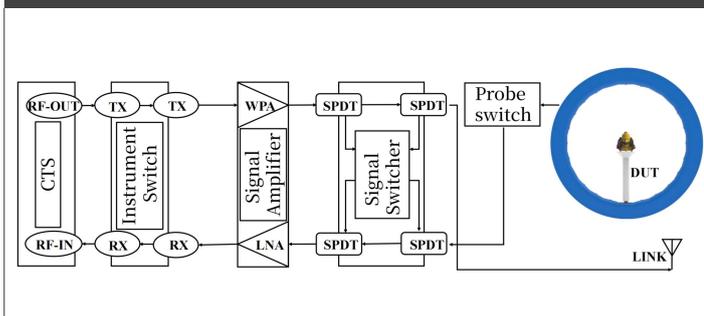
RF Link Overview



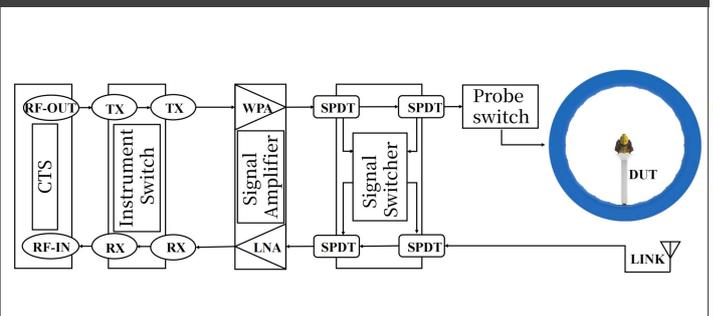
RF Link of Passivemeasurement



RF Link Overview



RF Link of Passivemeasurement





## DECLARATION:

**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: [marketing@batwireless.com](mailto:marketing@batwireless.com)

Tel: 0755-21031236

### Documentation

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

### Change Log
