

DATASHEET

FAKRA Antenna Connector

Model No:

BWFAK-JWE-EB

Description:

FAKRA PCB-end angled E-type connector

Features :

0-6000MHz

PCB-End male connector

Size: 22.6mmx11.3mmx9.3mm

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-JWE-EB

Part Number Description

BW	Company	BAT WIRELESS
FAK	Name	FAKRA Connector
-	Constant	Constant
J	Connector	Jack / Male
W	Feature	Angled
E	Type	PCB-End Connector
-	Constant	Constant
E	Type	E-Type
B	Structural Type	Semi-Covered

1. Description

Bat Wireless BWFAK-JWE-EB is a RF coaxial connector primarily employed in vehicle wireless communications, such as in-car Bluetooth, GPS navigation, and wireless networks. The E-type angled connector is typically employed for in-vehicle telephony and mobile communications, featuring a green colouration with a frequency range generally spanning 0 to 6 GHz. Its distinctive form and structure ensure proper connection and signal transmission. Incorporating a quick-release design facilitates installation and maintenance. The interface type is male, featuring a centre-pin terminal for pairing with a female connector. Its low-loss design, optimised manufacturing processes, and coaxial structure guarantee minimal insertion loss during signal transmission.

Typical Applications:

In-vehicle mobile communications: 4G/5G

Satellite signal reception: Satellite broadcasting

Vehicle-to-everything (V2X) communications antenna

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.

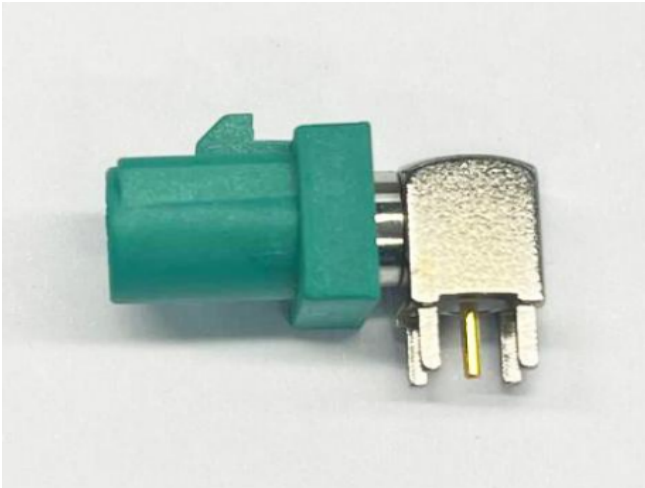
2. Specification

Parameters	Typ.	Unites	Notes
Electrical Characteristics			
Antenna Type	FAKRA Antenna Connector		
Frequency Range	0-6000	MHz	
Input Impendence	50	Ω	
Contact resistance	IC ≤ 6 , OC ≤ 1	m Ω	
Insulation resistance	1000	M Ω	
Insert Loss	0.15	dB(6GHz)	
RF leakage	1000	V	
Durability	500	Cycles	
PLUG / JACK	-	mm	
DC Voltage	-	V	
Mechanical Characteristics			
Dimensions	22.6 x 11.3 x 9.3	mm	
Connector Type	Male		
Cable Type	-		
Cable Length	-	mm	
Mount way	Plug-in snap-on type		
Color	Green		
Material	PA66 + 20%GF		
Weight	5	g	
Environmental Characteristics			
Waterproof Rating	-		
ROHS Complaint	Yes		
Operating Temperature	-45~ +85	$^{\circ}\text{C}$	
Storage Temperature	-45~ +85	$^{\circ}\text{C}$	

*Note: The above data is for reference only

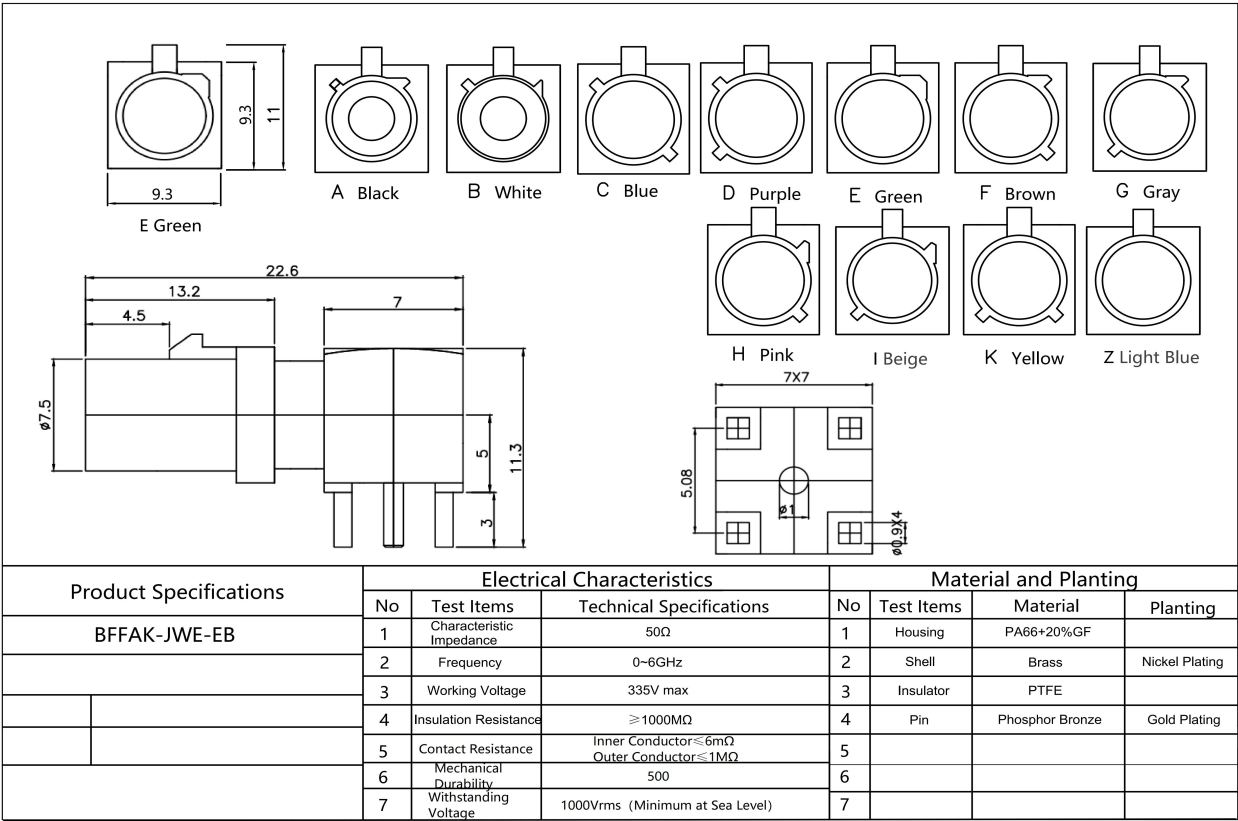
3 . Dimensions

3.1 Actual Picture



* Product images are for reference only

3.2 Parts Drawing



4 . Test Equipment



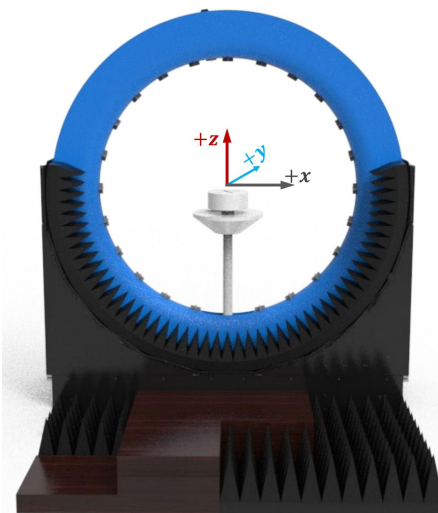
Keysight/E5071C Network Analyzer



R&S/CMW500 Comprehensive tester



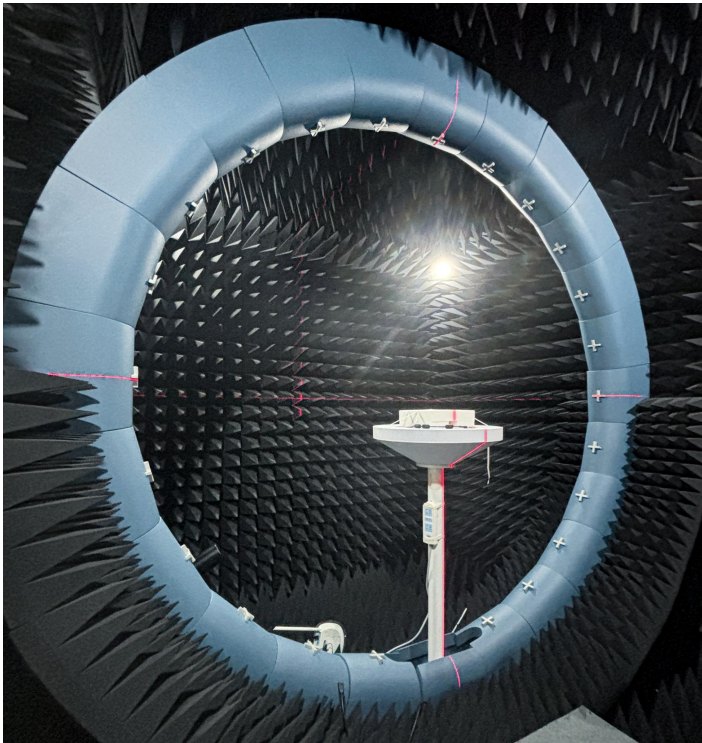
R&S/SMBV100B Signal Source



DT-3500 Datasheet / System Specifications

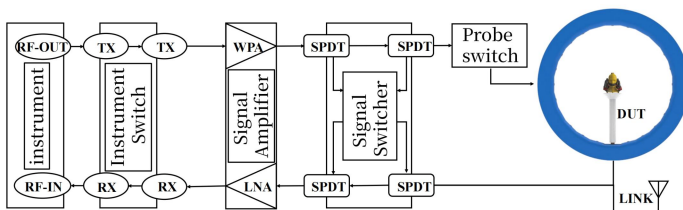
Specification:	Description
Test Frequency :	400MHz-8.5GHz
System Size :	L*W*H=4*3.5*3.5m
Number of Probes :	23 (Probe) + 1 (link)
Interval Angle :	15°
Sampling Diameter :	2200mm
Carring Capacity :	≤40 kg

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

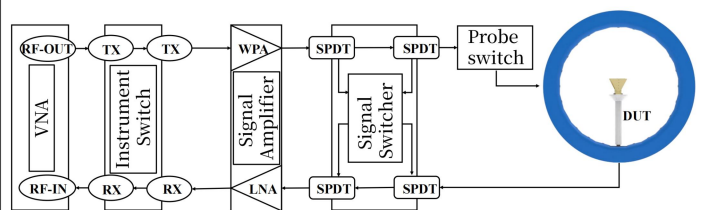


RF Link diagram of multi probe spherical near-field testing system

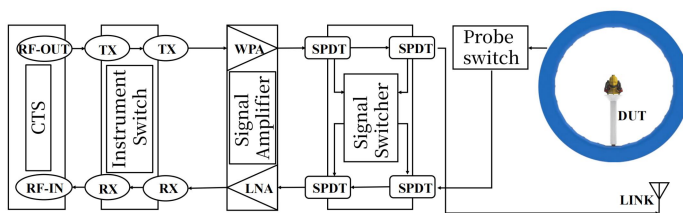
RF Link Overview



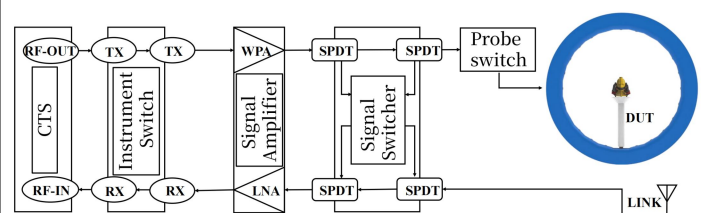
RF Link of Passivemeasurement



RF Link Overview



RF Link of Passivemeasurement





DECLARATION:

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

Tel: 0755-21031236

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

Change Log	
