



Shenzhen Feixun Lianke Electronics Co., Ltd

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### Acknowledgment **SPECIFICATION**

| Product data                                                                                                               | Customer information       |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Product name: built-in FPC antenna                                                                                         | Customer name: Bestway     |
| Product model: FXLK-FB47x10-2.4G-5G V1 BSV                                                                                 | Operating model: F18 (X10) |
| Specification summary: FPC flexible board FXLK-FB47x10-2.4G-5G V1 BSV generation terminal black wire length 155mm Material | Item No.:                  |

#### Supplier confirmation

| Proofread      | examine     | approval       |
|----------------|-------------|----------------|
| Huang Zhixiong | Yu Guanghui | Zhang Dongxiao |

#### Purchaser's confirmation

| Proofread   | examine | approval |
|-------------|---------|----------|
|             |         |          |
| conclusion: |         |          |

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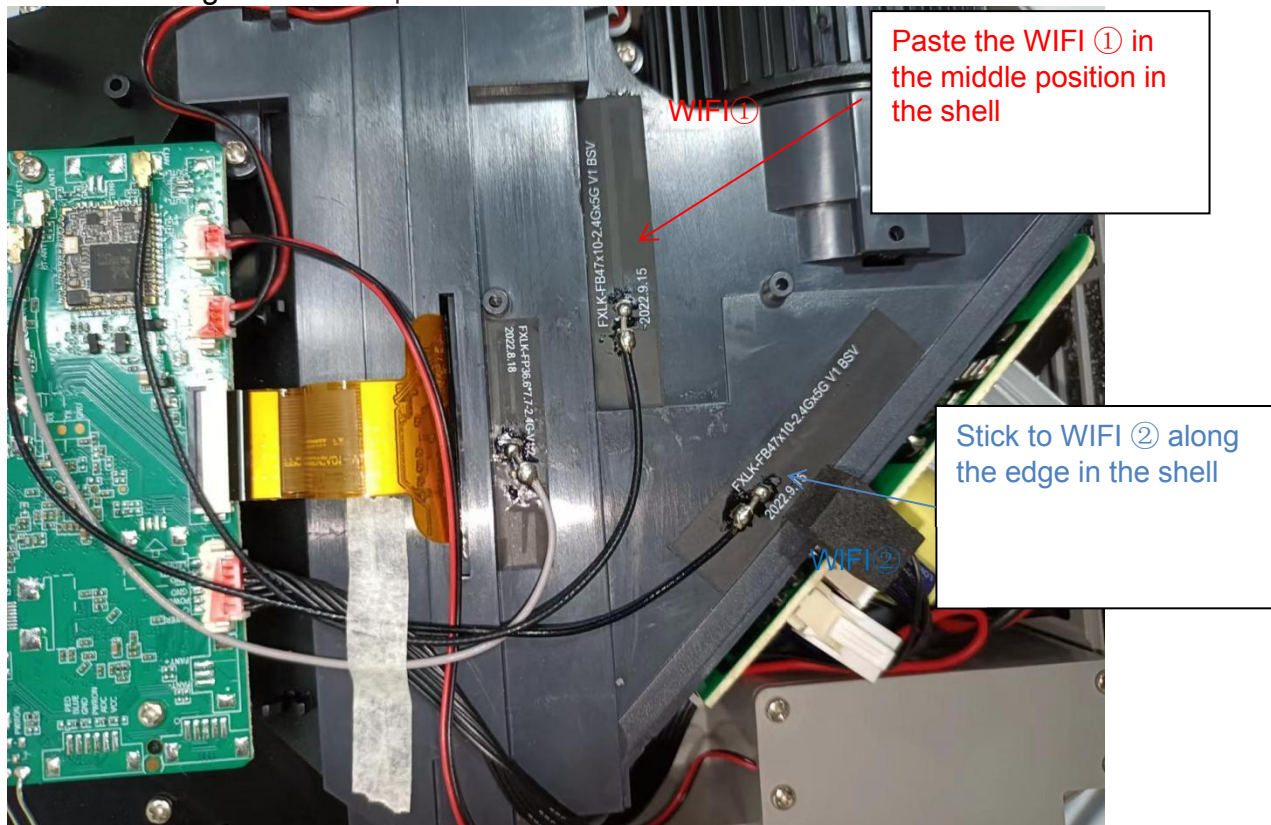


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# Shenzhen Feixun Lianke Antenna Specification FXLK-FB47x10-2.4G-5G V1 BSV

## 2.4GHz and 5G ISM Band Frequency

Feed Line length:155MM  $\phi$ : 1.13



During the production process, please stick to the antenna according to the antenna position, otherwise the antenna performance will be affected



## Descriptions

This antenna is designed for 2.4GHz ISM Band. Both of wireless LAN IEEE 802.11b/g/n ,Bluetooth and Zigbee .This Antenna provides a high Efficiency and good performance

The FXLK-FB47x10-2. 4G-5G V1 BSV dipole Antenna

### Following features:

- ◆ IEEE 802.11 b/g/n standards
- ◆ Single Band working
- ◆ 3.13dBi peak gain @2.45GHz
- ◆ 3.46dBi peak gain @5GHz
- ◆ Case mount
- ◆ Easy integration

### Applications

- ◆ Wireless LAN
- ◆ ISM band 2.4GHz/5G wireless applications
- ◆ BlueTooth
- ◆ Zigbee



## Electrical Specifications

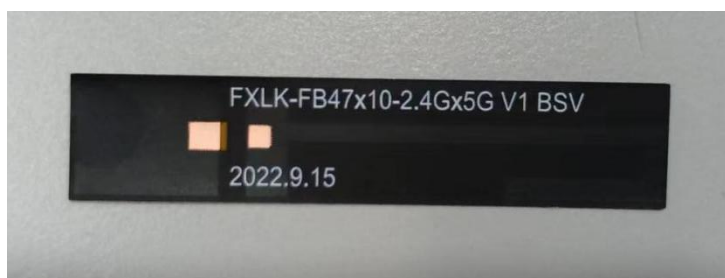
| Item                  | Specification                 |
|-----------------------|-------------------------------|
| Frequency Range       | 2.4 GHz ~ 2.5GHz, 5GHz ~ 6GHz |
| Peak Gain             | 3.13dBi @ 2.45G, 3.46 @ 5GHz  |
| VSWR                  | 2 max.                        |
| Polarization          | Linear                        |
| Feed Impedance        | 50Ω                           |
| Power handling        | 30dbm                         |
| Antenna dimensions    | 47mm×10mm                     |
| Operation Temperature | -40°C ~ +85°C                 |
| Antenna color         | Black                         |
| Feed line color       | Black                         |



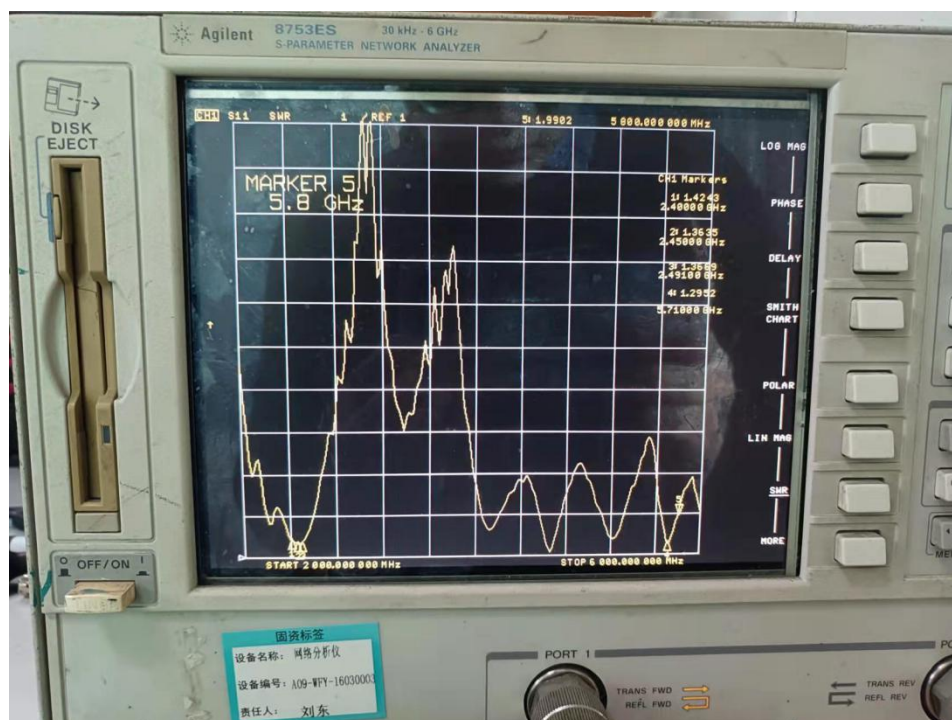
## RF Cable Dimensions

FXLK-FB47x10-2.4G-5G V1 BSV

dimensions:47MM\*10MM



VSWR:





# Antenna Test Environment;

## 1. Network Analysis:

Agilent 8753ES

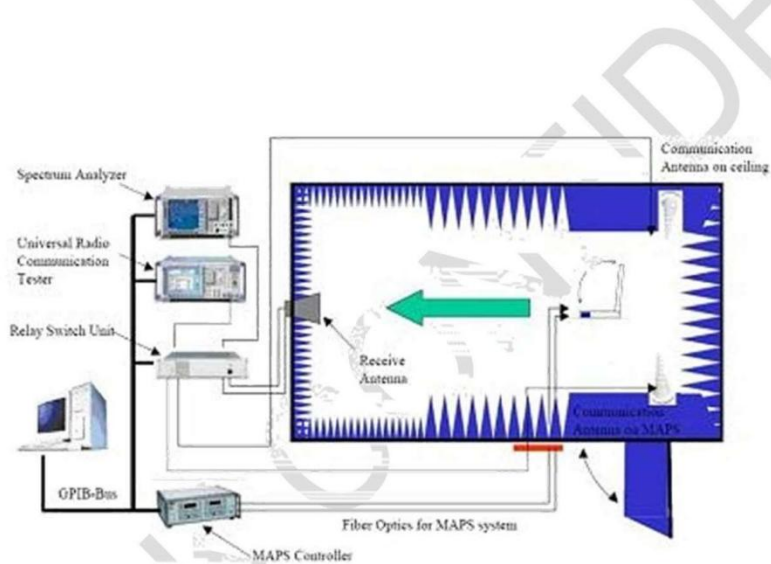
5071C

## 2. RF Test Equipment:

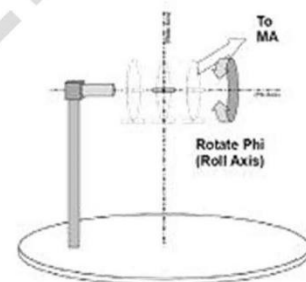
Agilent 8960

CMW500

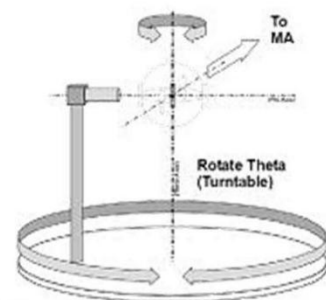
## 3. Shielding Rom Test Environment:



(Testing by 3D anechoic chamber)



Phi axis test

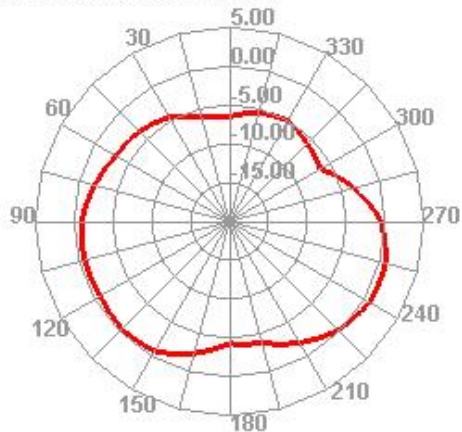


Theta axis test

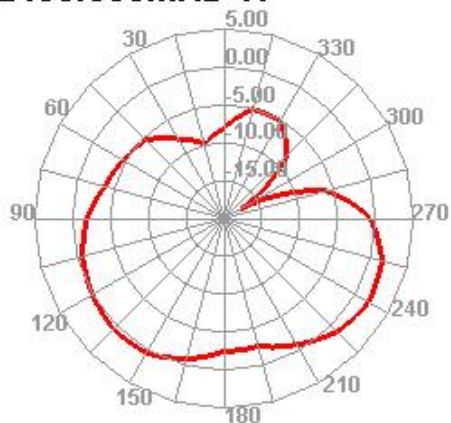


## WIFI:

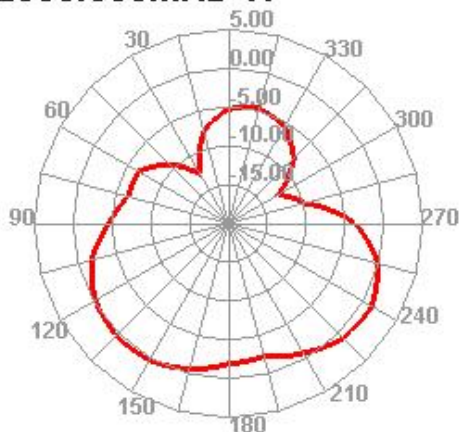
**2400.000MHz H**



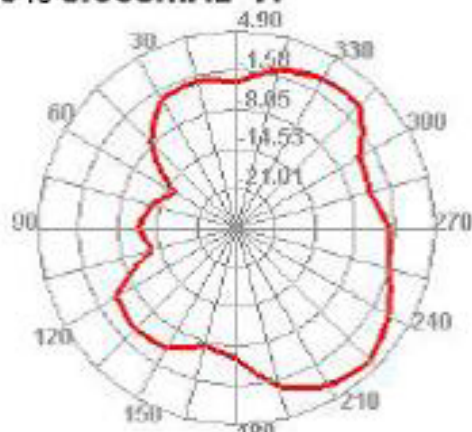
**2450.000MHz H**



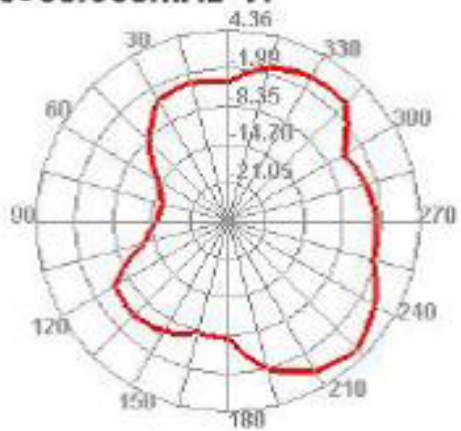
**2500.000MHz H**



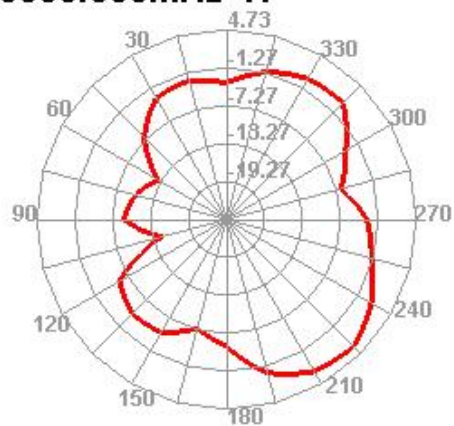
**5100.000MHz H**



**5500.000MHz H**



**5800.000MHz H**





## WIFI:

### Antenna Gain and Efficiency Test Results

#### 2.4G Gain and Efficiency

| Freq<br>(MHz) | Effi<br>(%) | Gain<br>(dBi) |
|---------------|-------------|---------------|
| 2400          | 51.55       | 2.99          |
| 2410          | 49.83       | 2.95          |
| 2420          | 48.33       | 2.83          |
| 2430          | 51.55       | 3.1           |
| 2440          | 48.89       | 2.75          |
| 2450          | 54.75       | 3.01          |
| 2460          | 54.62       | 2.75          |
| 2470          | 50.8        | 2.55          |
| 2480          | 56.51       | 3.12          |
| 2490          | 56          | 3.11          |
| 2500          | 57.4        | 3.13          |

#### 5G Gain and Efficiency

| Freq<br>(MHz) | Effi<br>(%) | Gain<br>(dBi) |
|---------------|-------------|---------------|
| 5100          | 49.5        | 2.85          |
| 5200          | 48.5        | 3.2           |
| 5300          | 47.9        | 3.3           |
| 5400          | 48.6        | 3.11          |
| 5500          | 50.5        | 3.29          |
| 5600          | 51.4        | 2.18          |
| 5700          | 52.3        | 3.46          |
| 5800          | 52.4        | 3             |
| 5850          | 51.3        | 2.47          |



## The Feed Cable Parameter

### Electrical characteristics

| Item                         | Standard value | Item        | Frequency | standard Value<br>Unit:dB/m |
|------------------------------|----------------|-------------|-----------|-----------------------------|
| Capacitance(pF/m)            | 98             | Attenuation | 1GHz      | ≤2.2                        |
| Velocity(%)                  | 70             |             | 2GHz      | ≤3.1                        |
| Impedance(Ω)                 | 50±2           |             | 3GHz      | ≤3.8                        |
| Standing wave ratio          | ≤1.3@0~6GHz    |             | 4GHz      | ≤4.4                        |
| Max.operating voltage(V)     | 1000           |             | 5GHz      | ≤4.9                        |
| Max.operating frequency(GHz) | 6              |             | 6GHz      | ≤5.4                        |

### Dependability

| ITEM                      | Unit | Standard value |
|---------------------------|------|----------------|
| Min.bending radius static | mm   | /              |
| Operating temperature     | °C   | -40°C ~ +85°C  |