

# 产品规格承认书

Product specifications  
acknowledgment

承认厂商: \_\_\_\_\_

(Recognized manufacturers)

制造厂商: Shenzhen Bat Wireless Technology Co., Ltd.

(Manufacturer)

地址: 1409, Building A, Zhiyun One Industrial Park, No. 13 Huaxing Road, Dalang Street, Longhua District, Shenzhen, Guangdong, China

(Address)

产品名称: FPC Antenna

(Description)

产品选型表:

(Product Type)

型号 (Model)	说明 (Specification)	备注 (Remarks)
BW2.4FNX40-7B1L105	IPEX1 Connector & 105mm Cable Length	Customizable

供应商承认签栏 Vendor acknowledgement signature Field		
制表者 Tabulator	审核者 Examiner	核准者 Approver

客户承认栏 Customer recognition field	
审核者 Examiner	核准者 Approver

## 1.1 Specifications

天线型号 Antennas Type	BW2.4FNX40-7B1L105
频率范围 Frequenc Range (MHz)	2400-2500MHz
输入阻抗 Input Impedence ( $\Omega$ )	50 $\Omega$
电压驻波比 V. S. W. R	<2
增益 Gain (dBi)	2.26dBi
极化形式 Polarization Type	垂直 Vertical
功率容量 Power Capacity (w)	50
雷电保护 Lingtning Protection	None
工作电压 DC Voltage (V)	None
天线尺寸 Dimension (mm)	40x7
接口形式/Connector Type:	IPEX-1
电缆型号 Cable type (mm)	$\phi$ 1.13
电缆长度 Cable length (mm)	105
辐射体 Radiator	None
天线颜色 Color	黑色 Black
重量 Weight (g)	None
工作温度 Operating Temperature ( $^{\circ}$ C)	-40~80
储藏温度 Storage Temperature ( $^{\circ}$ C)	-20~85

\* Note: The above data is for reference only; Because the antenna function is more sensitive, please inform us of any changes in the surrounding institutions.

## 1.2 Antenna Picture



Model: BW2.4FNX40-7B1 Antenna

客户定制款（可以中间连接线长度定制，天线形状定制）

Customized (Can be customized in the middle of the cable length, antenna shape customization)

\*天線功能較為敏感，主體周邊機構有變更請通知我們評估

\* The antenna function is more sensitive, please inform us of any changes in the surrounding institutions

## 2. Electrical Specification

### 2.1 Test Equipment

- A. VSWR and input impedance: Agilent 8753/E5071 Network Analyzer
- B. Antenna gain and efficiency: ETS three-dimensional anechoic chamber

### 2.2 Test Setup

#### 2.2.1 Frequency Range

A.

#### 2.2.2 VSWR

Step 1: The antenna is arranged on the customer provided test fixture.

Step 2: The VSWR of the antenna is measured via Agilent 8720/8753 Network Analyzer (see figure. 1).



Figure.1

#### 2.2.3 Radiation pattern and Gain

- A. The 3D chamber provides less than -40dB reflectivity from 800MHz to 6GHz and a 40cm diameter spherical quiet zone. The measurement results are calibrated using both dipoles and standard gain horns (see figure. 2).
- B. The antenna under tested is arranged in the turned table and a decoupling sleeve is used to reduce feed line radiation (see figure. 3).
- C. The measured results of the radiation patterns and antenna gain are obtained from the control system and showed on the monitor (see figure. 4 and 5).
- D.



Figure.2



Figure.3



Figure.4

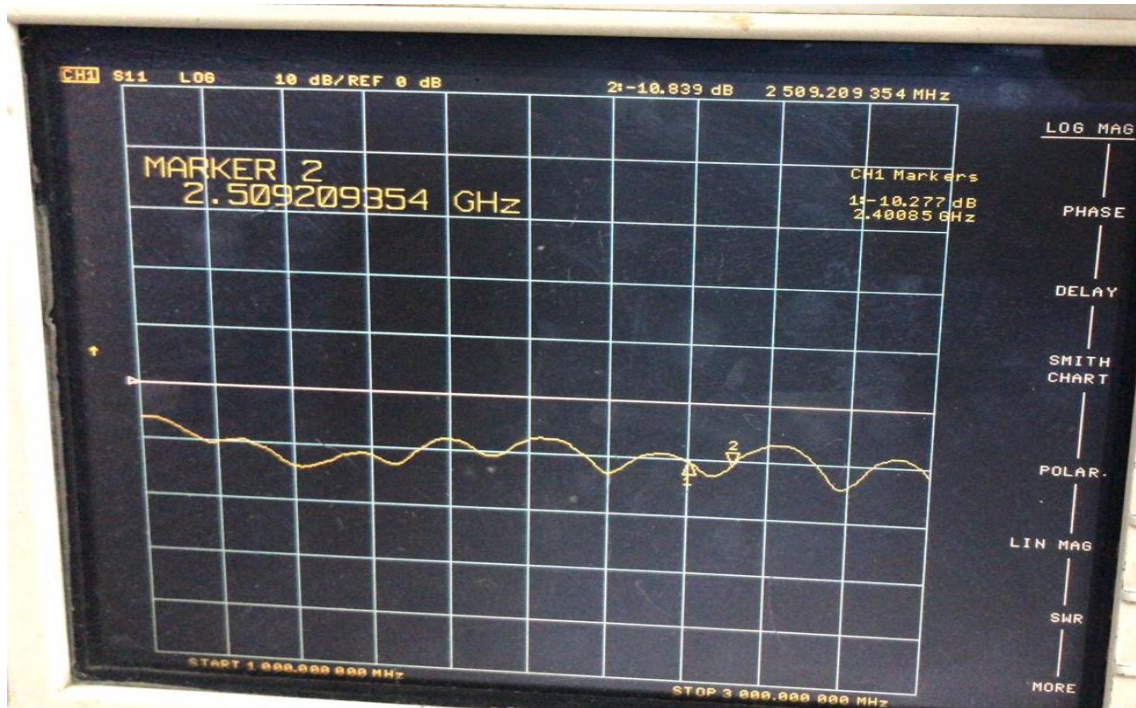
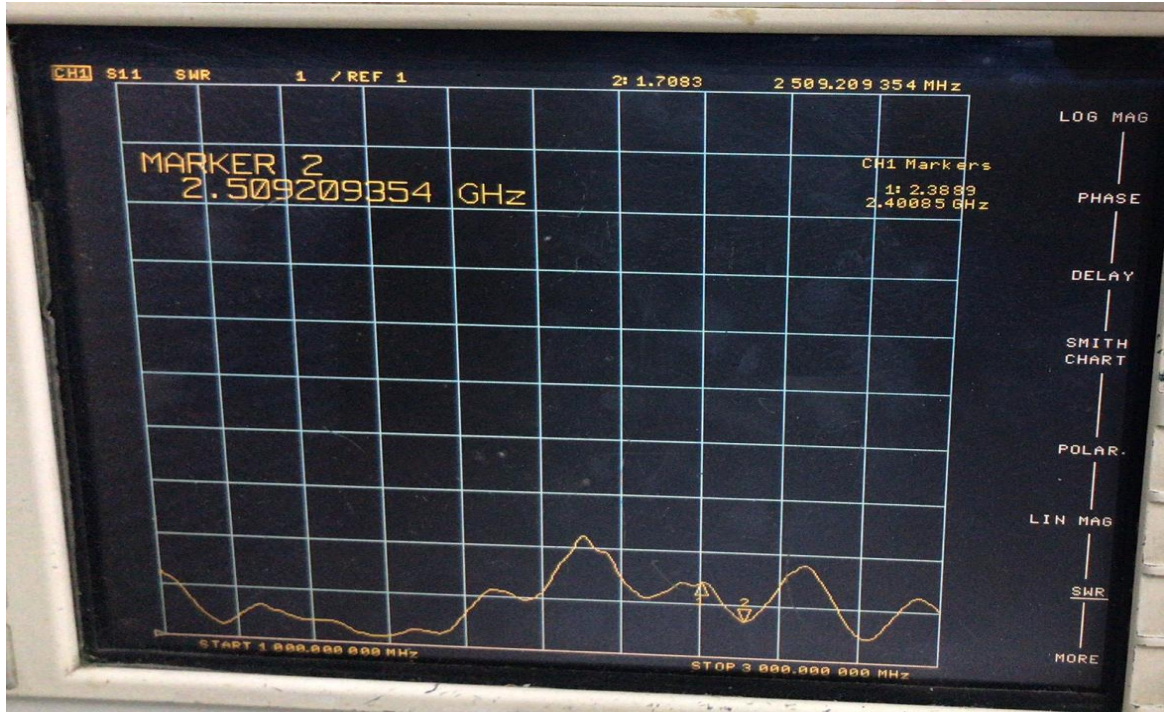


Figure.5

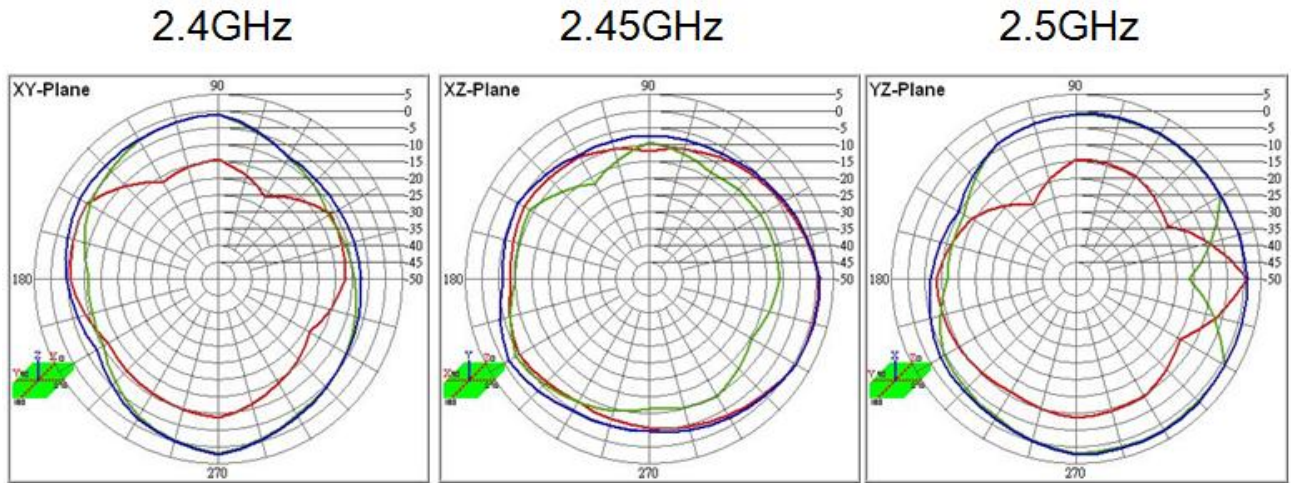
### 3. Performance Data

#### 3.1 Passive data

VSWR (电压驻波比) / Return Loss (回波损耗) / Smith Chart (史密斯圆图)

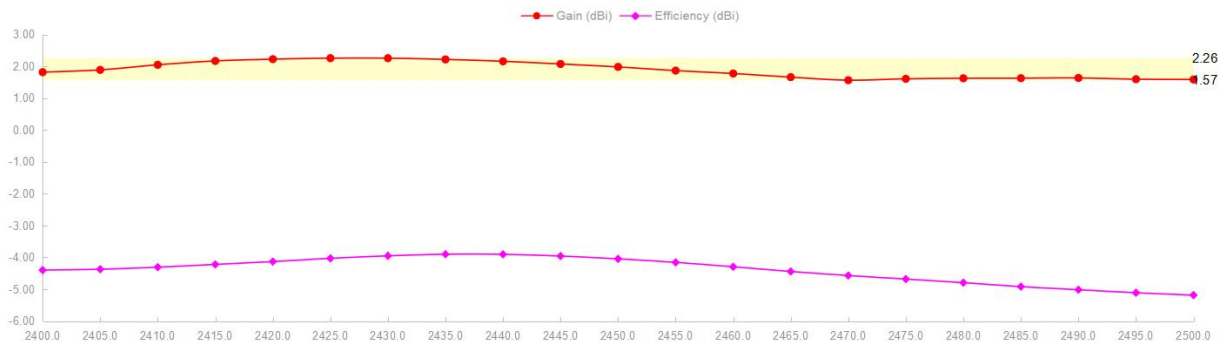


### 3.2 Radiation Pattern (辐射场型)



### 3.3 Gain (增益)

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Frequency (MHz)	2400.0	2405.0	2410.0	2415.0	2420.0	2425.0	2430.0	2435.0	2440.0	2445.0	2450.0	2455.0	2460.0	2465.0	2470.0	2475.0	2480.0	2485.0	2490.0	2495.0	2500.0
Efficiency (dBi)	-4.40	-4.37	-4.31	-4.22	-4.13	-4.03	-3.95	-3.90	-3.90	-3.96	-4.05	-4.16	-4.29	-4.44	-4.57	-4.68	-4.79	-4.92	-5.02	-5.11	-5.19
Gain (dBi)	1.82	1.89	2.05	2.17	2.22	2.26	2.26	2.22	2.16	2.07	1.98	1.87	1.77	1.66	1.57	1.61	1.62	1.63	1.64	1.60	1.59
Efficiency (%)	36.31	36.54	37.09	37.84	38.62	39.54	40.26	40.72	40.69	40.19	39.39	38.40	37.20	35.96	34.92	34.03	33.16	32.22	31.51	30.83	30.29
Directivity (dB)	6.22	6.26	6.36	6.39	6.36	6.29	6.21	6.12	6.06	6.03	6.02	6.02	6.07	6.10	6.13	6.29	6.42	6.55	6.65	6.71	6.77
Peak Gain Position (Theta)	45.00	17.00	16.00	16.00	15.00	15.00	15.00	15.00	15.00	16.00	16.00	17.00	17.00	17.00	42.00	42.00	42.00	41.00	41.00	40.00	40.00
Peak Gain Position (Phi)	215.00	167.00	167.00	167.00	167.00	166.00	166.00	166.00	167.00	169.00	170.00	170.00	171.00	172.00	204.00	204.00	204.00	206.00	206.00	207.00	208.00
Efficiency ThetaPol (%)	12.17	12.45	12.82	13.32	13.76	14.20	14.49	14.61	14.43	14.01	13.52	12.89	12.20	11.50	10.96	10.49	10.13	9.88	9.77	9.80	9.92
Efficiency PhiPol (%)	24.14	24.09	24.27	24.52	24.87	25.34	25.77	26.11	26.26	26.18	25.87	25.51	25.00	24.45	23.96	23.54	23.02	22.34	21.74	21.03	20.38
Upper Hem. Efficiency (%)	24.41	24.67	25.10	25.60	26.04	26.58	27.04	27.35	27.37	27.16	26.75	26.18	25.46	24.72	24.10	23.55	23.05	22.61	22.35	22.15	22.06
Lower Hem. Efficiency (%)	11.90	11.88	11.99	12.24	12.59	12.96	13.21	13.37	13.32	13.04	12.64	12.22	11.74	11.23	10.82	10.48	10.10	9.61	9.16	8.68	8.24



## 4. Mechanical Specification

### 4.1 Assembly Drawing

