
Product Name	WiFi terminal patch antenna	Product Code	ARWBT3216P
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Antenna Technical Specification

一、Overview

This antenna is a WiFi terminal patch antenna, working frequency is 2400-2500MHz, widely used in WiFi products, Bluetooth headset and audio, PAD, mobile phone multi-band antenna.

It is widely used in WiFi products, Bluetooth headset and audio, PAD, cell phone multi-band antennas on various devices, using small size SMD chip design.



二、Technical Requirements

2.1 Antenna Indicators

	Technical Requirements	Antenna Indicators
1	工作频率 Frequency	2400MHz-2500MHz
2	回波损耗 ReturnLoss	-10dB (典型值 Typical values)
3	天线效率 Efficiency	80% (典型值 Typical values , 在 80*40mm 底板上测试 Testing on the base plate)
4	平均增益 AverageGain	-3.6 dBi (典型值 Typical values)
5	峰值增益 PeakGain	2.5dBi (峰值 Peak)
6	输出驻波比 OutputVSWR	≤2
7	极化 Polarization	线极化 (Linear polarization)
8	阻抗 Impedance	50Ω

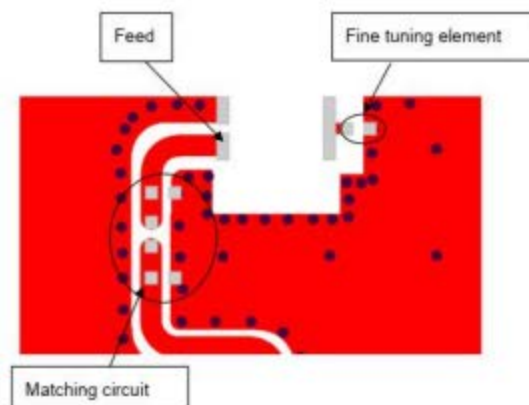
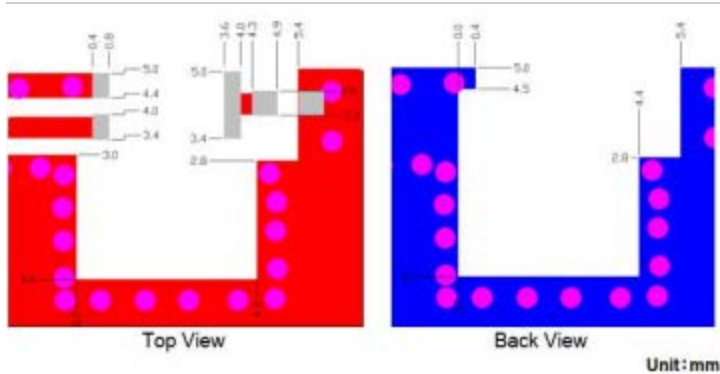
2.2 环境适应性 Environmental adaptability

1	工作温度 Operating temperature	-25°C ~ +70°C
2	存储温度 Storage temperature	-25°C ~ +85°C
3	相对湿度 Relative Humidity	10% ~95%

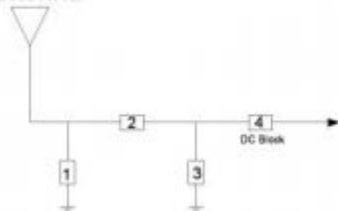
2.3 机械特性 Mechanical properties

1	天线尺寸 Demention	3.2*1.6*0.5mm
2	天线材料 Material	陶瓷 Ceramics

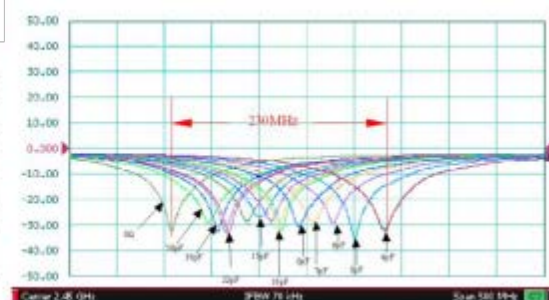
图Pic2 参考测试电路板 Reference test board



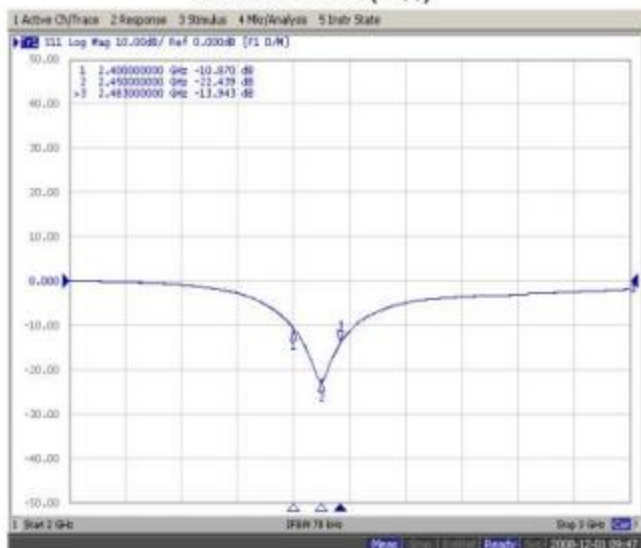
Antenna



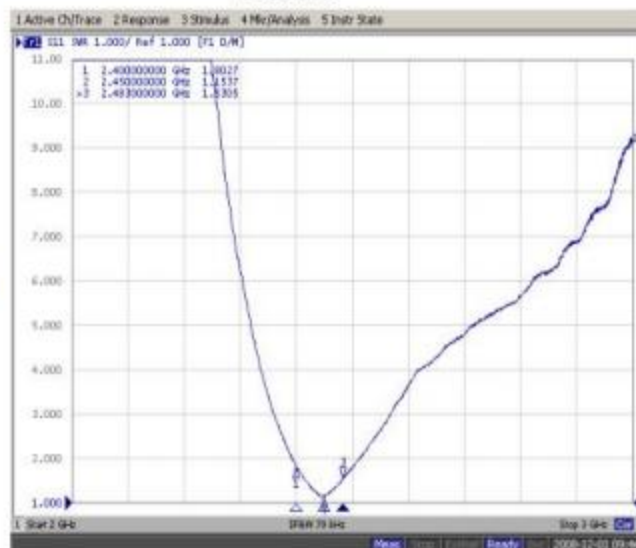
System Matching Circuit Component		
Location	Description	Vendor
1	N/A	-
2	0Ω	(0402)
3	N/A	-
4	22pF	TDK(0402)
Fine tuning element	8pF	TDK(0402)



Return Loss(S_{11})

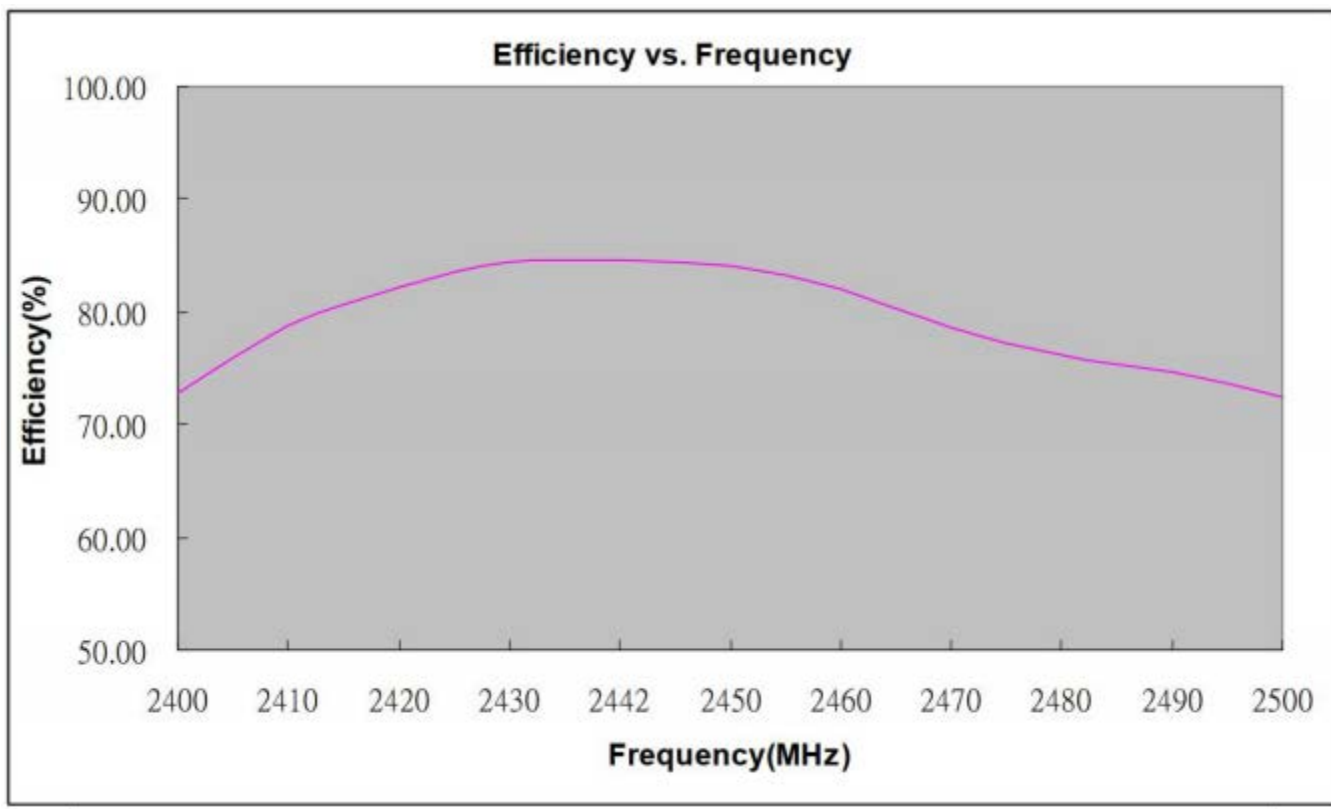


VSWR

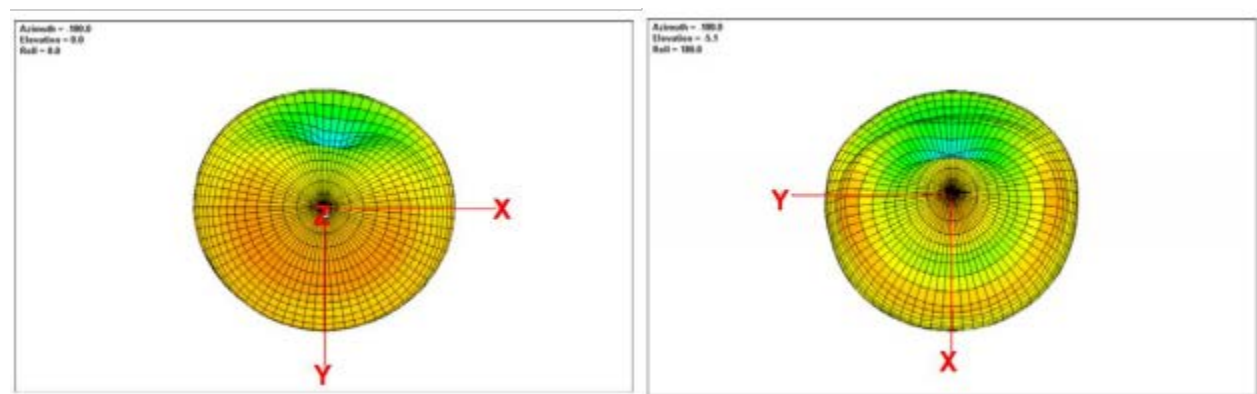


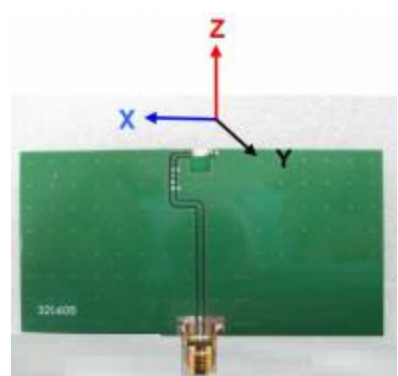
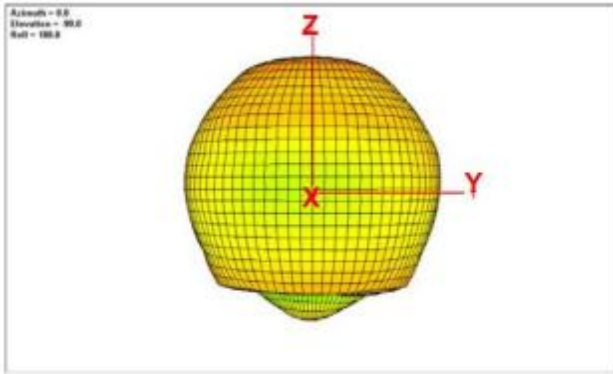
2、天线效率和增益Antenna efficiency and gain :

Frequency(MHz)	2400	2410	2420	2430	2442	2450	2460	2470	2480	2490	2500
Efficiency(dB)	-1.38	-1.04	-0.85	-0.74	-0.73	-0.76	-0.86	-1.05	-1.18	-1.27	-1.40
Efficiency(%)	72.83	78.71	82.27	84.39	84.53	84.04	82.00	78.60	76.14	74.64	72.50
Gain(dBi)	1.47	1.81	2.10	2.40	2.50	2.50	2.37	2.10	1.90	1.87	1.75



3、天线辐射方向图Antenna radiation direction map :





五、Antenna welding conditions

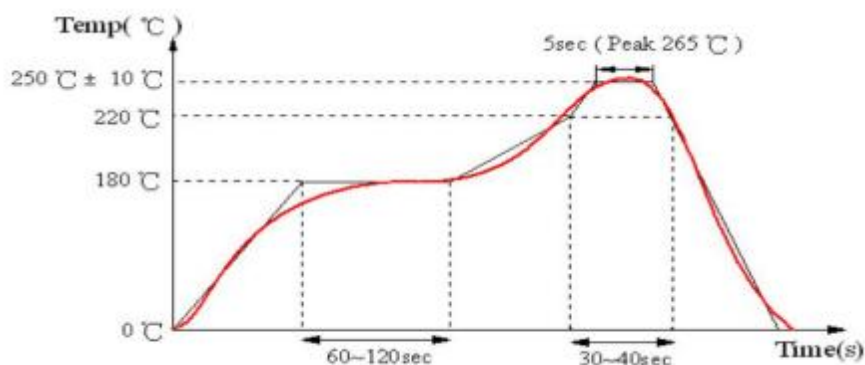
1、Solder flux

① Use rosin flux, prohibit the use of halide content from 0.2wt% of the strong acid flux.

② Use pure tin solder

2、Reflow soldering conditions

When preheating, the temperature difference between the product surface temperature and the solder temperature should not exceed 150°C. When cooling after soldering, the temperature difference between the product surface temperature and the solvent temperature should not exceed 100°C. Insufficient preheating may cause cracks on the surface of the product, resulting in a decline in product quality.



- Standard reflow profile

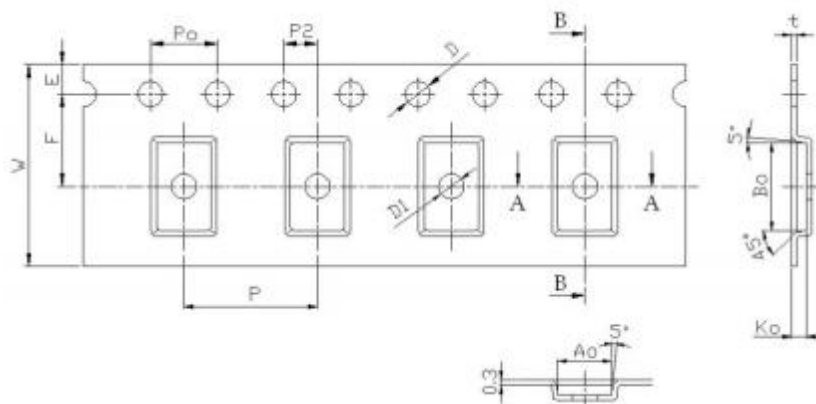
3、Manual rework

When using a soldering iron for manual soldering, the following conditions must be strictly observed

预热 Pre-heating	150°C, 1 minute
尖端温度 Tip temperature	350°C max
输出功率 Soldering iron output	80w max
电烙铁头尖端尺寸 End of soldering iron	φ3mm max
焊接时间 Soldering time	3 seconds max

六、Packaging

①Braided belt and pulley size : Unit: mm



Feature	Specifications	Tolerances
W	12.00	±0.30
P	8.00	±0.10
E	1.75	±0.10
F	5.50	±0.10
P2	2.00	±0.10
D	1.50	+0.10 -0.00
Po	4.00	±0.10
10Po	40.00	±0.20

Feature	Specifications	Tolerances
Ao	1.90	+0.20
Bo	3.50	-0.10
Ko	0.60	±0.10
t	0.30	±0.05

②Package Quantity: 6000 PCS / Tray

七、Custody

① . Storage period

Within six months from the time of factory inspection, the product can be used; the inspection time can be confirmed by the inspection number marked on the outside of the package;

If the time exceeds six months, the welding performance should be checked before use.

②. Storage conditions

The storage room where the goods are stored should meet the following conditions

Temperature: 10 ~ 40°C Humidity: 30 to 70% relative humidity

Extreme changes in temperature and humidity are not allowed.

It is forbidden to store the product in corrosive substances such as sulfur, chlorine, or acid, as this will cause oxidation of the ends and reduce the weldability.

To avoid the influence of moisture, dust and other substances, the product should be stored on the shelf.

The product should be stored in a warehouse to avoid thermal shock, vibration, and direct light, etc.

The product should be sealed and packed.