

OA-FW1807-2.4G Antenna Specification

**® Flexible FPC Patch Antenna Series Complies With
RoHS**

2.4G Flexible FPC Surface Mount Antenna

Chapter 1 Product Introduction

OA-FW1807-2.4G is a flexible FPC antenna with built-in back adhesive and coaxial cable, designed for 2.4-2.5Ghz systems. The antenna measures 18×7mm in dimensions with a thickness of just 0.2mm (including the adhesive layer). It features an RF0.81 coaxial cable that reduces signal loss while maintaining flexibility, with a 10cm length and IPEX Type 1 certification.

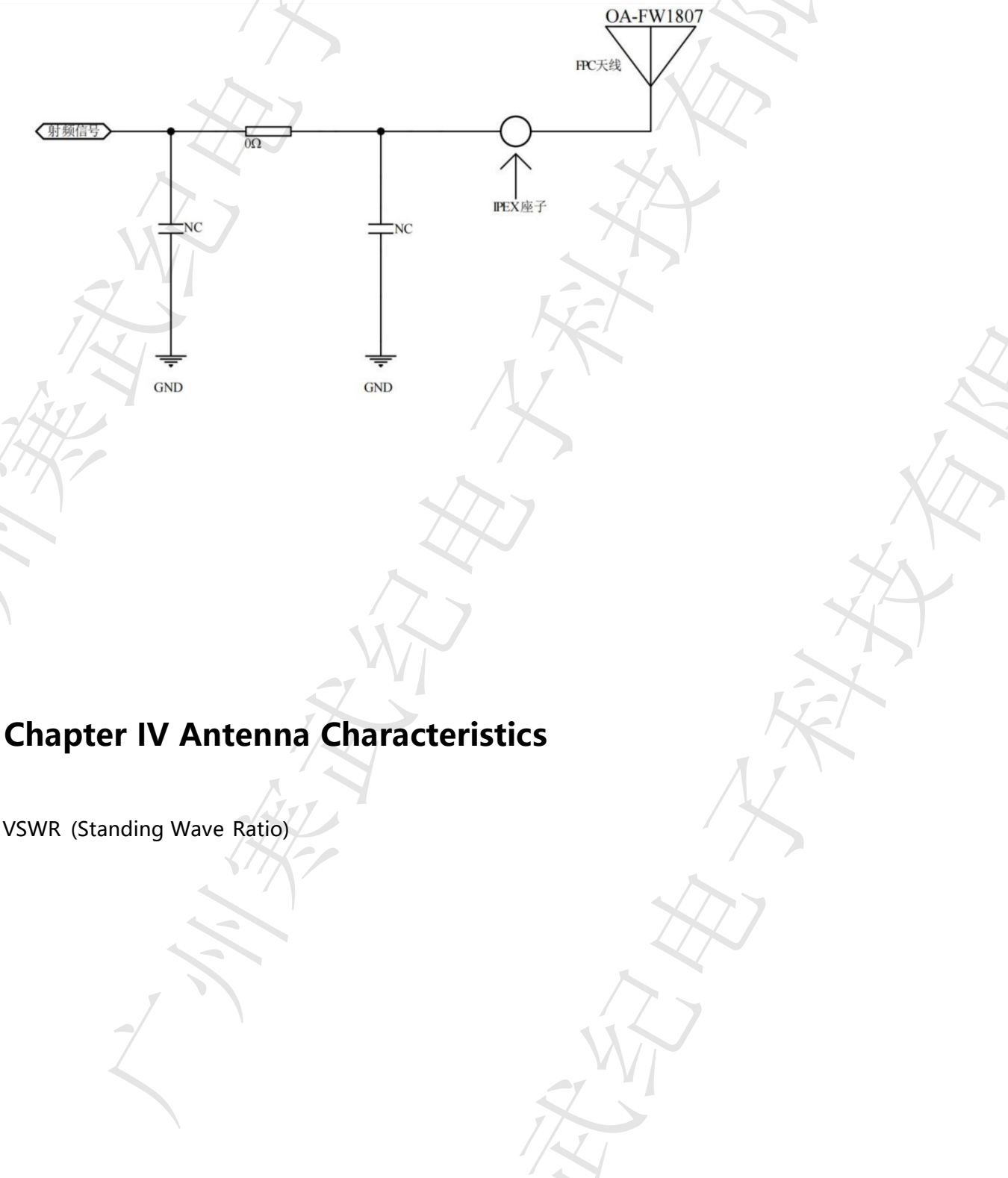
This antenna is suitable for all kinds of electronic products and communication equipment with 2.4G (such as Bluetooth, WI FI, etc.) antenna built-in electronics.

Chapter II Specifications and Parameters

Electrical parameters	
center frequency	2450Mhz
antenna bandwidth	2400-2500Mhz
antenna gain	1.2dB
antenna efficiency	48.5%
standing-wave ratio	<2
direction of polarization	vertical polarization
radiation direction	omnidirectional
input impedance	50Ω
maximum power	5W
Other parameters	
Antenna size	18.0*7.0*0.2mm
Antenna body thickness	0.2mm
Same coaxial line length	4—30cm
Antenna body material	FPC
Same coaxial line specification	RF0.81
Interface specifications	Generation IPEX1
working temperature	-30°C ~ +80°C



Chapter 3 Antenna Matching Schematic

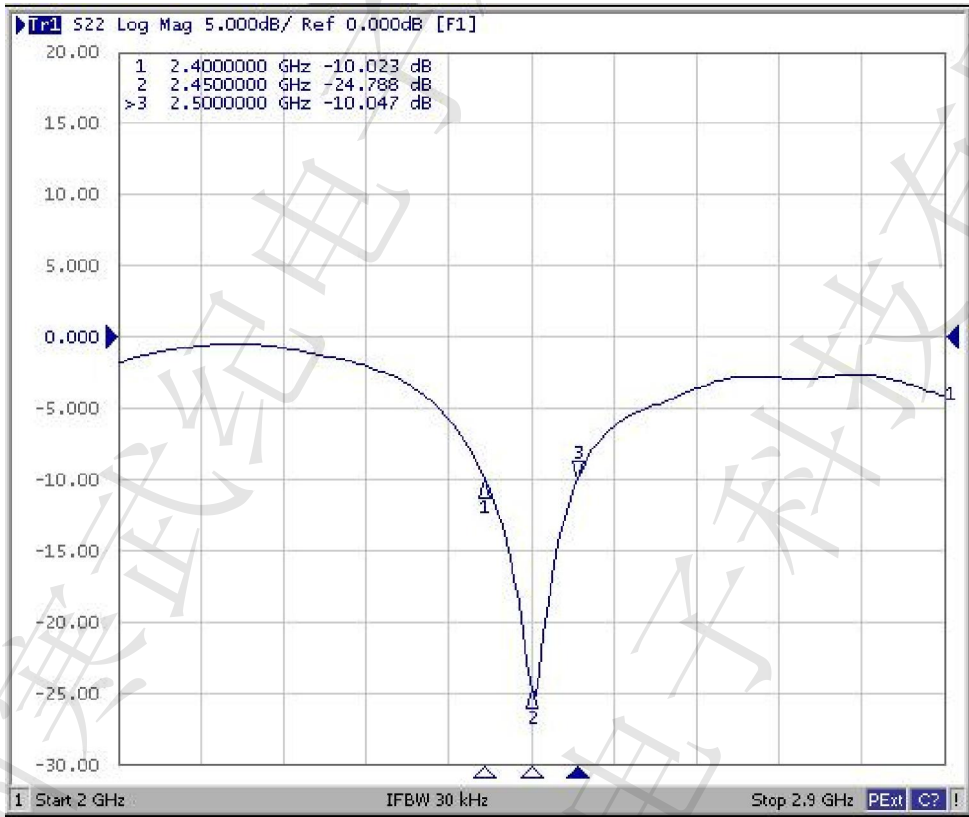


Chapter IV Antenna Characteristics

VSWR (Standing Wave Ratio)



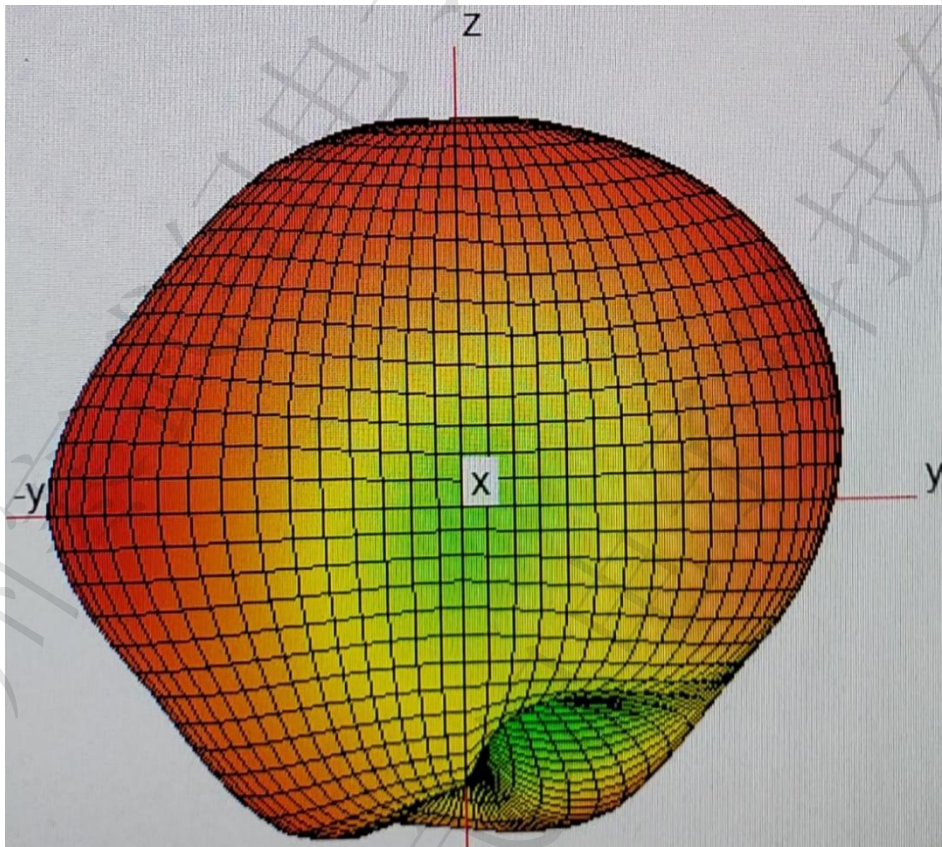
Return Loss (RL)



Antenna efficiency and gain (Efficiency and Gain)

Freq (MHz)	Gain (dbi)	Efficiency (%)
2400	1.25	44.87
2410	1.30	46.74
2420	1.12	47.26
2430	1.07	48.09
2440	1.23	50.59
2450	1.36	50.89
2460	1.40	51.60
2470	1.22	50.01
2480	1.18	48.59
2490	1.10	47.62
2500	1.09	47.15

antenna pattern



Chapter V Matters Needing Attention

- 1 、 The antenna should be attached to the surface of the insulator inside the product. Do not attach the antenna body to the surface of the metal conductor.
- 2 、 The antenna body should be kept at least 3mm away from the metal

conductor, and the farther away the better. The PCB board as a conductor also needs to be kept as far away from the antenna as possible.

- 3 、 Do not wrap the coaxial cable of the antenna around the antenna body, otherwise the performance of the antenna may be reduced.
- 4 、 The impedance of the antenna may be offset due to structural differences in different products. You can reserve π type impedance matching device for debugging and improvement. If this happens, please contact us for technical support.

Chapter VI Antenna Drawings

