

Plate loadFtypePCBAntenna Specifications

Antenna manufacturer：Shenzhen Newxinxing Technology Co. LTD

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I. Product Introduction

This product is an onboard inverter.FtypePCBAntenna, usingFR4The substrate copper foil pattern is designed specifically for...2.4GHz ISMFrequency band wireless communication module design

II. Electrical Specifications

2.1Main parameters

parameter	Minimum value	Typical value	Maximum value	unit
Operating frequency	2402	2440	2480	MHz
impedance		50		Ω
Peak gain	2.23	1.90	1.92	dBi
Standing Bobby	1.5	2	3	

2.2Test Conditions Description

The above electrical parameters are based on tests conducted on a reference design evaluation board. Antenna performance is affected by...PCBThe layout, ground plane dimensions, casing and surrounding components are subject to actual measurement of the whole machine.

III. Mechanical Specifications

3.1Antenna size diagram



3.2Dimensions

Overall length of antenna 12.3 mm±0.1 mm
Overall antenna width 5.6 mm±0.1 mm
Copper foil thickness1 oz (35 μ m) -

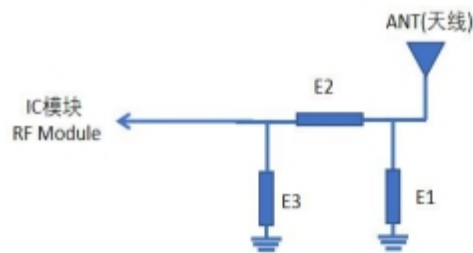
-IV. Reference Design Layout

4.1 PCBLayout requirements

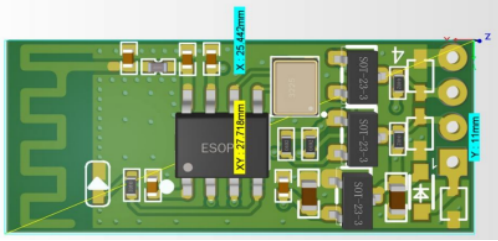
Serial Number	Require	illustrate
1	Antenna position	Placed inPCBedge or corner
2	Clear zone	Copper plating and traces are prohibited on all layers below and around the antenna.
3	ground level	The antenna feed point must be connected to a complete ground plane, and the recommended size is ≥30×20mm
4	signal routing	Cable routing is prohibited on all layers in the antenna area.
5	Impedance control	The feeder line must be made50 Ω

V. Electrical Performance Specifications

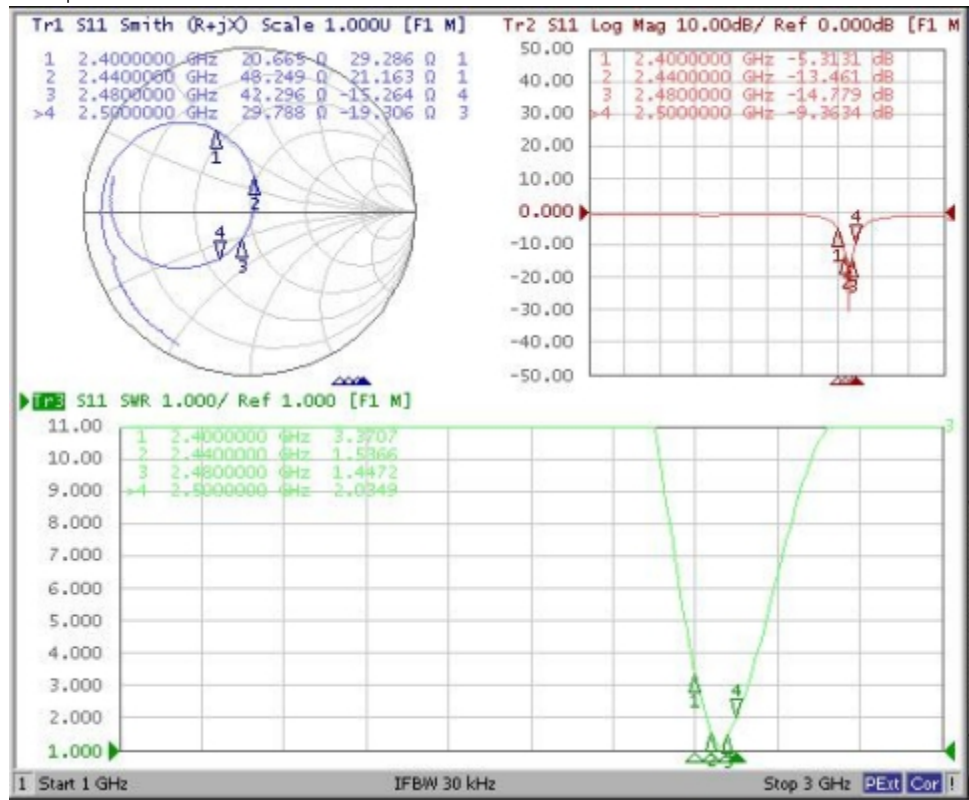
5.1 Matching circuit diagram



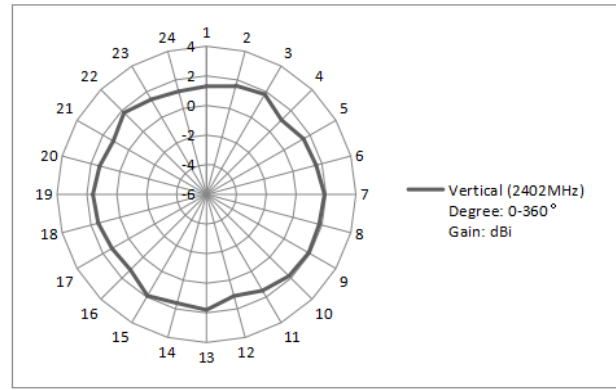
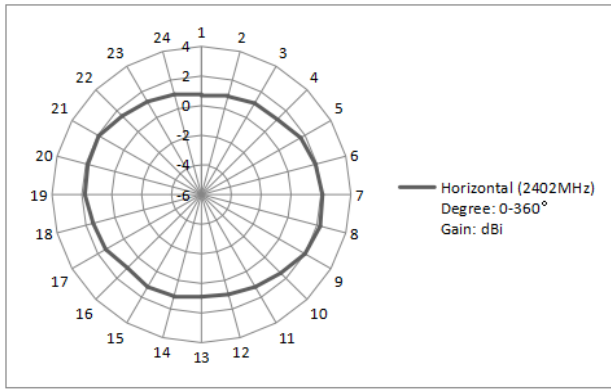
L/R		
Main Antenna		
Element		
E1(0201)		N/A
E2(0201)		0Ω
E3(0201)		1PF



5.2S11 parameters



5.3 Passive efficiency



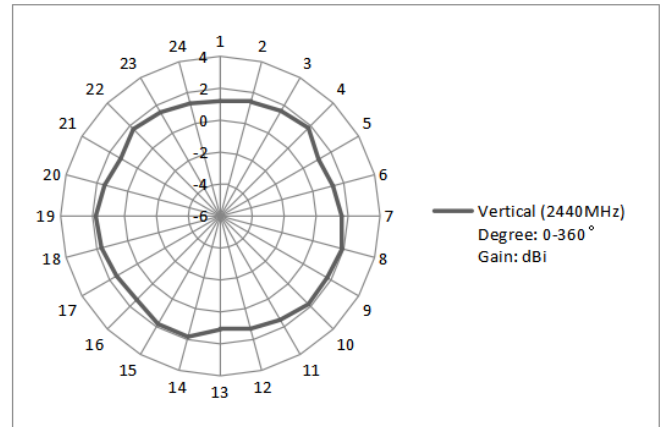
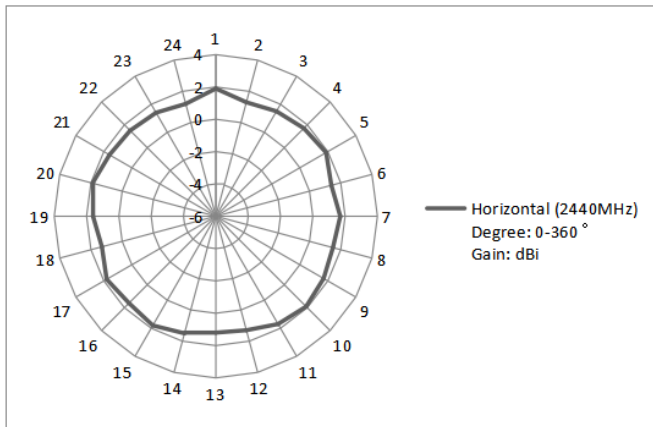
Diagram

Horizontal (2402MHz) Degree: 0-360° Gain: dBi

Phi	0		30		60		90		120		150		180		210		240		270		300		330	
Max Gain (dBi)	0.68	0.86	1.12	1.18	1.67	1.9	2.1	2.23	2	1.5	1.2	0.98	0.9	1.1	1.2	1	1.4	1.5	1.8	1.87	1.93	1.5	1.24	1

Vertical (2402MHz) Degree: 0-360° Gain: dBi

Phi	0		30		60		90		120		150		180		210		240		270		300		330	
Max Gain (dBi)	1.3	1.6	1.8	1.1	1.5	1.6	1.9	1.81	1.9	1.8	1.5	1.1	1.8	1.6	1.9	1.2	1.3	1.5	1.6	1.4	1.2	1.8	1.4	1.2



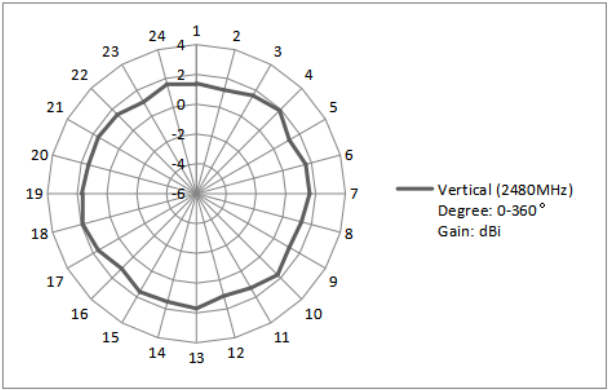
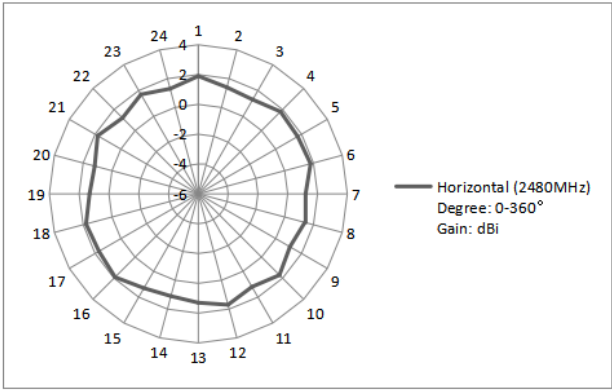
diagram

Horizontal (2440MHz) Degree: 0-360° Gain: dBi

Phi	0		30		60		90		120		150		180		210		240		270		300		330	
Max Gain (dBi)	1.9	1.3	1.5	1.7	1.88	1.4	1.7	1.5	1.7	1.9	1.7	1.3	1.2	1.5	1.8	1.6	1.8	1.3	1.6	1.9	1.6	1.5	1.4	1.2

Vertical (2440MHz) Degree: 0-360° Gain: dBi

Phi	0		30		60		90		120		150		180		210		240		270		300		330	
Max Gain (dBi)	1.2	1.4	1.6	1.8	1.1	1.3	1.6	1.9	1.72	1.8	1.5	1.3	1.1	1.82	1.8	1.4	1.5	1.7	1.8	1.5	1.2	1.7	1.5	1.3



diagram

Horizontal (2480MHz) Degree: 0-360° Gain: dBi

Phi	0		30		60		90		120		150		180		210		240		270		300		330	
Max Gain (dBi)	1.9	1.4	1.3	1.8	1.7	1.8	1.2	1.4	1.1	1.7	1.2	1.7	1.3	1.1	1.3	1.9	1.7	1.8	1.3	1.2	1.8	1.2	1.7	1.3

Vertical (2480MHz) Degree: 0-360° Gain: dBi

Phi	0		30		60		90		120		150		180		210		240		270		300		330	
Max Gain (dBi)	1.4	1.2	1.6	1.9	1.2	1.6	1.6	1.3	1.2	1.7	1.3	1.1	1.7	1.5	1.6	1.1	1.6	1.9	1.7	1.5	1.6	1.5	1.1	1.6