Shenzhen Anwei Wireless Technology Co., Ltd

SPECIFICATION

Customer	weipai	Specs	QW16-2
Part Number	AW006-QW16-2-WIFI-021-A0	Frequency Band	2.4G/5G-WIFI
Color	Balck	Edition	REV:A
Salesperson	Xu long	Design	Huang he
Structure	Qin yun lin	Confirm	Song
Date	2025/9/5	Signing Date	huanghe
Customer confirmation:			
Join hands to create the future			

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1、Product specification

The report mainly provides parameter test of QW16-2 antenna performance.

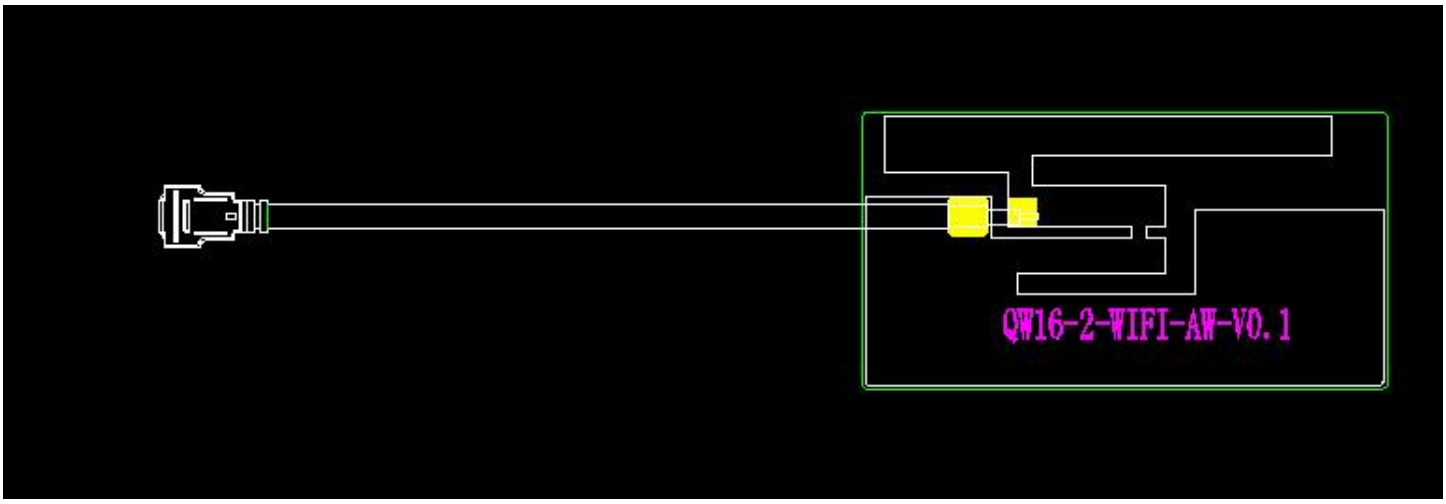
Silk screen model	Frequency+Range	Impendence	Antenna Gain	V.S.W.R
QW16-2	2400～2500MHz	50Ω	1.4dBi	1.6
	5100～5800	50Ω	3.06dBi	1.4

2、Electrical performance

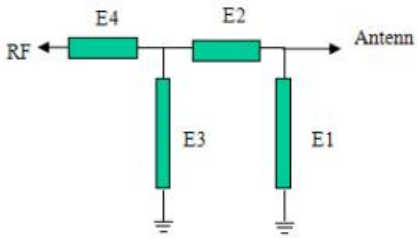
2.1 Specifications and standards

QW16-2 antenna operates at 2400~2500/5100~5800MHZ, and resonance occurs at this frequency band.

2.2Product Photograph



2.3Antenna matching circuit



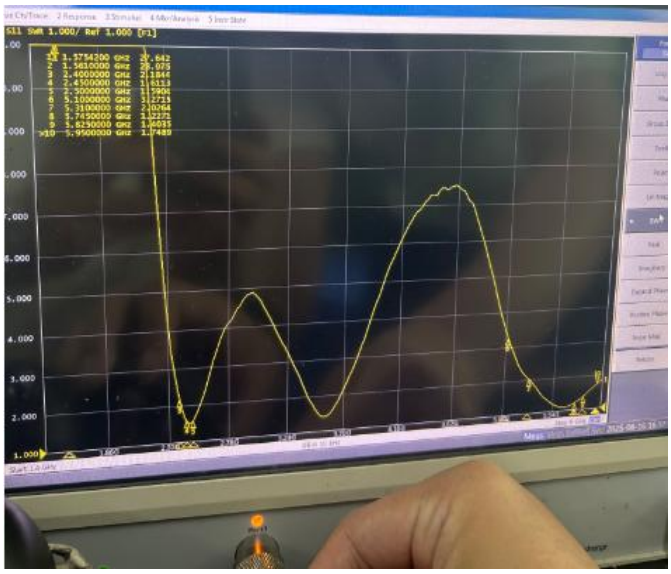
	Main Antenna
Element	Value
E1（0201）	N/A
E2（0201）	0Ω
E3（0201）	N/A
E4（0201）	N/A

Antenna structure: FPC+2 generation terminal 60mm copper axis

3、Test of passive parameters

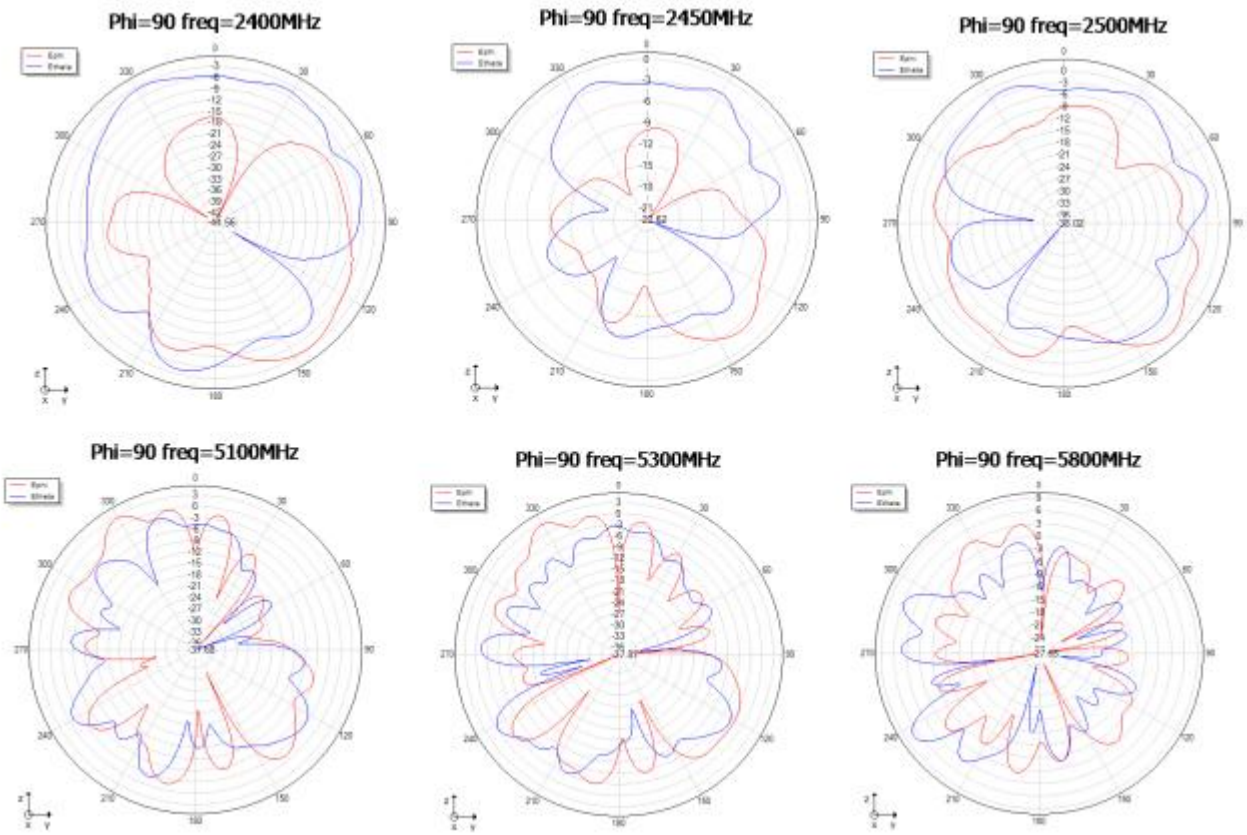
3.1Test result

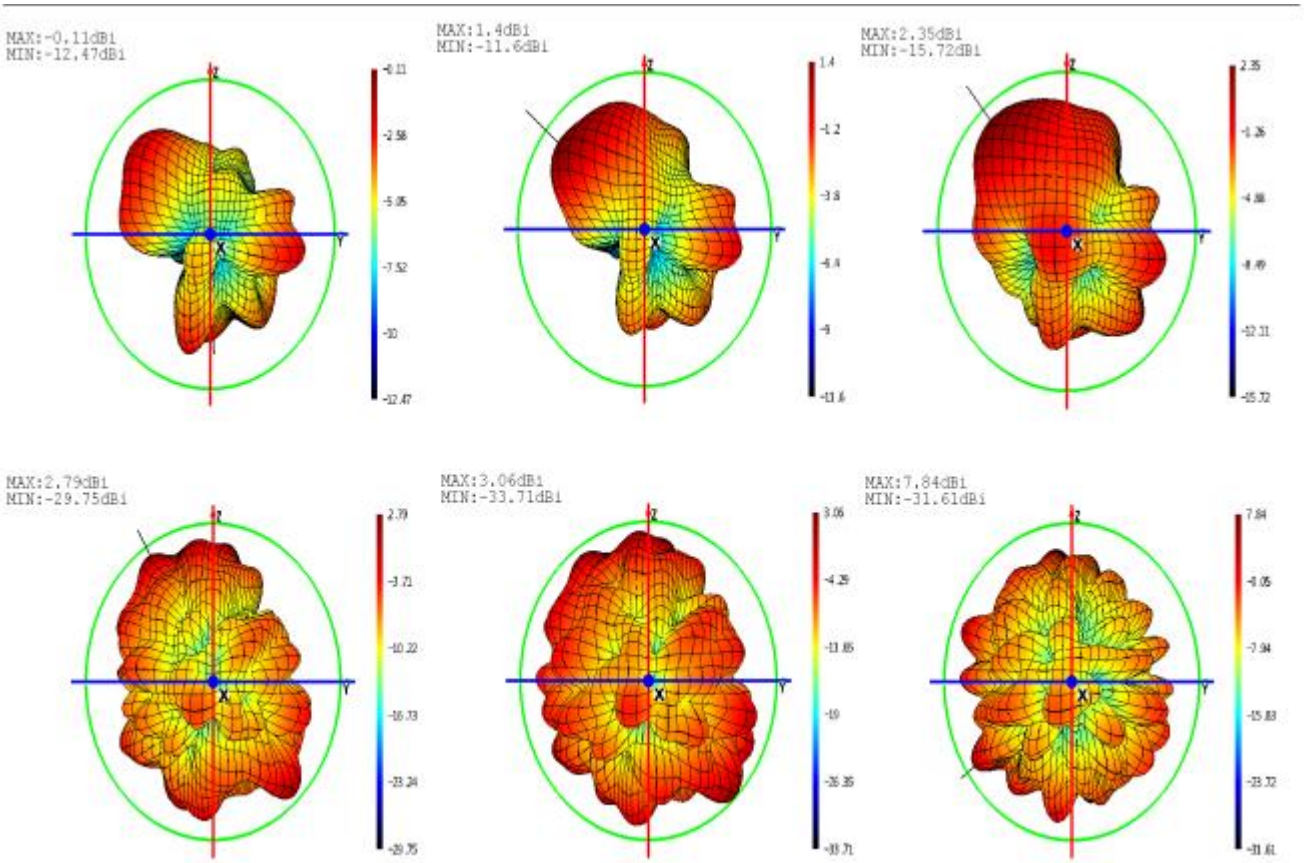
The following are antenna passive parameter data:



Efficiency and gain

Frequency ID	1	2	3	4	5	6
Frequency（MHz）	2400	2450	2500	5100	5300	5800
Gain（dBi）	-0.11	1.40	2.35	2.79	3.06	7.84
Efficiency（dB）	-4.90	-3.76	-2.81	-2.14	-2.09	-1.76
Efficiency（%）	48.67	48.54	51.40	52.15	51.83	56.64




MAX:-0.11dBi
MIN:-12.47dBi
MAX:1.4dBi
MIN:-11.6dBi
MAX:2.35dBi
MIN:-15.72dBi
MAX:2.79dBi
MIN:-29.75dBi
MAX:3.06dBi
MIN:-33.71dBi
MAX:7.84dBi
MIN:-31.61dBi

4、 Setting of OTA active test

4.1 Test result

The maximum radiation power and maximum reception sensitivity reflect the maximum power radiation value and the best reception performance of the antenna in the whole radiation space. TRP and TIS reflect the average radiation power and average reception sensitivity of the antenna, that is, the overall reception performance of the antenna.

The following is the active test results of the bright screen of QW16-2 2.4G dual-band WIFI antenna:

2.4G

Standard	Band	Channel	Frequency	TRP	TIS
WIFI_B	B_11M	1	2412	18.86	-83.63
WIFI_B	B_11M	6	2437	18.14	-85.39
WIFI_B	B_11M	11	2462	18.41	-77.8
WIFI_G	G_54M	1	2412	17.92	-66.83
WIFI_G	G_54M	6	2437	17.87	-64.53
WIFI_G	G_54M	11	2462	18.04	-62.62
WIFI_N	N_65M	1	2412	18.92	-67.97
WIFI_N	N_65M	6	2437	18.36	-66.35
WIFI_N	N_65M	11	2462	18.54	-63.93

2.4G/5.0G

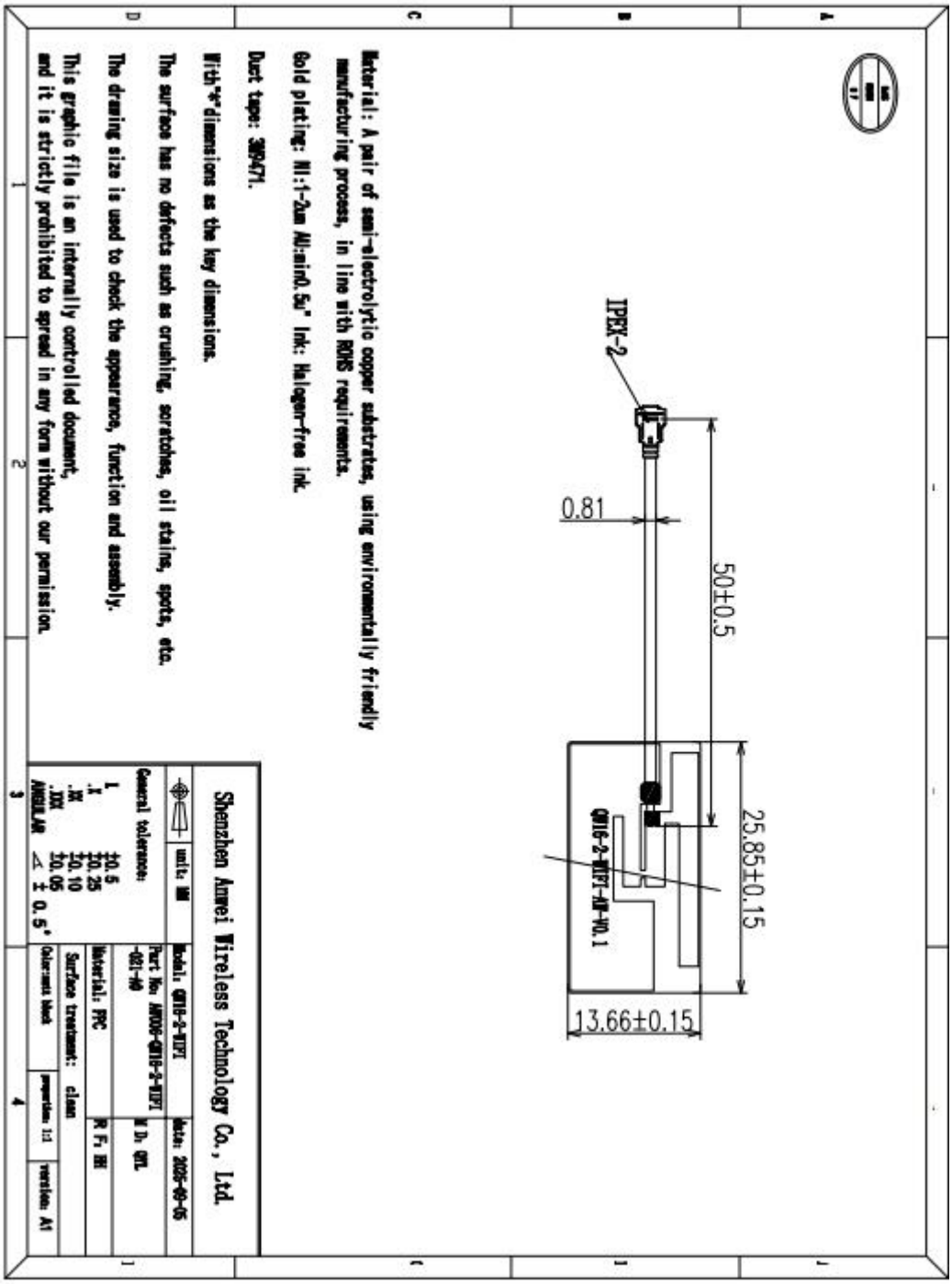
Standard	Band	Channel	Frequency	TRP	TIS
WIFI_B	B_11M	1	2412	18.36	-72.77
WIFI_B	B_11M	6	2437	18.84	-80.27
WIFI_B	B_11M	11	2462	18.11	-75.98
WIFI_G	G_54M	36	2412	16.36	-71.03
WIFI_G	G_54M	64	2437	17.91	-69.6
WIFI_G	G_54M	165	2462	17.47	-57.48
WIFI_N	N_65M	1	2412	18.78	-78.36
WIFI_N	N_65M	6	2437	16.71	-69.62
WIFI_N	N_65M	11	2462	17.85	-67.93
WIFI_A	A_54M	36	5180	17.33	-59.7
WIFI_A	A_54M	64	5320	15.87	-74.45
WIFI_A	A_54M	165	5825	18.59	-74.7

4.2 Environmental treatment

5.Recommendations and conclusions

This report is based on the antenna electrical performance measured by the product provided by the customer. Please check it carefully.

6. Antenna structure drawing


Material: A pair of semi-electrolytic copper substrates, using environmentally friendly manufacturing process, in line with ROHS requirements.
Gold plating: Ni:1-2um Au:min0.5u" Ink: Halogen-free ink.
Duct tape: 3M9471.
With"*"dimensions as the key dimensions.
The surface has no defects such as crushing, scratches, oil stains, spots, etc.
The drawing size is used to check the appearance, function and assembly.
This graphic file is an internally controlled document, and it is strictly prohibited to spread in any form without our permission.
IPEX-2
0.81
50±0.5
25.85±0.15
13.66±0.15
Shenzhen Anwei Wireless Technology Co., Ltd.
unit: MM
Model: QW16-2-WIFI
Date: 2025-09-05
Part No: AW006-QW16-2-WIFI-021-A0
M D: QYL
General tolerance:
Material: PPC
R F: HH
Surface treatment: clean
Color:matt black
proportion: 1:1
version: A1