

Antenna Specification

2.4/5.8G
PIFA Antenna

PN: UB01NP2D1087A

2.4 /5.8GHz Dual-band antenna

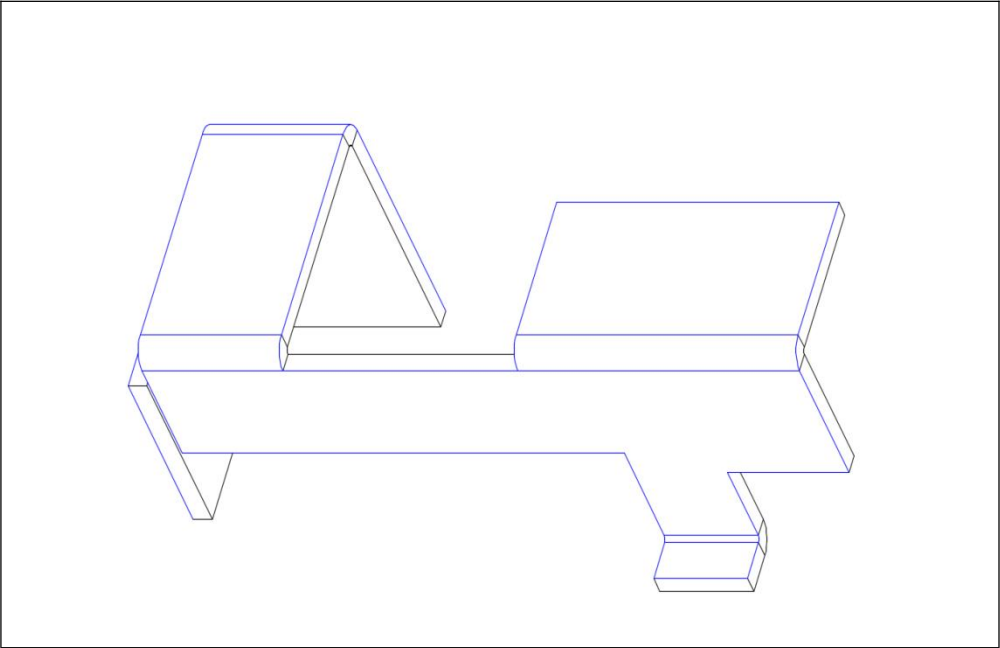
Features

1. Size 15 X 7 X 6.19 X 0.4 mm3 steel piece built-in antenna.
2. low energy loss, high antenna efficiency. 3.
3. High stability under temperature and humidity variations.

Applications

1. 2.4 / 5.8GHz band antenna application.
2. Bluetooth, wireless, smart home applications.

Structure



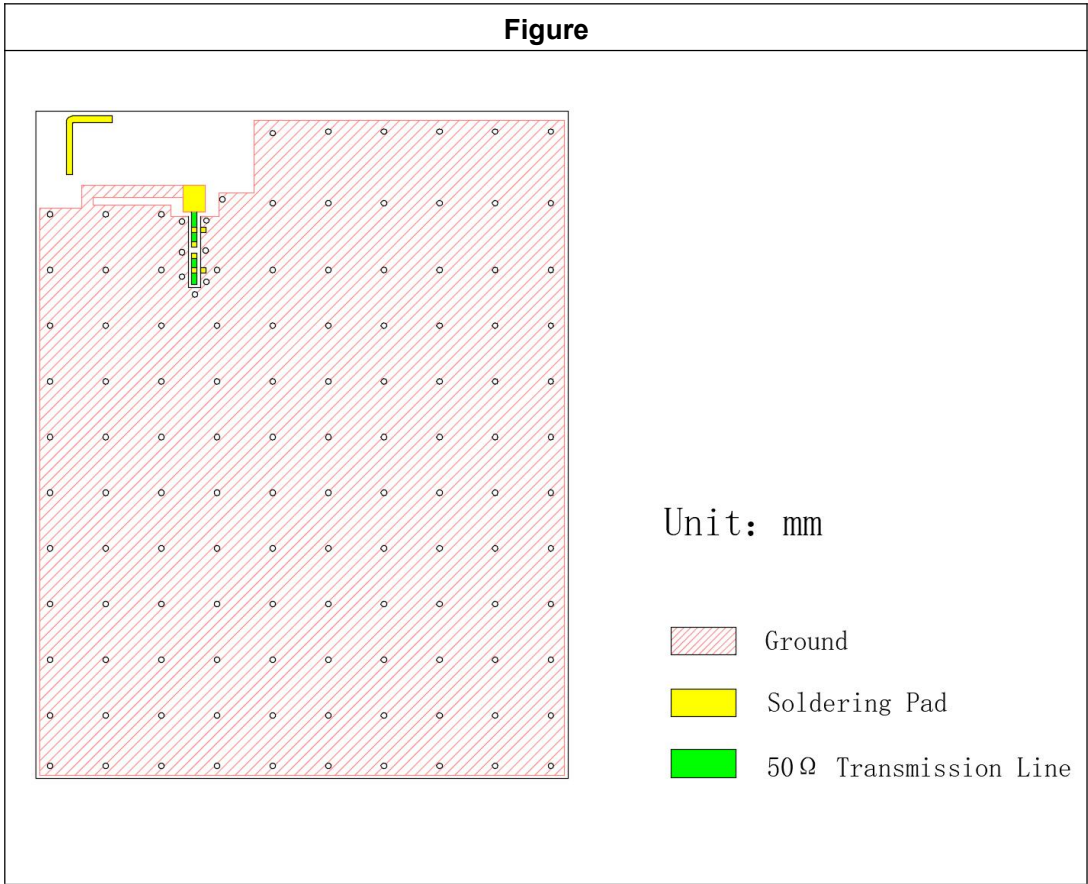
Size

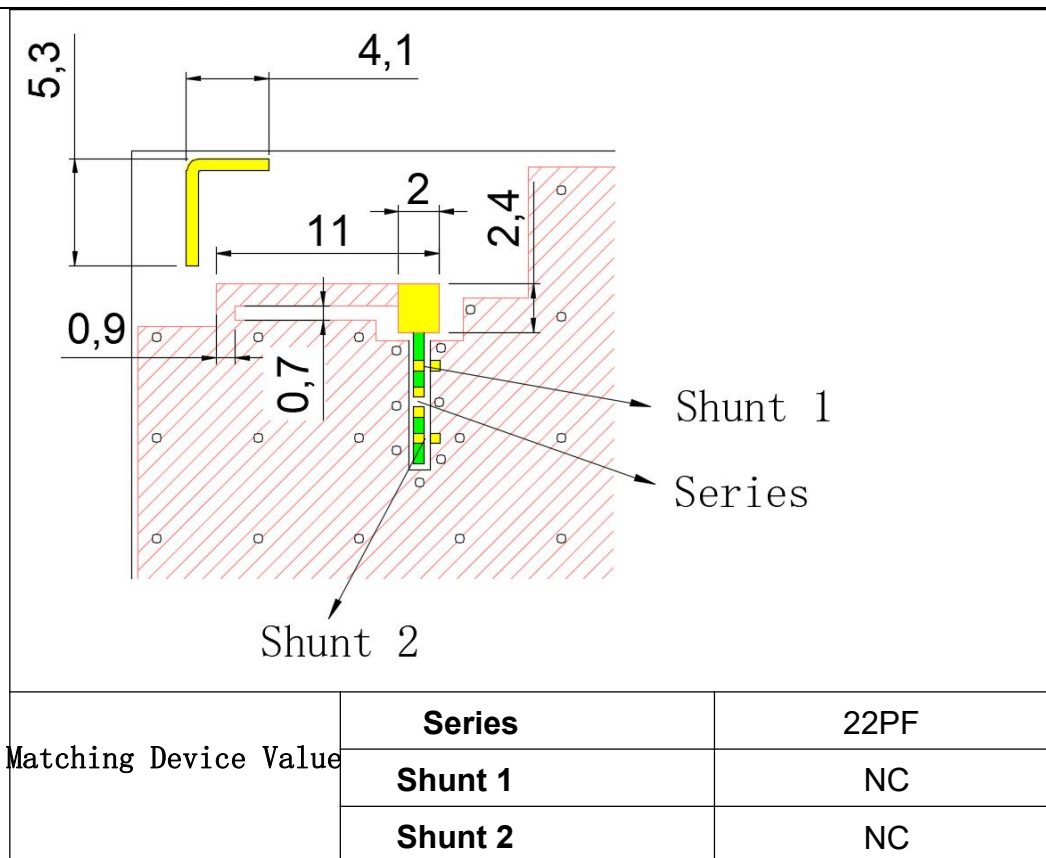
Three Views	Symbol	Size (mm)
<p>Top view: 15±0.2 (length), 7±0.2 (width), 0.4±0.1 (thickness).</p> <p>Side view: 6±0.2 (height), 7±0.2 (width).</p> <p>Front view: 6.19±0.2 (height), 7±0.2 (width).</p>	L	15±0.2
	w	7±0.2
	H	6.19±0.2
	T	0.4±0.1

Electrical Characteristics

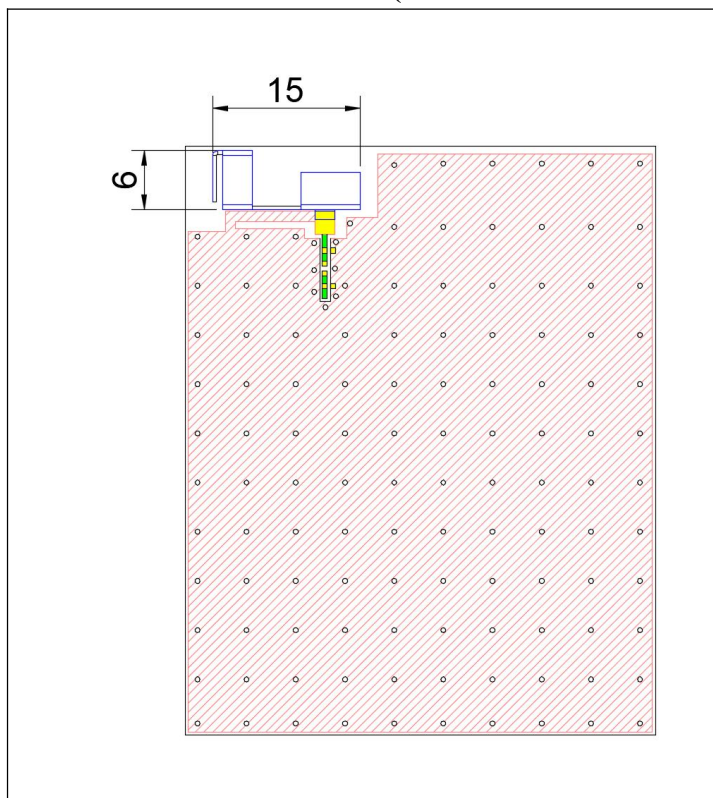
UB01NP2D1087A	Specification
Working Frequency	2400-2500MHz 5150-5850MHz
Band Width	>100MHz
Impedance	50 Ω
Gain(dBi)	2
VSWR	<2
Operation Temperature	-40℃~+85℃
Power Capacity	3W

Antenna pads and alignment design

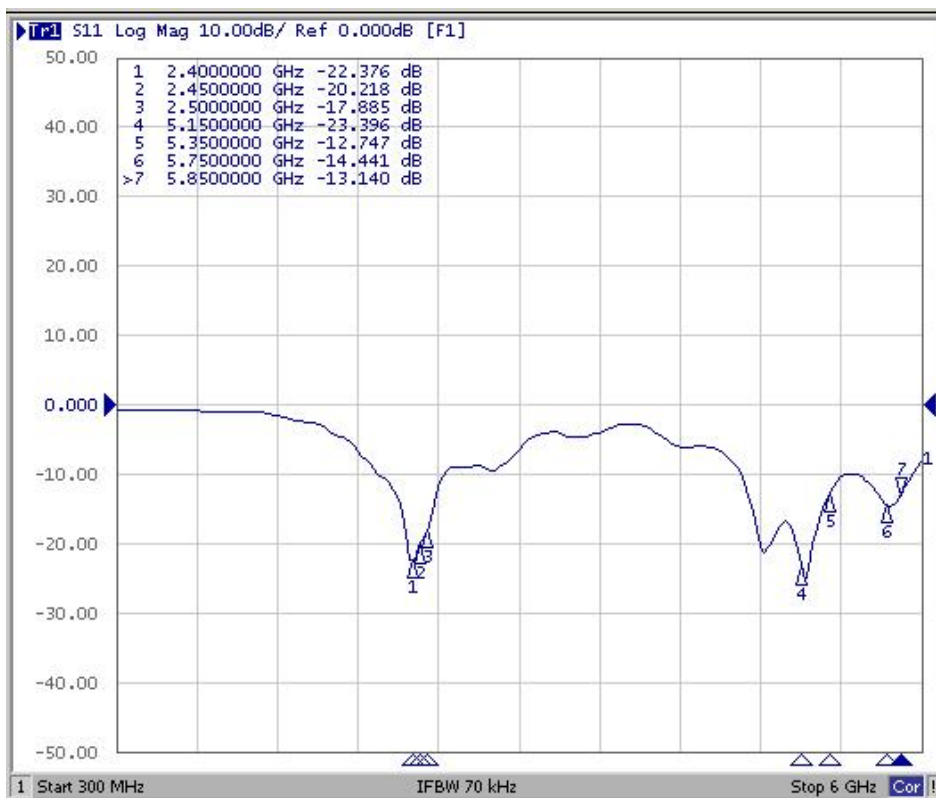




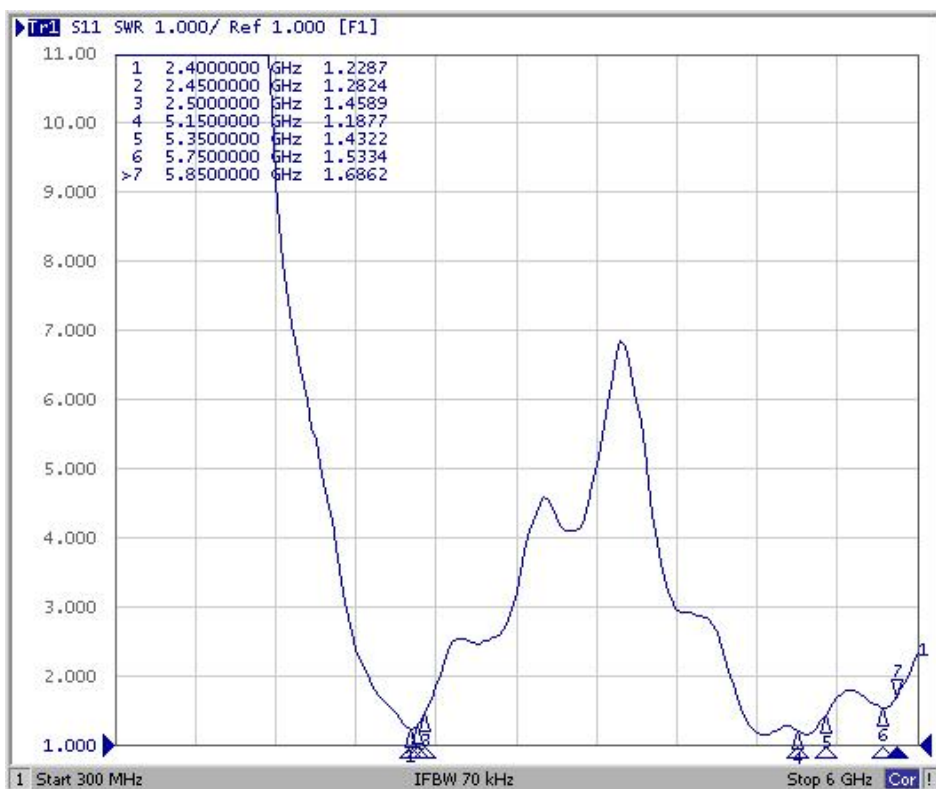
Antenna test on test board (board thickness 0.6mm)



Antenna S11

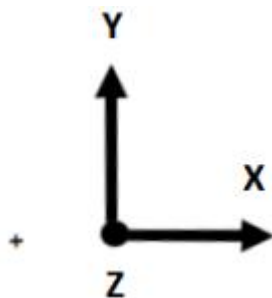
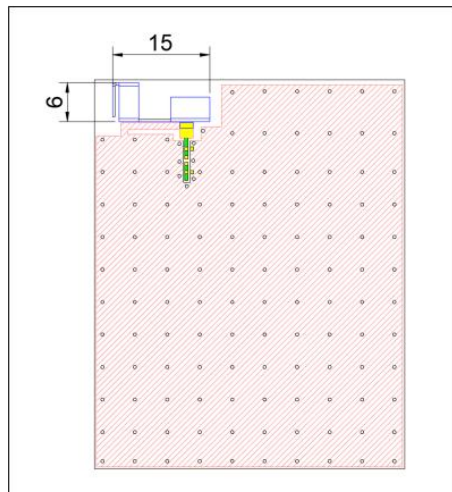


Antenna VSWR

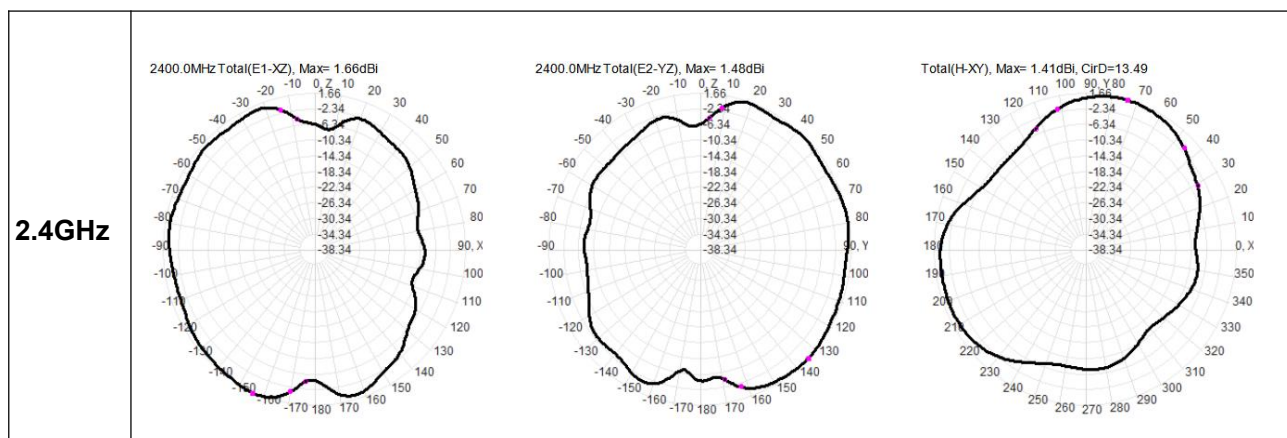


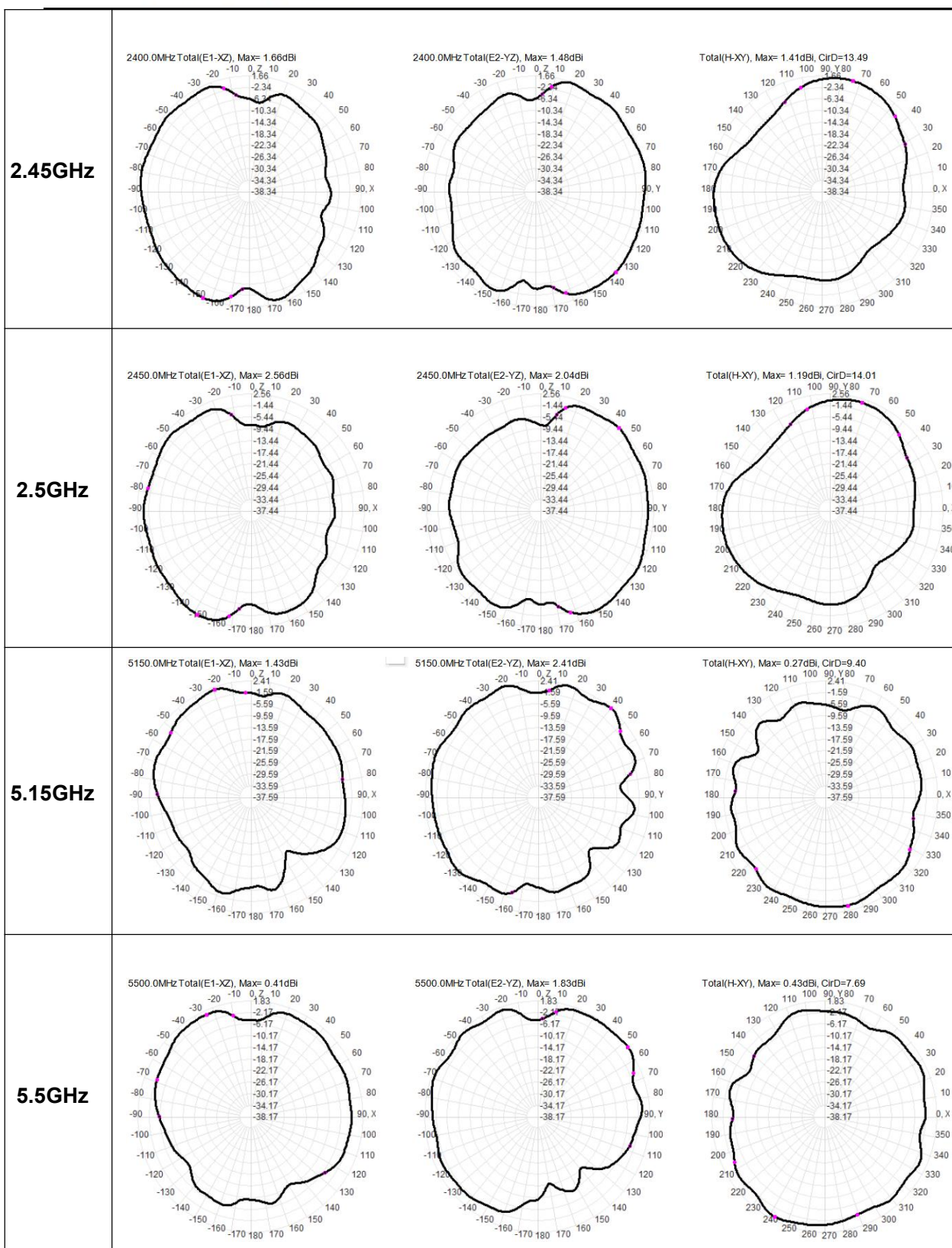
Efficiency and radiation maps

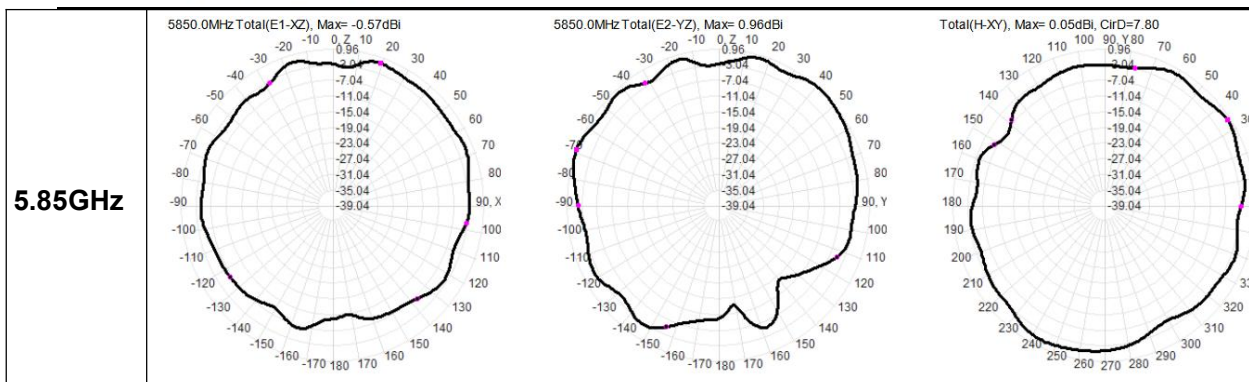
The performance such as efficiency, radiation pattern, gain, etc. are obtained based on the test board design. The specification data of the antenna is based on the test PCB size and the test orientation shown in the figure below. The following data were tested in the ETS 3D microwave darkroom.



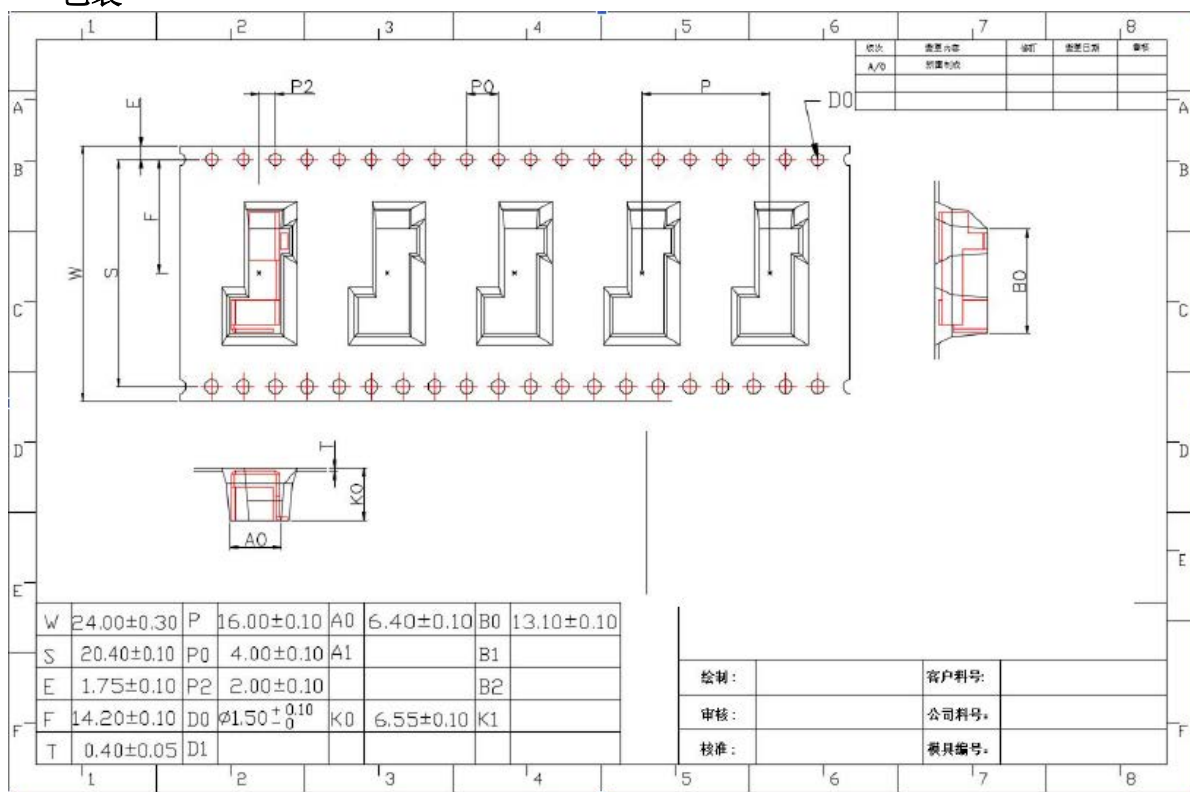
Gain and efficiency	2.4G-2.5GHz	5.15G-5.85GHz
Peak Gain	2.7dBi	2.59dBi
Average Gain across the band	2.33dBi	2.24dBi
Gain Range across the band	2.07dBi~2.7dBi	1.75dBi~2.59dBi
Peak Efficiency	71.18%	66.78%
Average Efficiency across the band	69.36%	63.64%
Efficiency Range across the band	68.06%~71.18%	61.01%~66.78%







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Storage Environment

The following conditions should be met when storing the product:

Temperature : -10℃~+40℃

Humidity : 30% to 70% relative humidity

The location where the product is placed should not be exposed to corrosive gases, such as sulfur. Chlorine or acid may cause oxidation of product electrodes resulting in poor solderability.

The products should be placed in the tool box and avoid the influence of moisture and dust. Products should be stored in a warehouse and protected from heat, vibration and direct sunlight.

The products should be stored under airtight conditions.