

Antenna Specifications

2.4/5.8G PIFA antenna

RoHS compliant

PN:UB01NP2D1087A

2.4/5.8GHz dual-band antenna

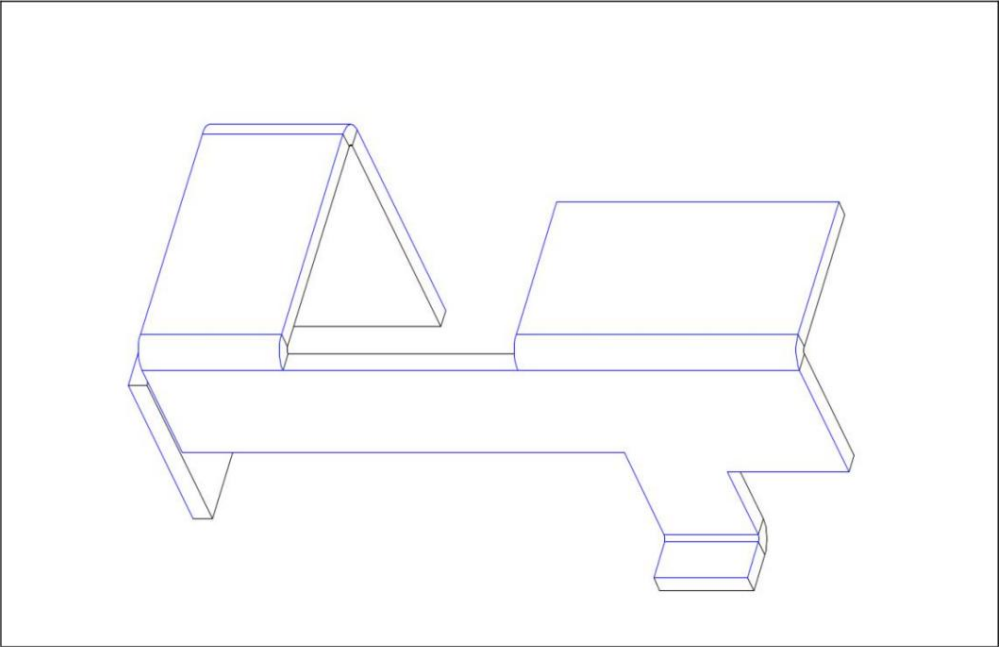
Features

1. A steel sheet with an internal antenna measuring 15 x 7 x 6.19 x 0.4 mm3 .
2. Low energy loss and high antenna efficiency.
3. It exhibits high stability under varying temperature and humidity conditions.

application

- Antenna applications in the 1. 2.4 / 5.8 GHz bands.
2. Bluetooth, wireless, and smart home applications.

structure



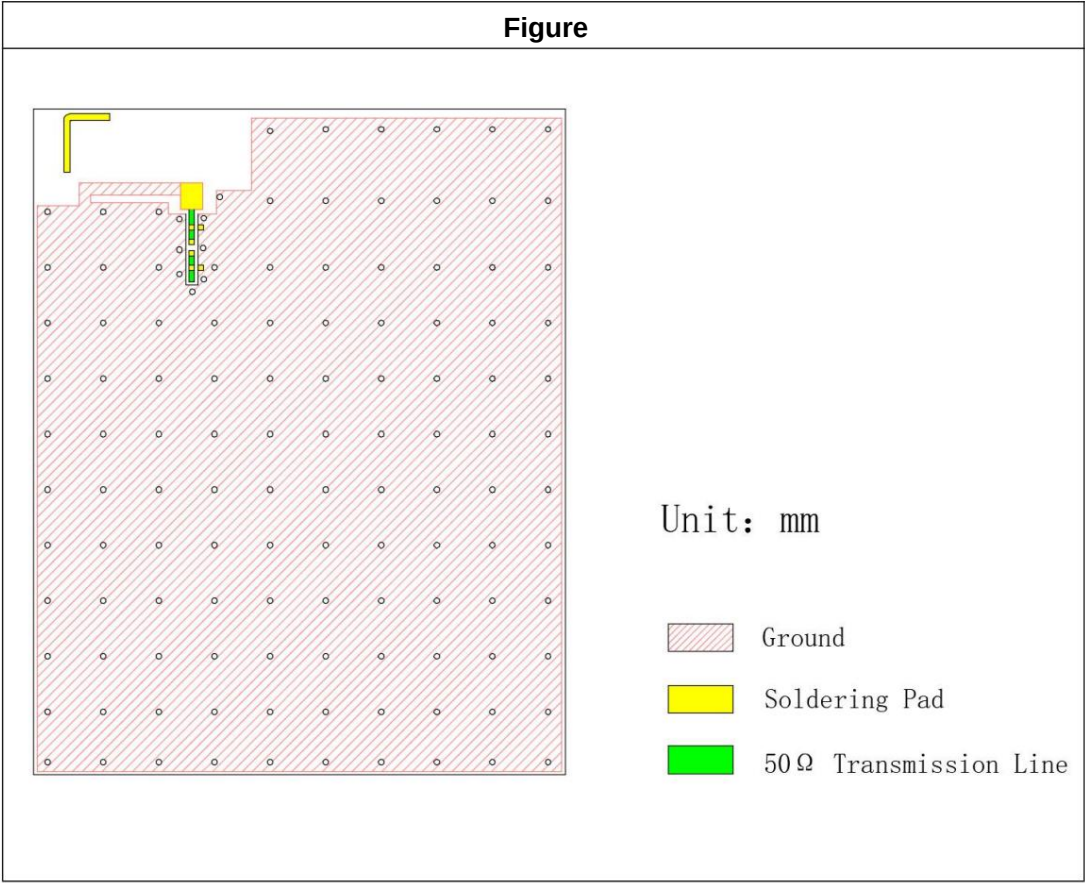
size

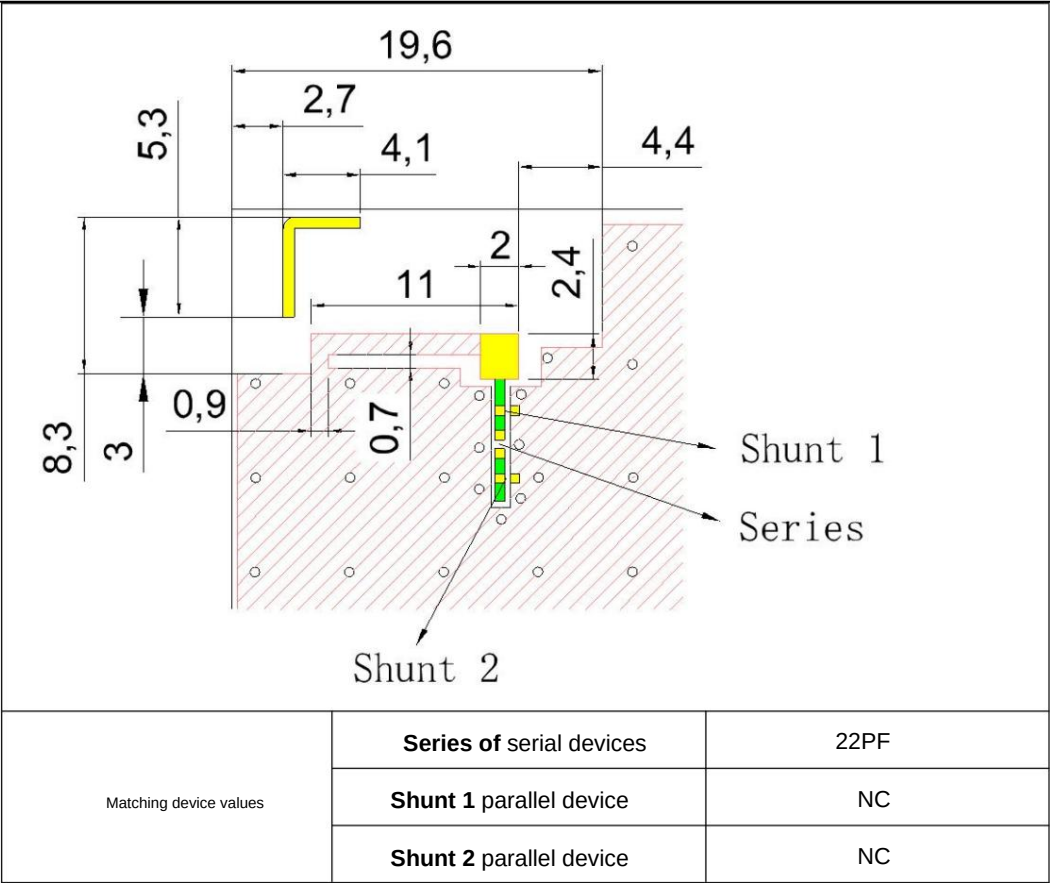
Three views	symbol	size (mm)
Three views of the antenna structure: top, side, and front views. Dimensions are indicated: 15±0.2, 7±0.2, 6±0.2, 0.4±0.1, and 6.19±0.2.	L 15±0.2	
	w 7±0.2	
	H 6.19±0.2	
	T 0.4±0.1	

Electrical characteristics

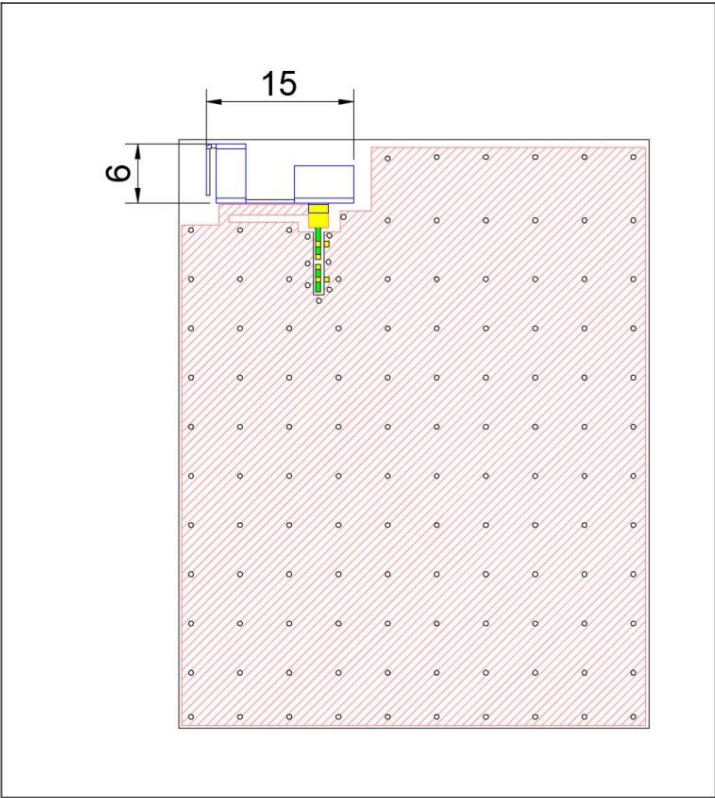
UB01NP2D1087A	Specification
Operating Frequency Range	2400-2500MHz
Frequency	5150-5850MHz
Bandwidth ,	>100MHz
Impedance , Gain	50ÿ
(dBi) , VSWR ,	2
Operating	<2
Temperature	-40ÿ~+85ÿ
Temperature	
Power Capacity	3W

Antenna pad and trace design

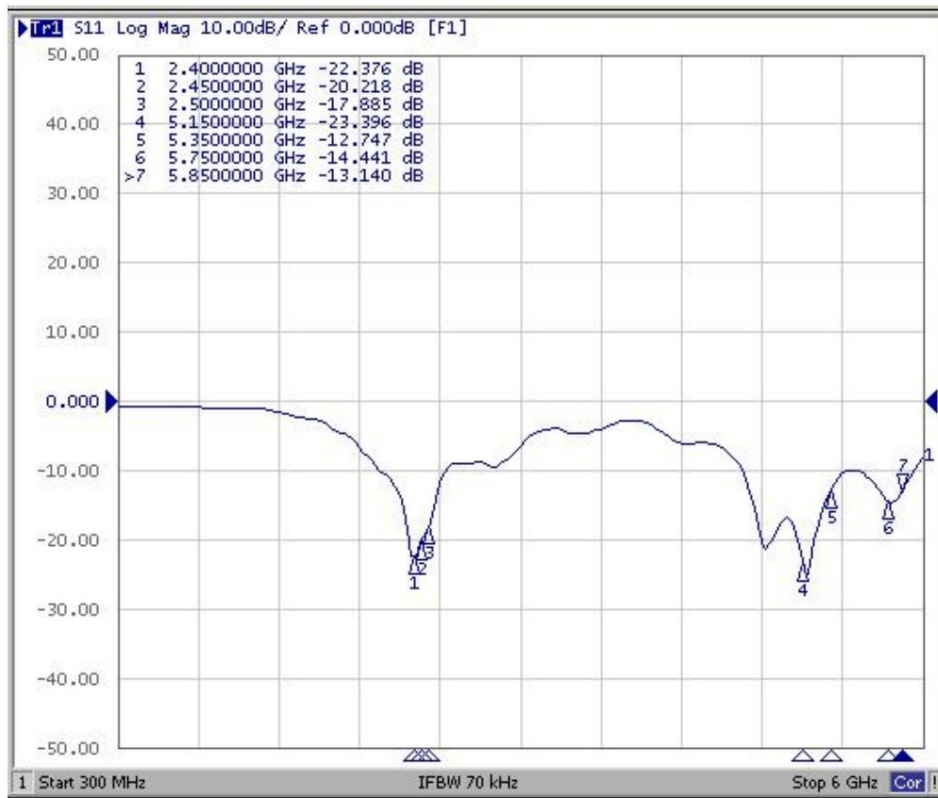




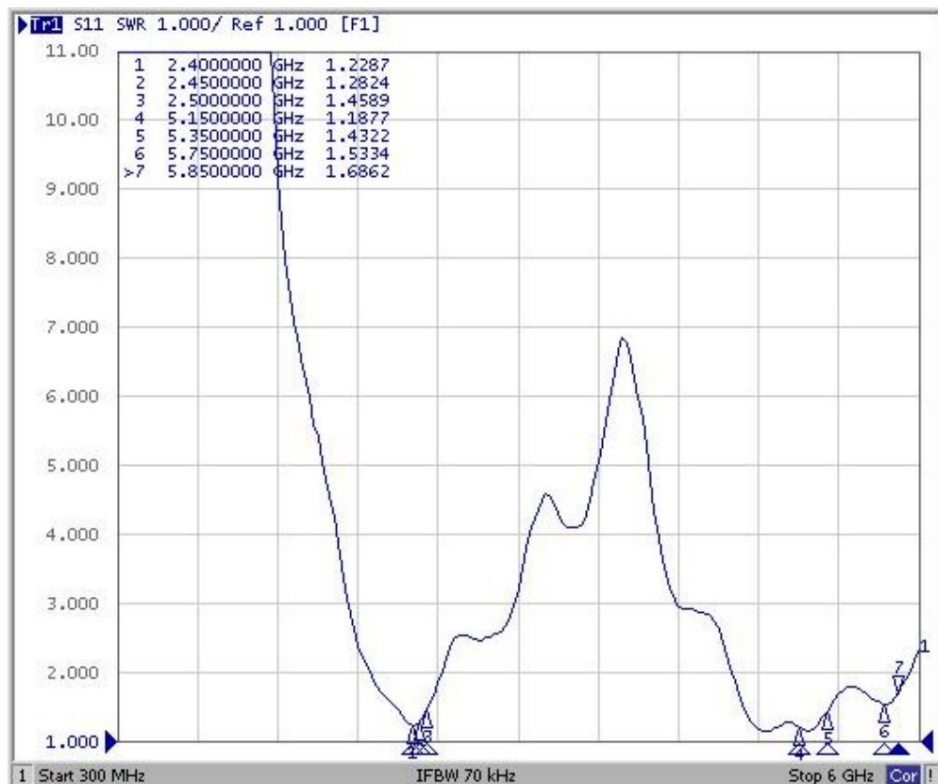
Antenna testing on the test board (board thickness 0.6mm)



Antenna S11 characteristics



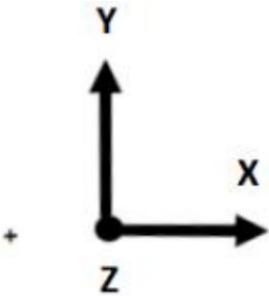
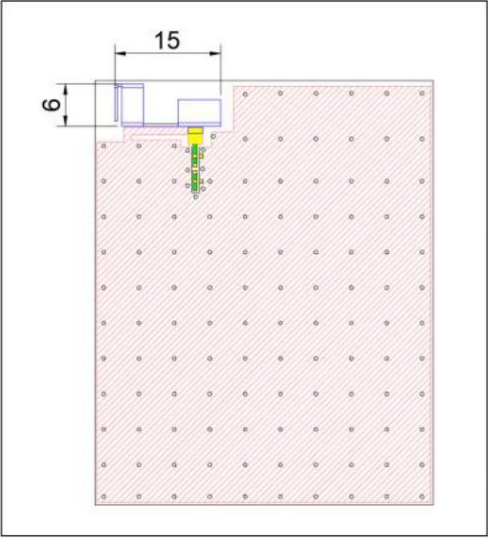
Antenna VSWR characteristics



Efficiency and radiation diagram

Efficiency, radiation pattern, gain, and other performance characteristics are based on the test board design. The antenna's specification characteristics test data are based on the test PCB board dimensions.

The dimensions and test orientation shown in the diagram below were used. The following data were obtained from tests conducted in an ETS 3D microwave anechoic chamber.



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



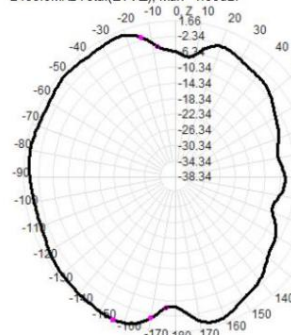
好天线 · 优比造

东莞市优比电子有限公司

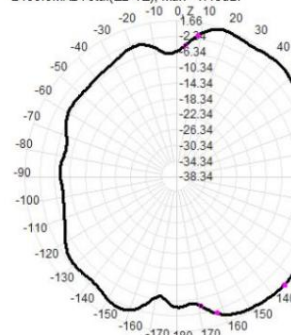
Dongguan Youbi Electronics Co., Ltd

2.4GHz

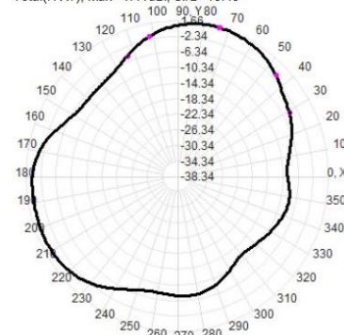
2400.0MHz Total(E1-XZ), Max= 1.66dBi



2400.0MHz Total(E2-YZ), Max= 1.48dBi

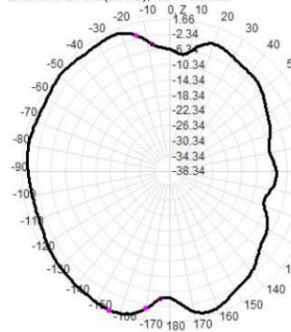


Total(H-XY), Max= 1.41dBi, CirD=13.49

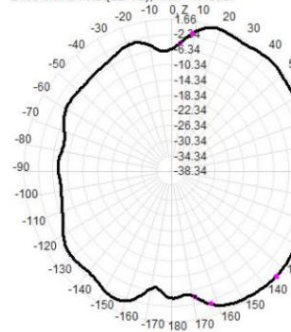


2.45GHz

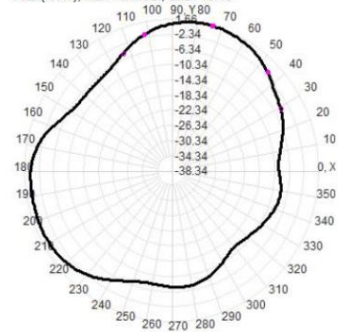
2400.0MHz Total(E1-XZ), Max= 1.66dBi



2400.0MHz Total(E2-YZ), Max= 1.48dBi

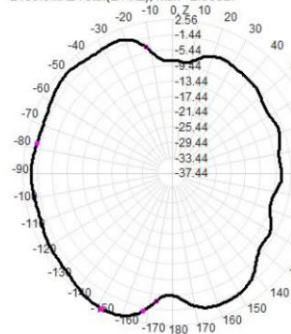


Total(H-XY), Max= 1.41dBi, CirD=13.49

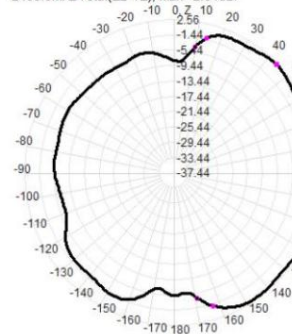


2.5GHz

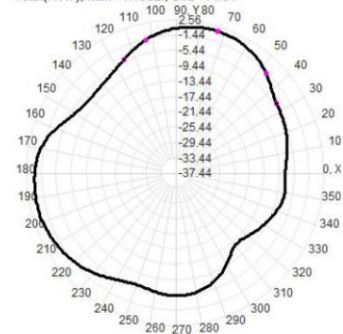
2450.0MHz Total(E1-XZ), Max= 2.56dBi



2450.0MHz Total(E2-YZ), Max= 2.04dBi

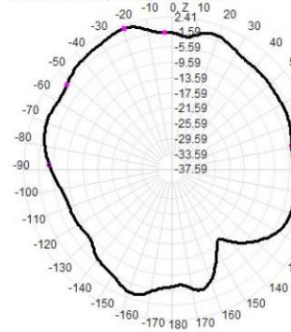


Total(H-XY), Max= 1.19dBi, CirD=14.01

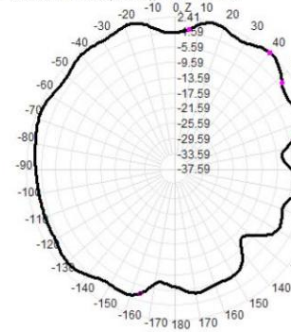


5.15GHz

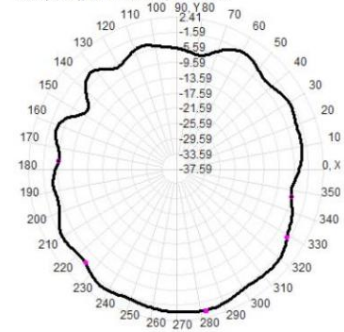
5150.0MHz Total(E1-XZ), Max= 1.43dBi

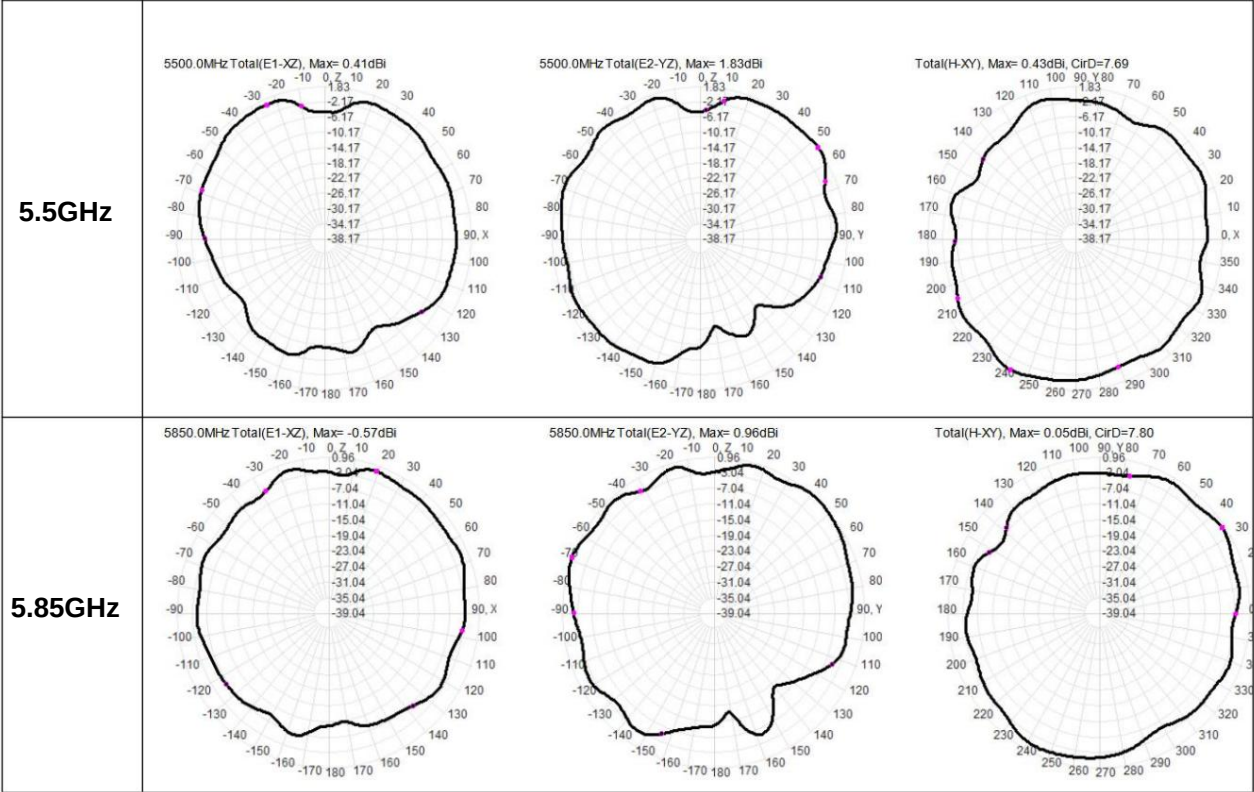


5150.0MHz Total(E2-YZ), Max= 2.41dBi

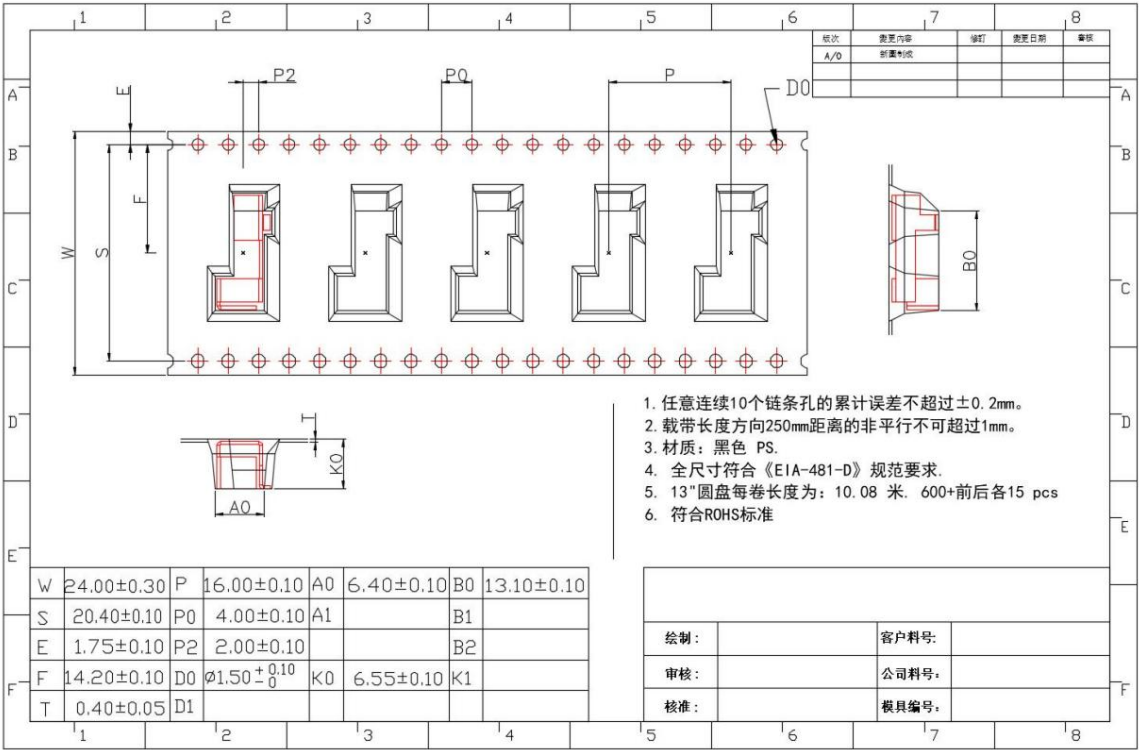


Total(H-XY), Max= 0.27dBi, CirD=9.40





Package



Storage environment

The following conditions must be met when storing the product:

Temperature: -10y to +40y

Humidity: 30% to 70% relative humidity

The product should not be placed in contact with corrosive gases, such as sulfur. Chlorine or acid may cause the product to become electrically charged.

Extreme oxidation causes a decrease in weldability.

The product should be placed in a toolbox and protected from moisture and dust. It should also be stored in a warehouse and protected from heat, vibration, and direct sunlight.

The product should be stored in a sealed environment.