ANT Datasheet

2.4G PIFA ANT

RoHS compliant

PN: UB01NJ3D1305A

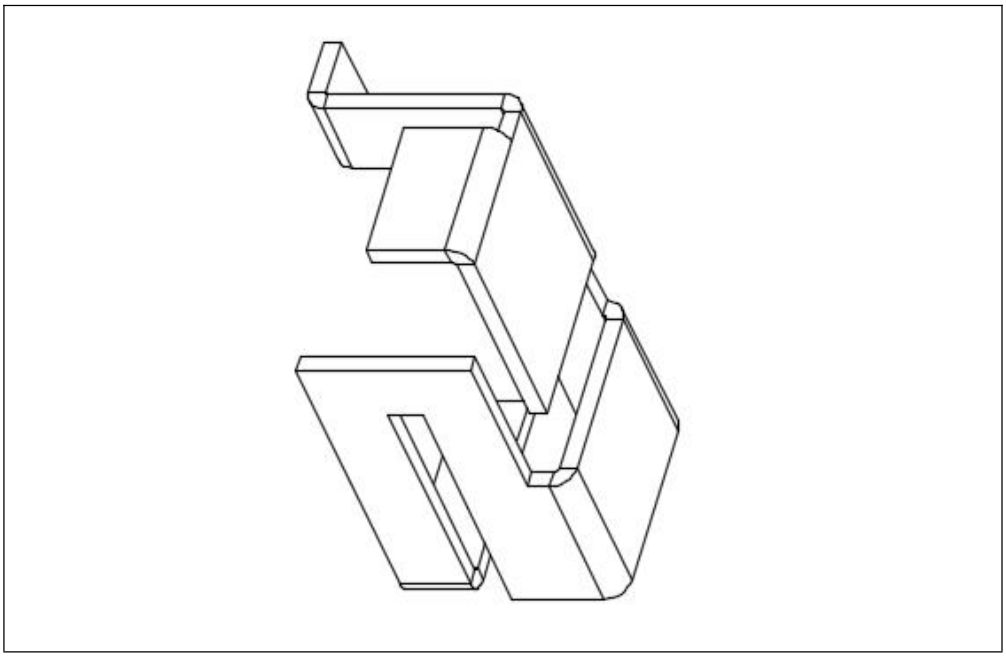
characteristic:

1. 11.3 X 6.4 X 5X 0.4 mm steel plate built-in antenna.
2. Low energy loss, high antenna efficiency.
3. High stability in the case of temperature and humidity changes.

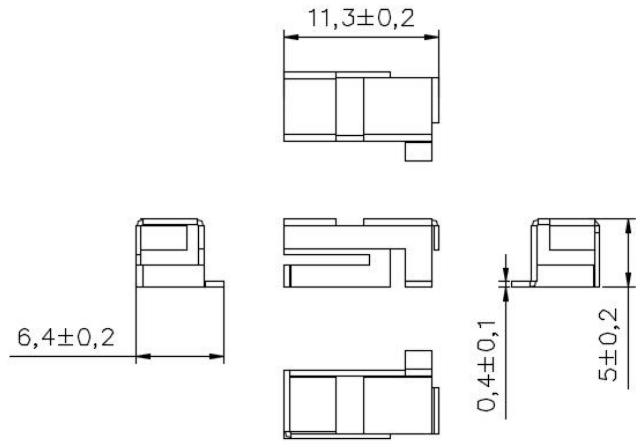
Apply:

1. Antenna applications in the 2.4 GHz band.
2. Bluetooth, wireless, smart home applications.

Structure:



Size:

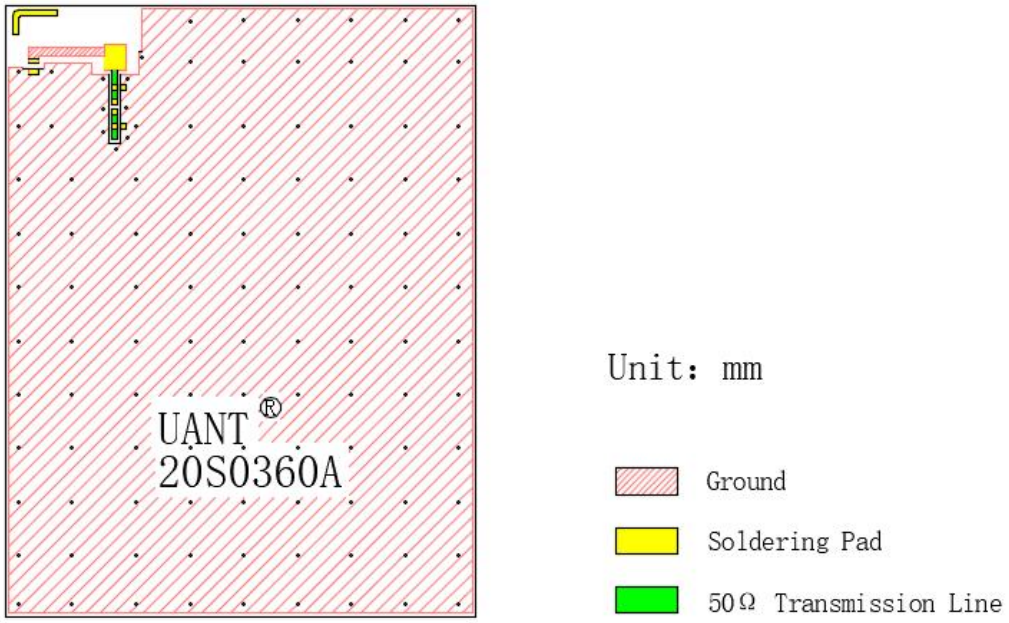
	symbol	Size (mm)
	L	11.3±0.2
	w	6.4±0.2
	H	5±0.2
	T	0.4±0.1

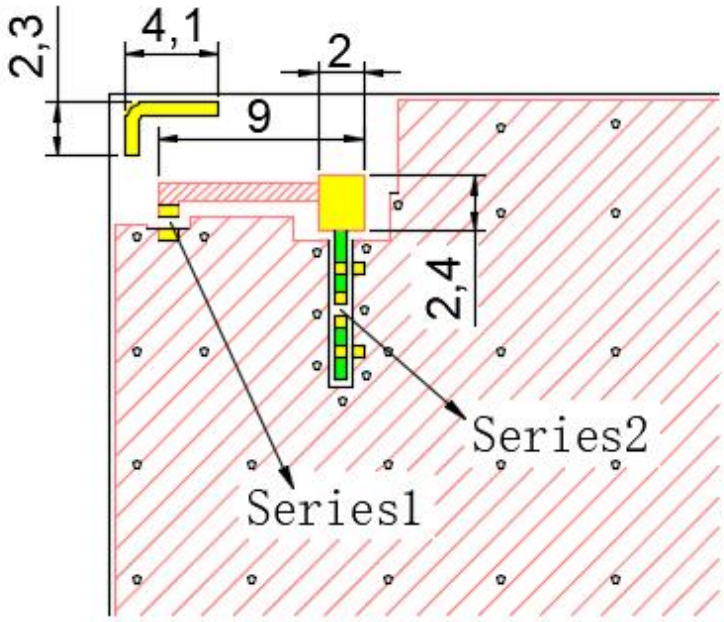
Electrical characteristic

UB01NJ3D1305A	Specification
Working Frequency	2400-2500MHz
Band Width	>100MHz
Impedance	50Ω
Gain(dBi)	3.18
VSWR	<2
Operation Temperature	-40℃~+85℃
Power Capacity	3W

Layout

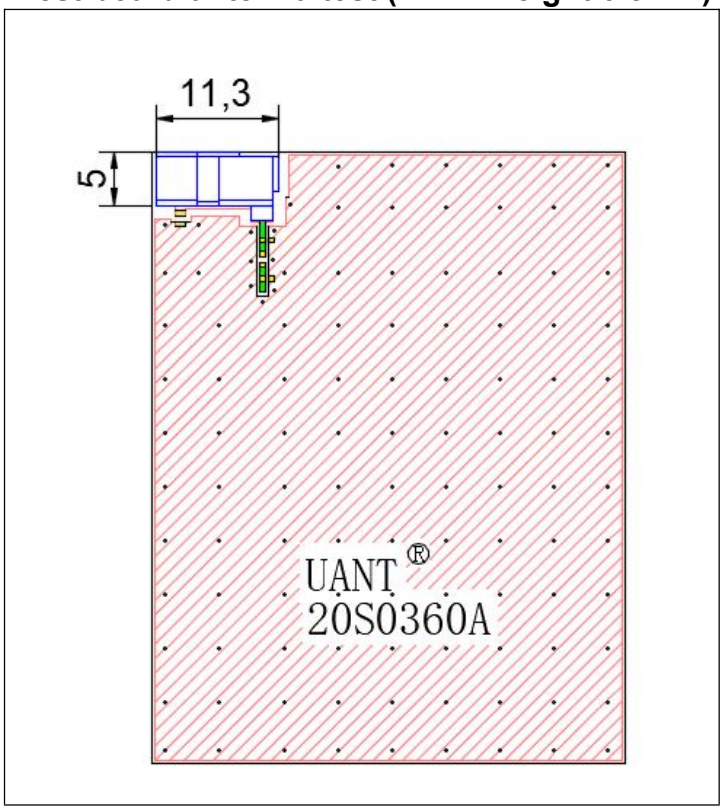
Figure



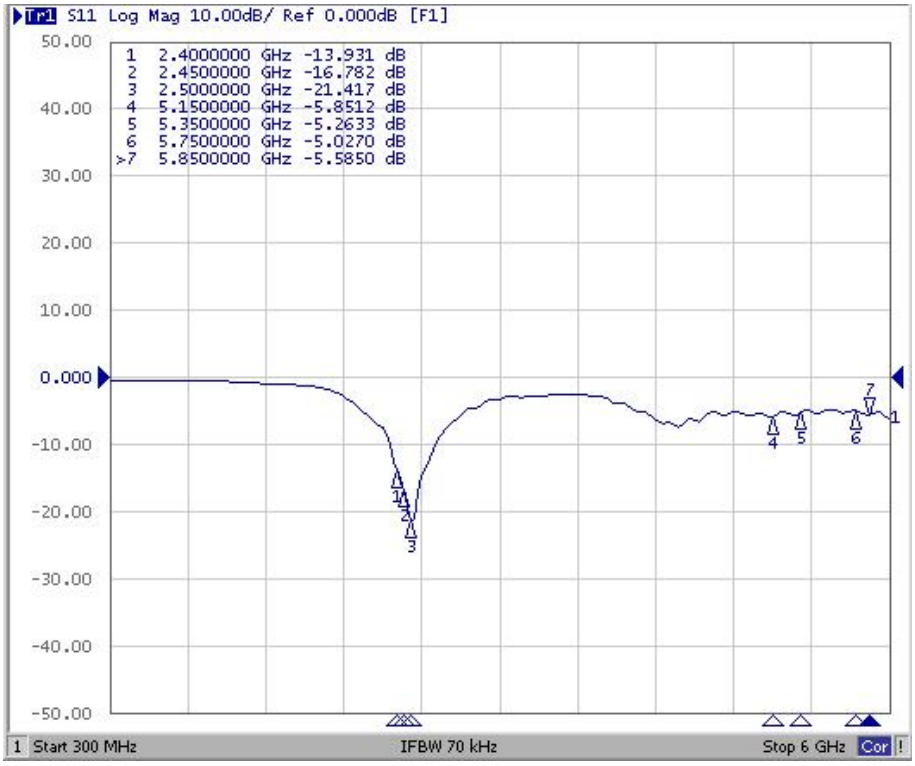


RF recommend matching	**Series 1**	10PF
	Series 2	1.2NH

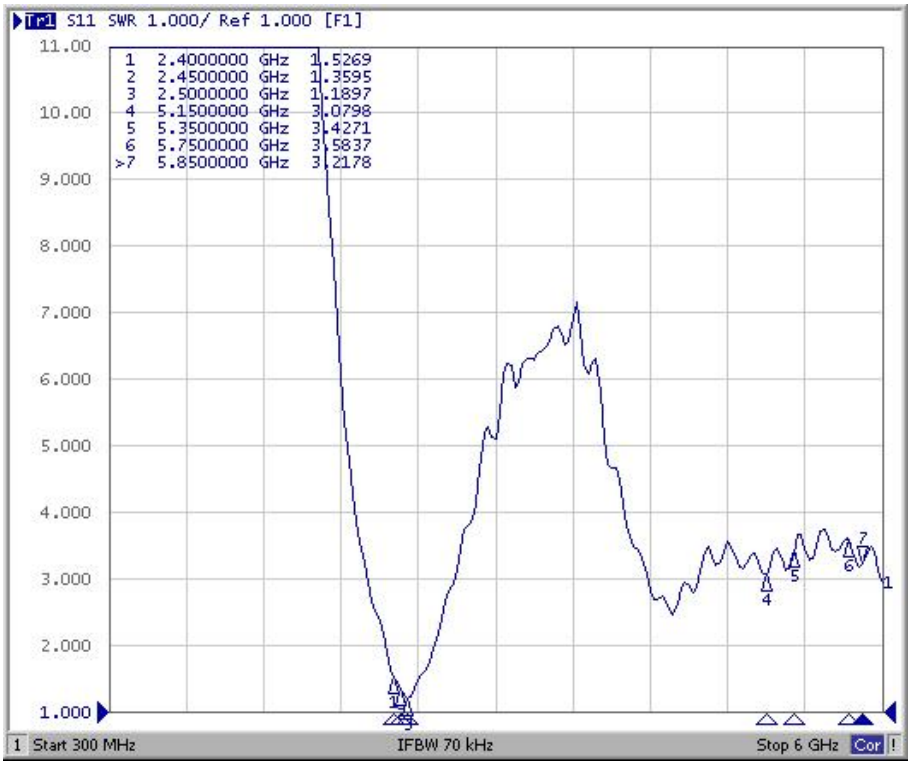
Test board antenna test (PCBA height 0.8mm)



ANT S11 Peculiarity

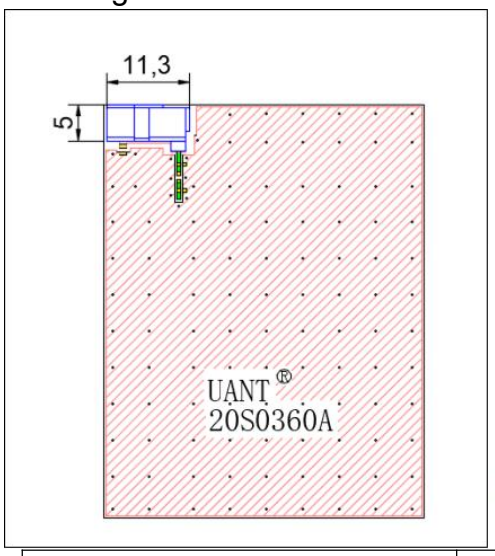


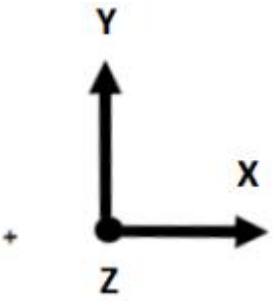
ANT VSWR Peculiarity



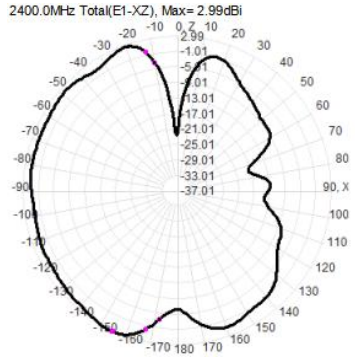
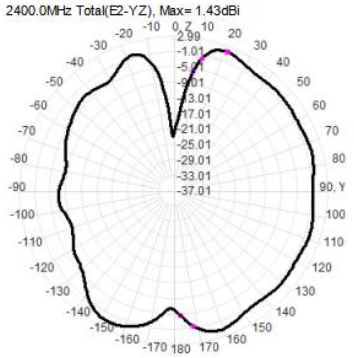
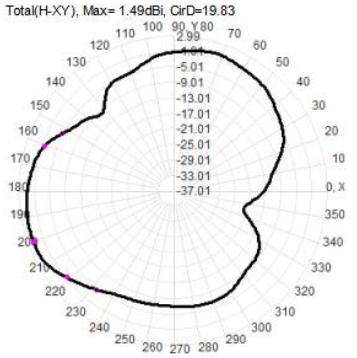
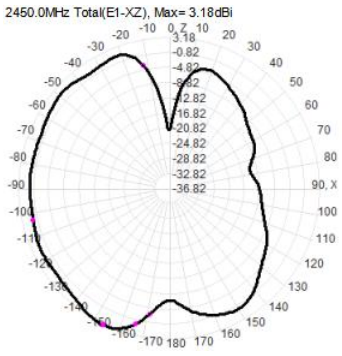
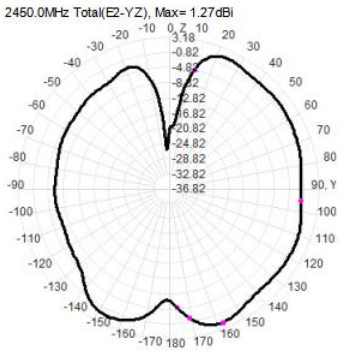
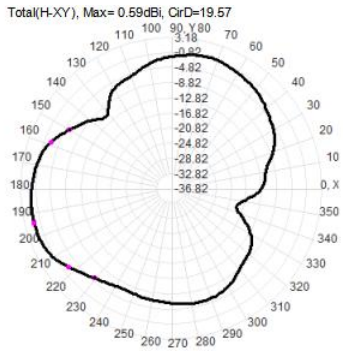
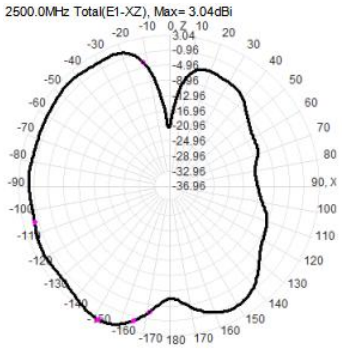
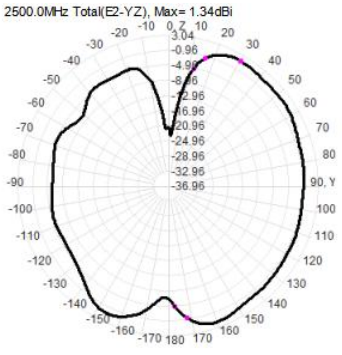
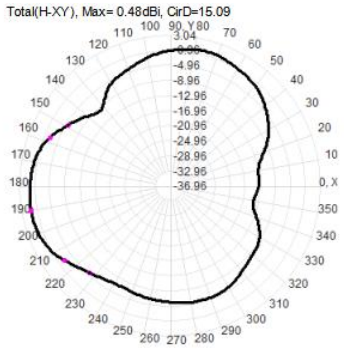
Efficiency and radiation maps:

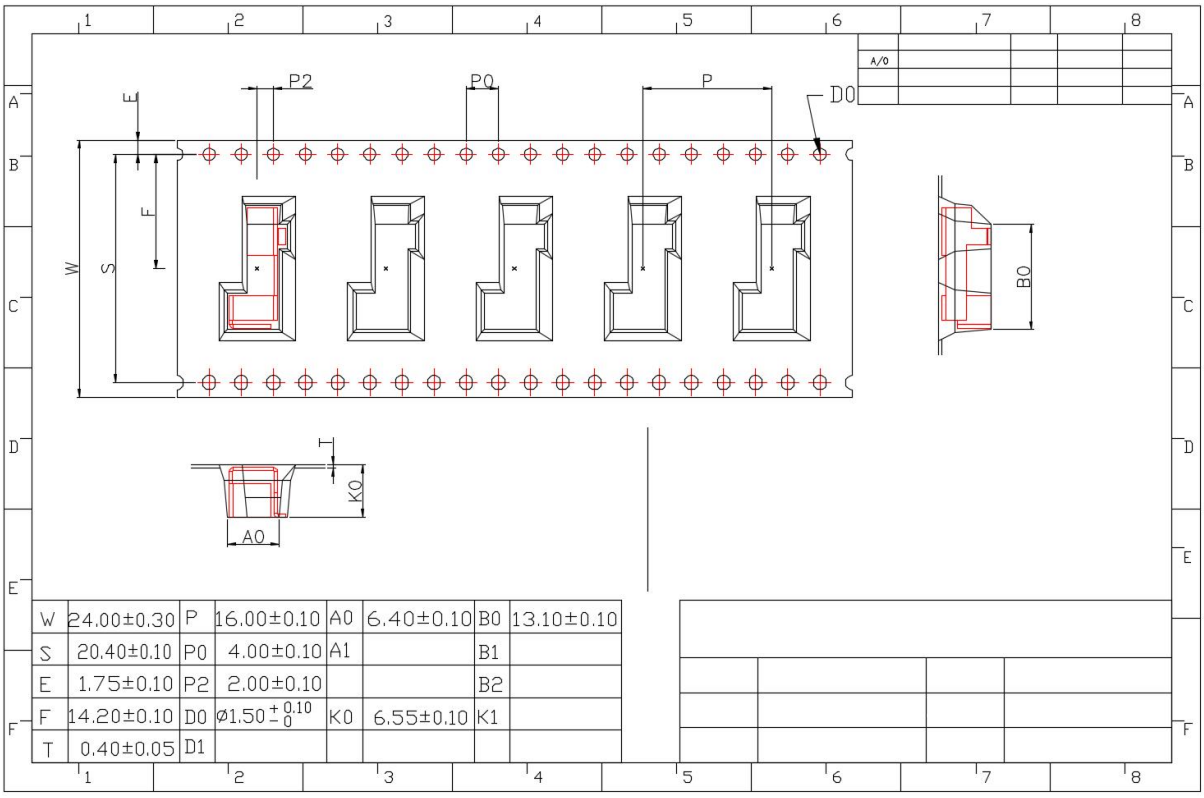
The efficiency, radiation pattern, gain and other properties are designed based on the test board. The specification and characteristic test data of the antenna are obtained based on the test PCB board and the test direction shown in the figure below. The following data was obtained in ETS 3D microwave darkroom testing.





Gain and efficiency	2.4G-2.5GHz
Peak Gain	3.18dBi
Average Gain across the band	3.04dBi
Gain Range across the band	2.99dBi~3.18dBi
Peak Efficiency	69.67%
Average Efficiency across the band	67.34%
Efficiency Range across the band	65.63%~69.67%

2.4GHz	  
2.45GHz	  
2.5GHz	  



W	24.00±0.30	P	16.00±0.10	A0	6.40±0.10	B0	13.10±0.10
S	20.40±0.10	P0	4.00±0.10	A1		B1	
E	1.75±0.10	P2	2.00±0.10			B2	
F	14.20±0.10	D0	Ø1.50 $^{+0.10}_{0}$	K0	6.55±0.10	K1	
T	0.40±0.05	D1					

Storage environment:

The following conditions must be met for storage: Temperature: -10℃ to +40 ℃

Humidity: 30% to 70% relative humidity

Do not place the product in contact with corrosive gases, such as sulfur. Chlorine gas or acid may lead to oxidation of product electrodes resulting in poor weldability.