

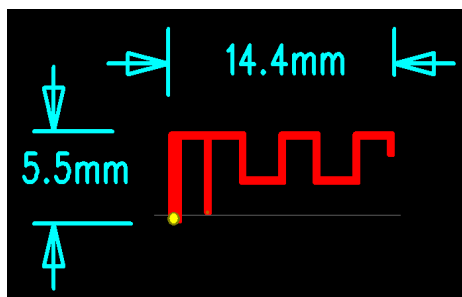
## Product specification

### Quick Reference Data

	Antenna module on the system board	
Antenna type	PCB	
Frequency	2.45GHz*1	
Ant. Port Input Pwr. (dBm)	0 (Typ. BT class 2 output power)	
Tot. Rad. Pwr. (dBm)	-2.3 (Input pwr ?loss pwr)	
Peak EIRP(dBm)	1.3	
Directivity (dBi)	1 (all direction antenna)	
Efficiency (dB)	-2.3 (58.5%)	
Gain (dBi)	1.7 (Peak Gain X Z-plane)	
Maximum Power (dBm)	1.3 (XY-plane)	
Minimum Power (dBm)	-4(XY-plane)	
Avg. Power (dBm)	-0.5(XY-plane)	
Max/Min Ratio (dB)	5.3(XY-plane)	
Max/Avg Ratio (dB)	1.8(XY-plane)	
Min/Avg Ratio (dB)	-3.5(XY-plane)	
Average Gain (dB)	-0.5 (Avg Gain XY-plane)	

All the technical data and information contained herein are subject to change without prior notice

### Antenna Layout & module on the system board



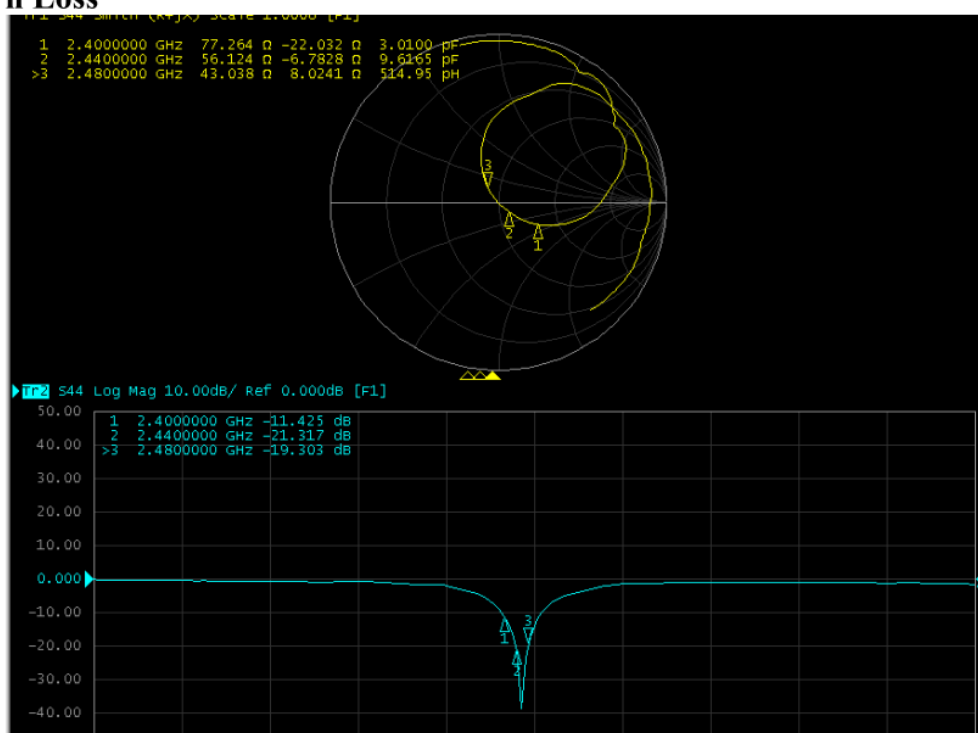
PCB antenna  
Zhuhai Rongyuan Electronic Technology Co., Ltd.  
No. 2, Pingbei 2nd Road, Nanping , Xiangzhou , Zhuhai , Guangdong

### Antenna Gain

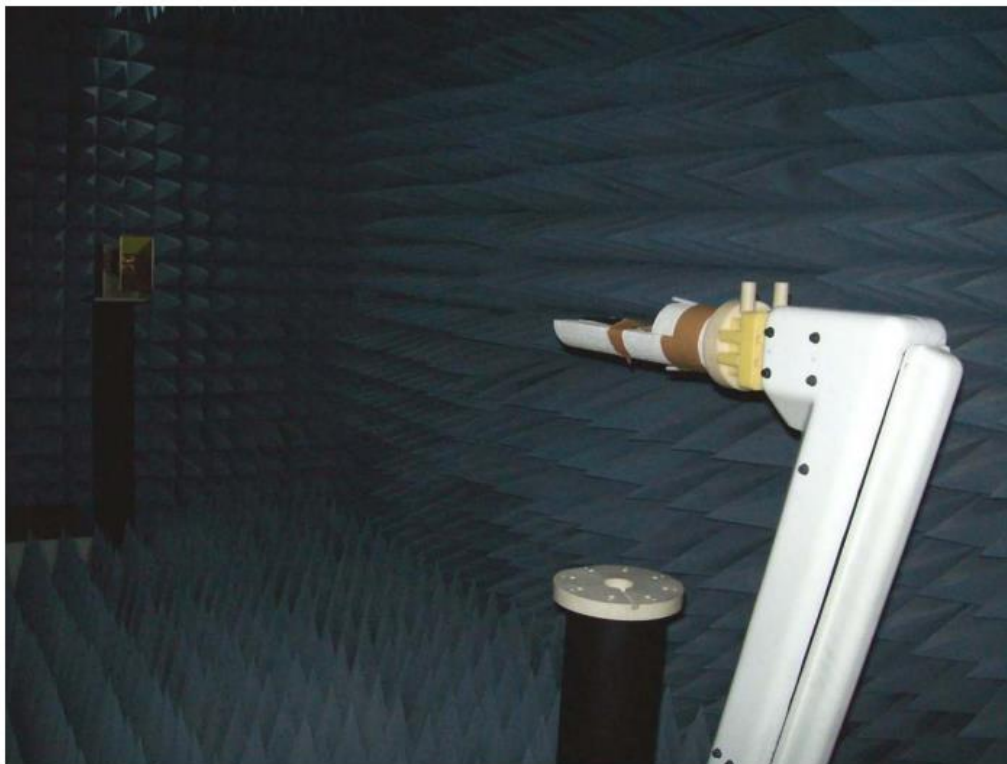
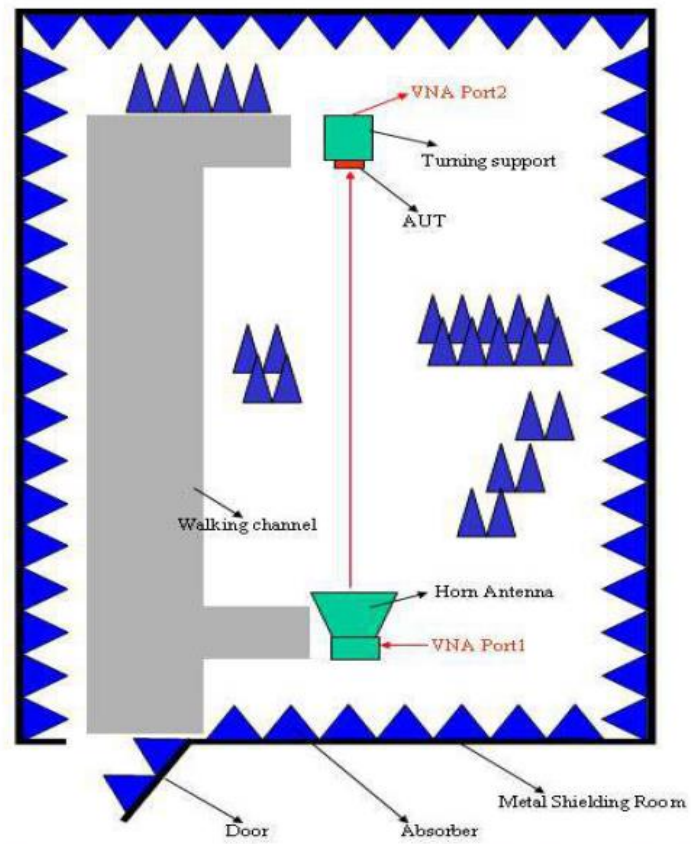
Gain Table

Unit in dBi @2.44GHz	XY-plane		XZ-plane		YZ-plane		Efficiency
	Peak	Avg.	Peak	Avg.	Peak	Avg.	
Module Board	1.3	-0.5	1.7	-3.8	1.1	-3.0	58.5%

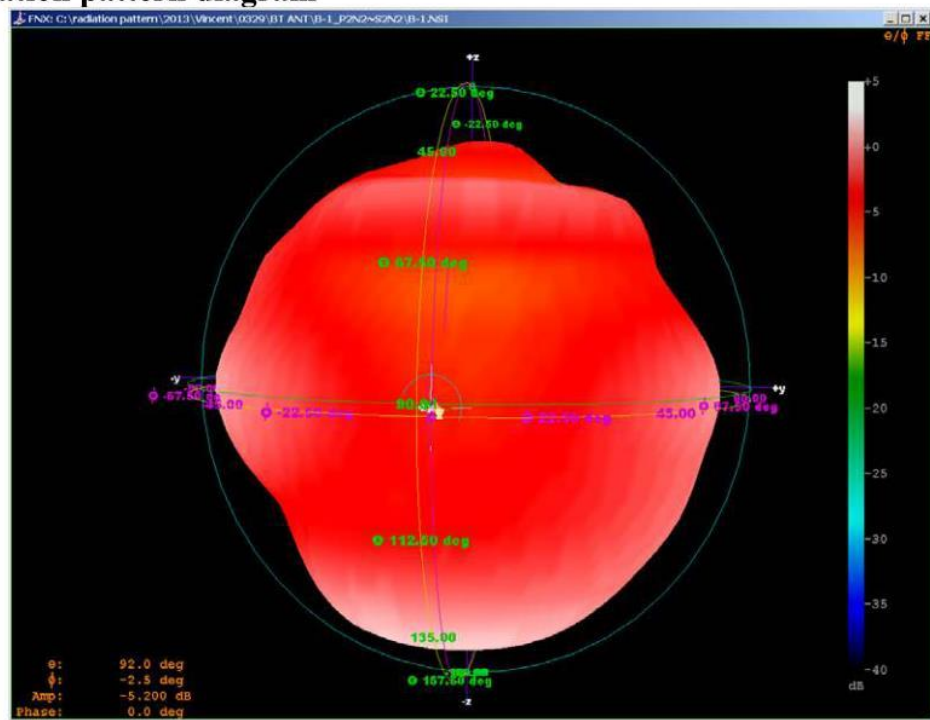
## Return Loss



## The Environment of Antenna Radiation Pattern



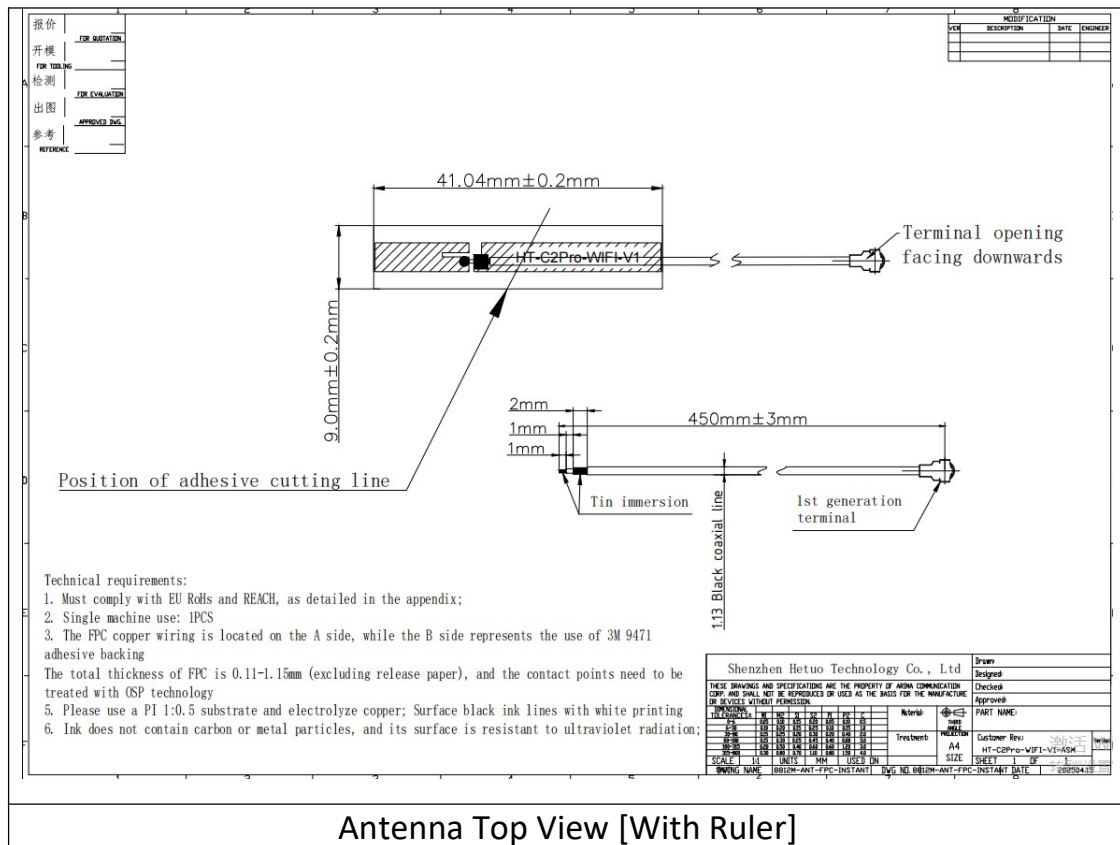
### 3D radiation pattern diagram

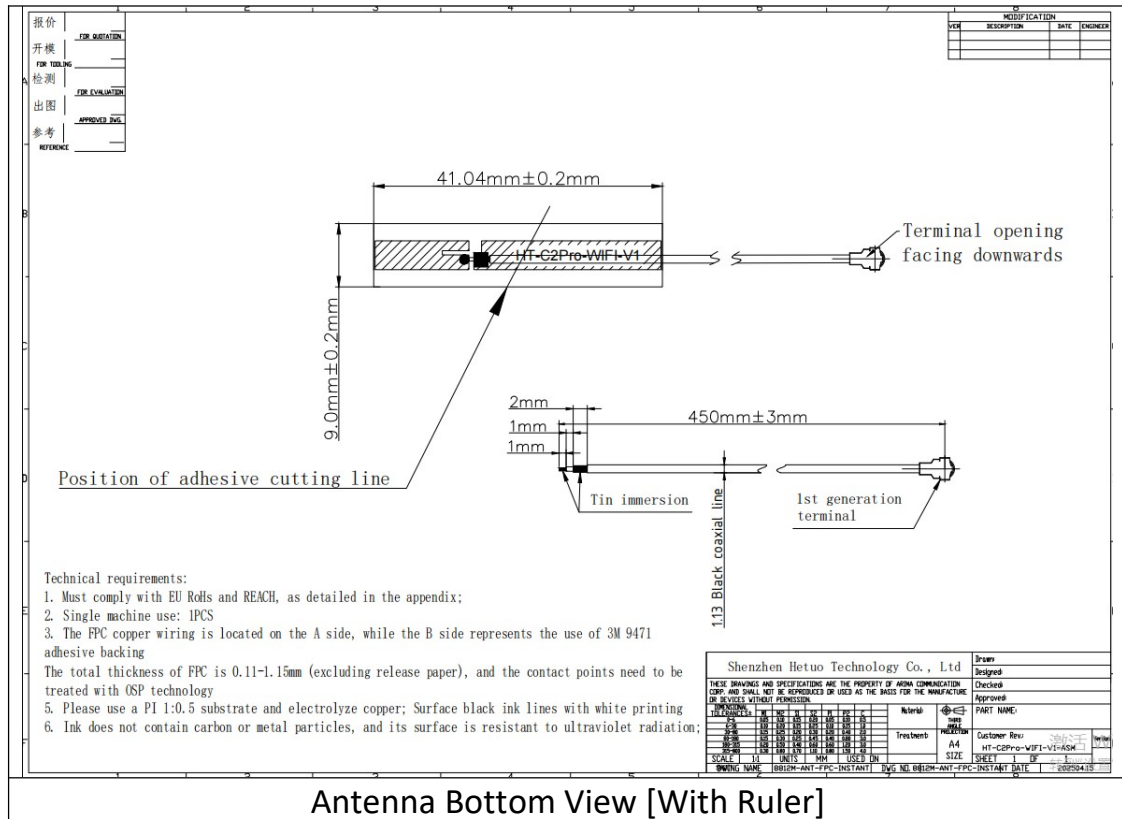


## Antenna Information

Manufacturer	Zhuhai Rongyuan Electronic Technology Co., Ltd.
Antenna Type	Combination antenna
Antenna Model	Snake antenna
Antenna Part Number	3010-0491
Antenna Frequency Range	2400-2500MHz
Antenna Input Power Limitation	8DBM
Antenna Peak Gain	1.6dbi
Antenna Dimension (LxHxW)	41X9MM

## Antenna Photo

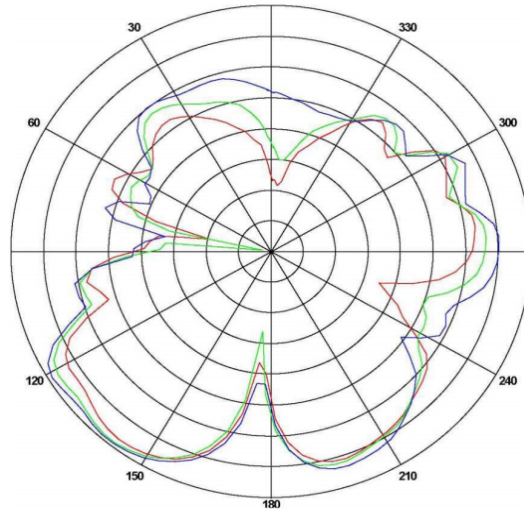
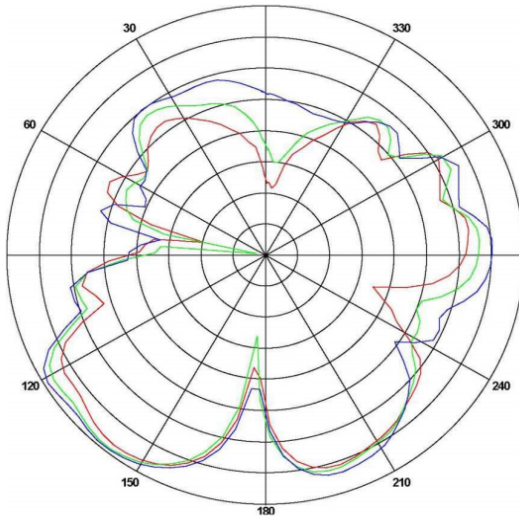




## Antenna Pattern/Gain Measurement data/Table:

Horizontal: 2400 MHz 2450 MHz 2500 MHz  
 Power (dBm)  
 Max: 0 Min: -40 Scale: 5/div

Vertical: 2400 MHz 2450 MHz; 2500 MHz  
 Power (dBm)  
 Max: 0 Min: -30 Scale: 5/div



Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	45.6	1.1
2410	46.9	1.4
2420	47.3	1.2
2430	47.5	1.3
2440	47.6	1.4
2450	47.8	1.4
2460	47.8	1.2
2470	48	1.4

2480	47.8	1.6
2490	47.6	1.5
2500	47.3	1.3
Antenna Pattern/Measurement data		