



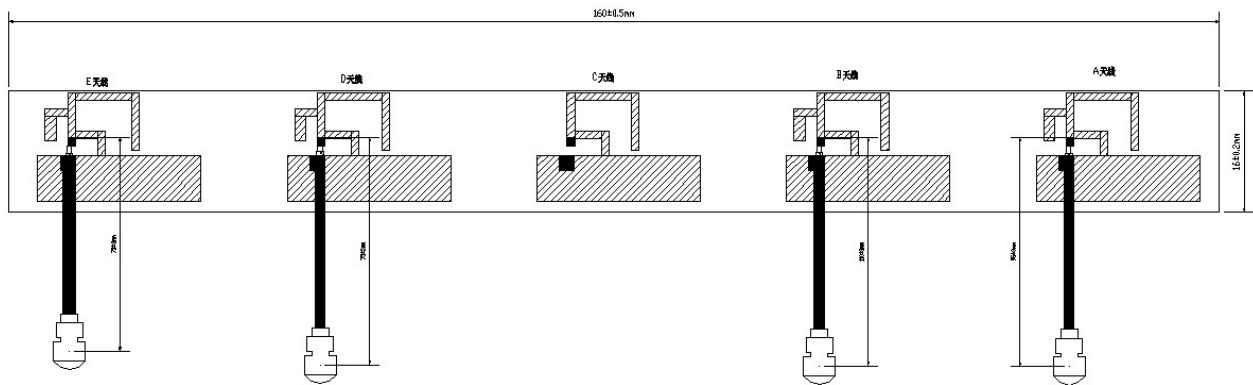
2.4& 5GHz PCB ANT Specification

Revision History

Revision	Summary	Release Date
0.1	First edition release	2022-11-28

Product Name: 2.4&5GHz PCB Ant		
Frequency: 2.4~2.5&5.1~5.8GHz		
Revision: V0.1		
Customer Approval:		
Company: Shenzhen KTC Commercial Display Technology Co.,Ltd		
Title: Certification Engineer		
Signature: Bentmj		Date:2023-9-8
FRX Approval: Shenzhen Feng Ruixiang Intelligent Technology Co., Ltd.		
Title: Senior RF Engineer		
Signature: Li Po		Date: 2023-9-8

1. Introduction



This antenna support 2.4&5GHz dual band frequency. Designed by IFA antenna theory Almost Omni-directional radiation for far field.

Good port matching ,low return loss ,high efficiency can make communication more easily.

1.1 Features

- Operating Frequencies: 2400~2500MHz/5100~5800MHz
- Radiation: Omni-directional radiation
- Modulation support: WLAN/BT/ZIGBEE
- Connect to host through IPEX connectors

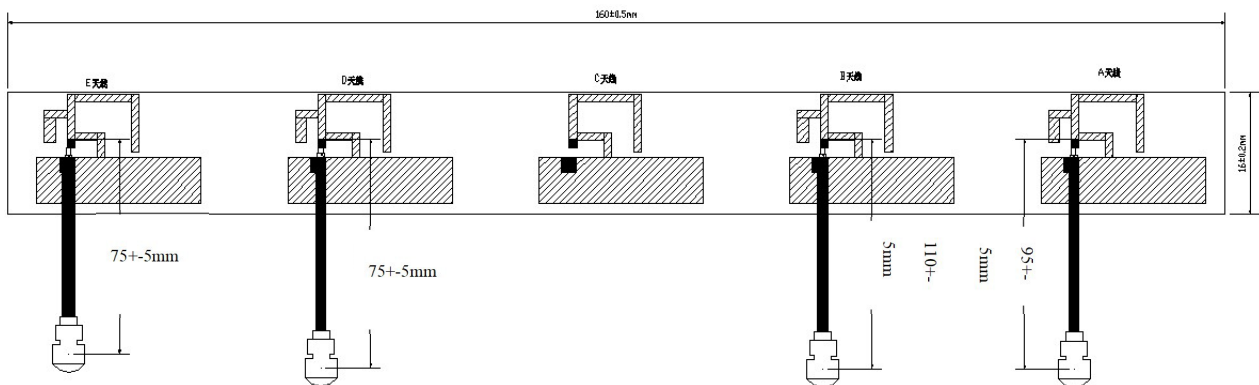
1.2 Applications

- IP Camera
- STB
- Smart TV
- Screen thrower
- Intelligent home furnishing
- Other devices which need to be supported by wireless network

1.3 General Specifications

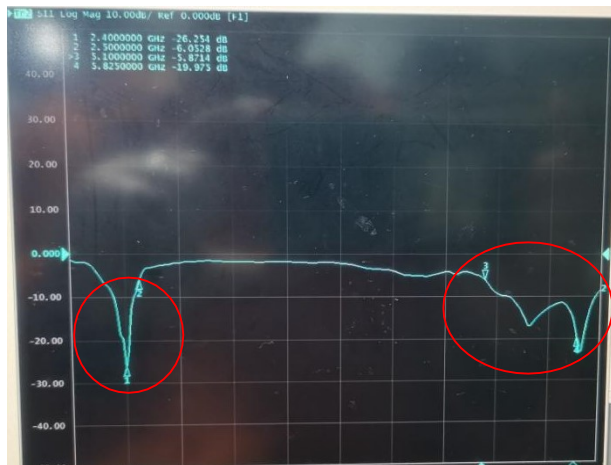
Product Name	2.4&5GHz PCB antenna
Frequency	2400~2500MHz/5100~5830MHz
Modulation support	WLAN/BT/ZIGBEE
VSWR	≤ 2.5
Return loss	$\leq -7\text{dB}$
Radiation	Omni-directional
Gain (peak)	3.5dBi@2.4~2.5GHz and 5.5dBi@5.1~5.8GHz
Polarization	Linear
Admitted Power	2W
Connector	IPEX1
Efficiency	20%~50%
Cable	RF1.13 black cable

2. Mechanical Specifications

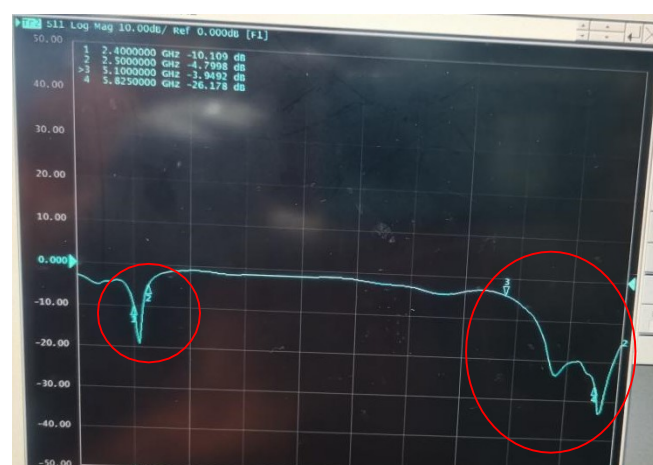


PCB Antennas connect to product by IPEX connectors and the cable is 1.13 RF black cable.
The Antennas can be fixed by back viscose.

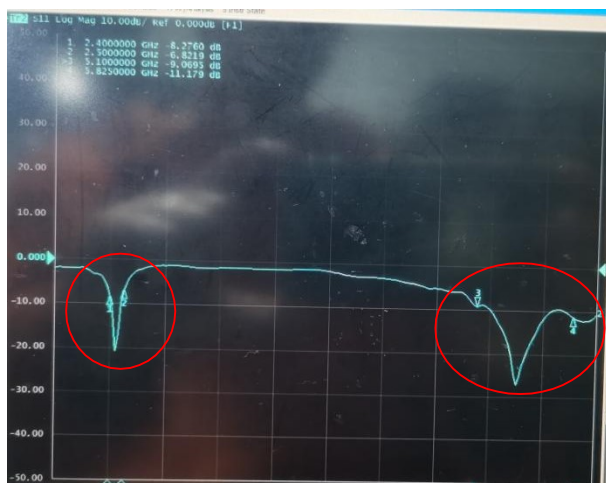
3. S-parameter



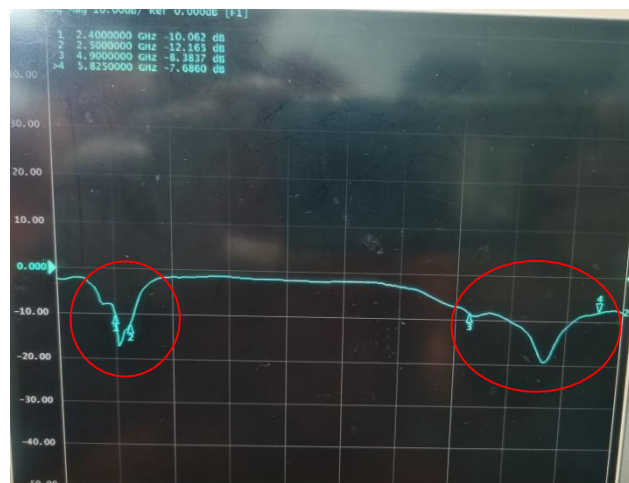
ANT A:Return loss: $\leq -7\text{dB}$



ANT B:Return loss: $\leq -7\text{dB}$

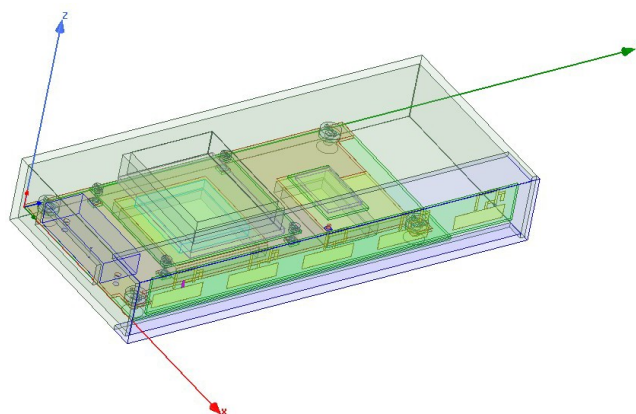


ANT D:Return loss: $\leq -7\text{dB}$



ANT E:Return loss: $\leq -7\text{dB}$

4. Radiation parameter

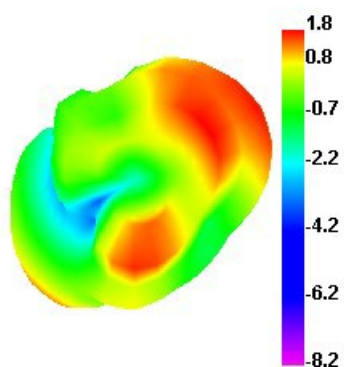


4.1 Gain and efficiency

Frequency	Gain	efficiency
2400~2500MHz	1.5~3.5dBi	20%~50%
5100~5800MHz	2.5~5.5dBi	25%~50%
ANT A/B/D/E:2400/2450/2500MHz	1.51/1.77/1.14	32.65%/35.26%/27.26%
ANT A/B/D/E:5100/5460/5830MHz	0/2.46/3.36	21.7%/35.53%/38.6%

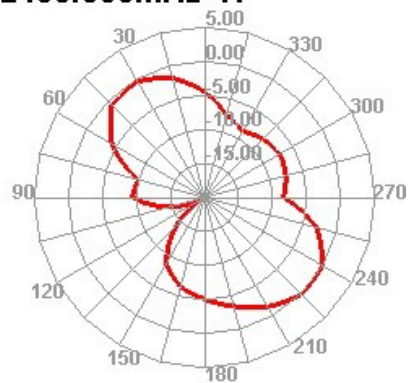
4.2 Radiation Pattern

2450.000MHz



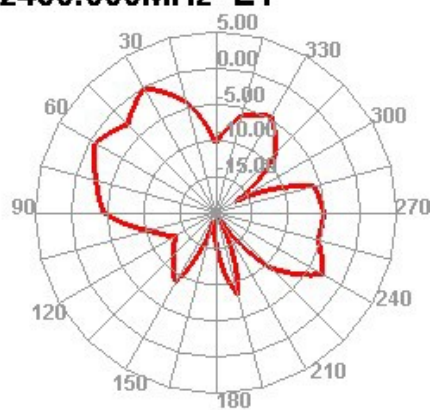
3D radiation

2450.000MHz H



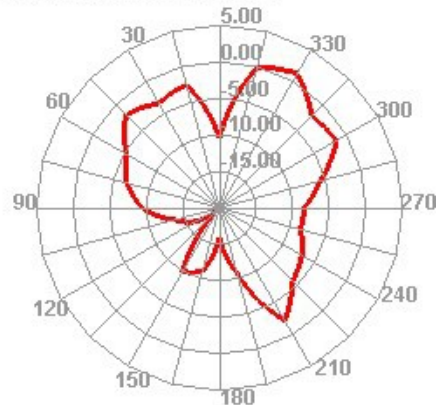
XY plane

2450.000MHz E1



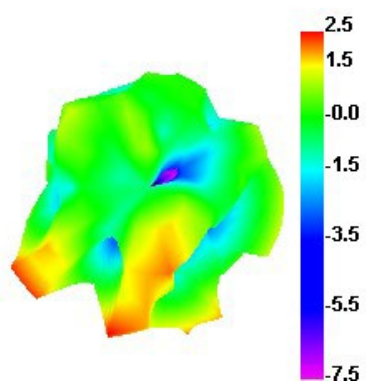
XZ plane

2450.000MHz E2



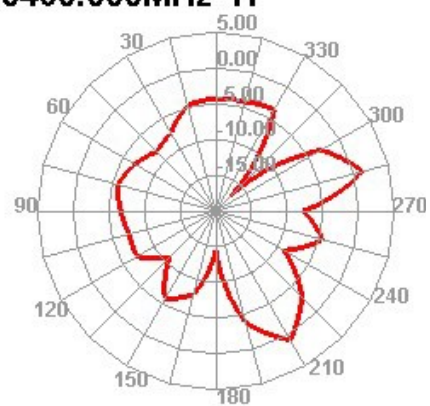
YZ plane

5460.000MHz



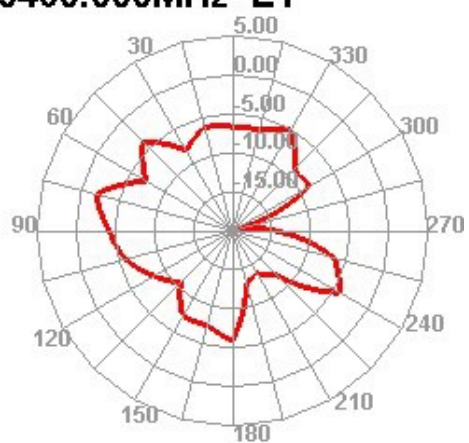
3D radiation

5460.000MHz H



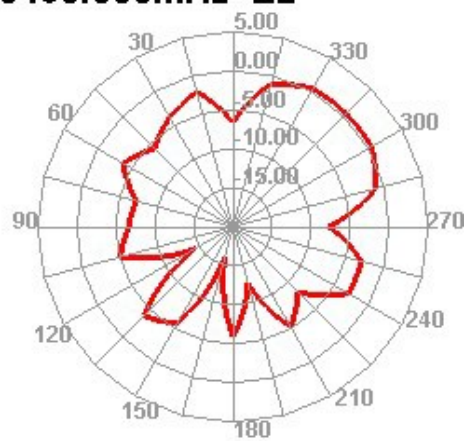
XY plane

5460.000MHz E1



XZ plane

5460.000MHz E2



YZ plane