



2.4&5.8GHz Dipole FPC ANT

Specification

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Revision History

Revision	Summary	Release Date
1.0	Official release	2023-08-19

Product Name: 2.4&5.8GHz Dipole FPC Antenna

Frequency: 2.4~2.5&5.1~5.8GHz

Model Number: 10018446

Customer Approval:

Company:

Title:

Signature:

Date:

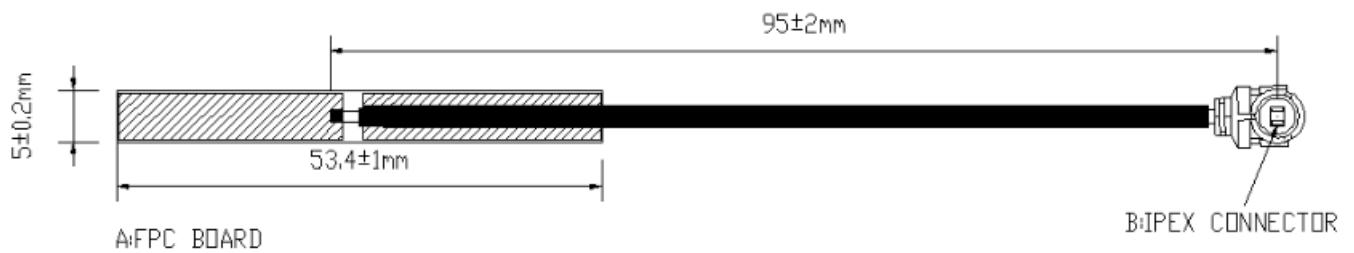
BL-link Approval:

Title:

Signature:

Date:

1. Introduction



This antenna support 2.4&5.8GHz dual band frequency. Designed by dipole 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

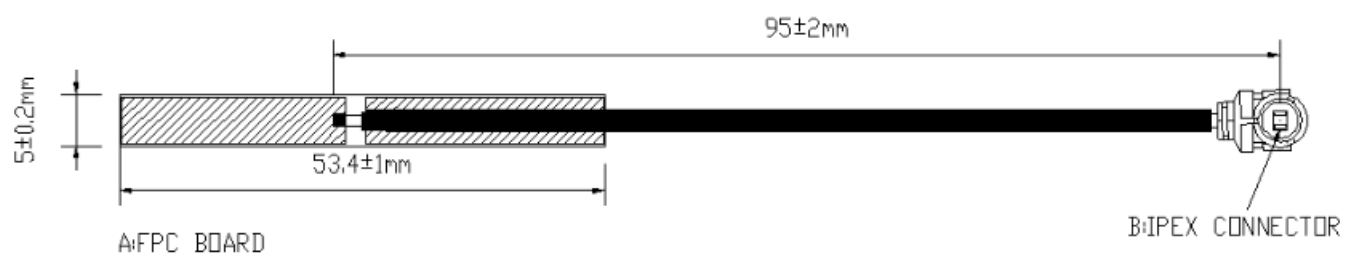
1.2 Applications

- 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&5.8GHz Dipole FPC antenna
Frequency	2400~2500MHz/5100~5800MHz
Modulation support	WLAN/BT/ZIGBEE
VSWR	≤ 3
Return loss	$\leq -6\text{dB}$
Radiation	Omni-directional
Gain (peak)	2.5dBi
Polarization	Linear
Admitted Power	2W
Connector	IPEX1
Efficiency	40%~70%
Cable	RF $\Phi 1.13$ cable and length is 95 mm

2. Mechanical Specifications



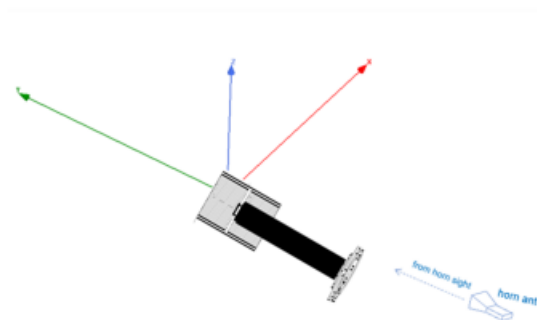
Antenna made by FPC material and fixed to customer' s product shell by bottom side adhesive,
Then through IPEX1 connector connect main board RF signal port.

3. S-parameter

Antenna	Frequency	Return loss	VSWR
FPC antenna	2.4~2.5GHz	≤ -6 dB	≤ 3
FPC antenna	5.1~5.83GHz	≤ -6 dB	≤ 3



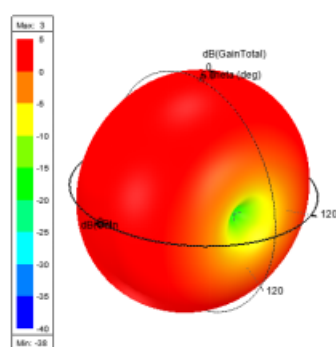
4. Radiation parameter



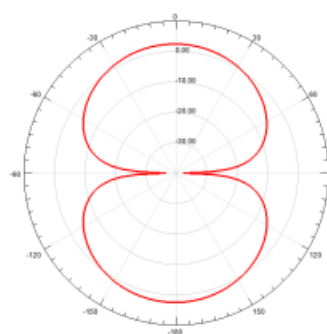
4.1 Gain and efficiency

Frequency	Gain	efficiency
2400~2500MHz	1~2.5dBi	40%~70%
5100~5800MHz	1~2.5dBi	40%~70%

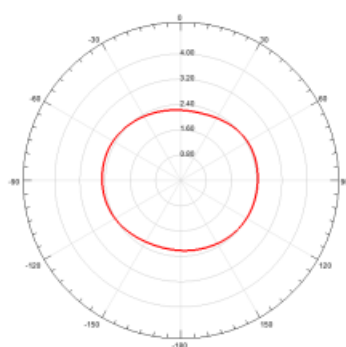
4.2 Radiation Pattern



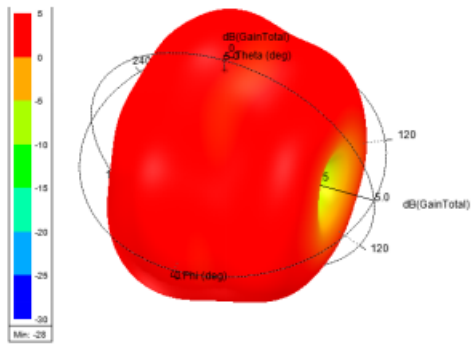
2G 3D radiation



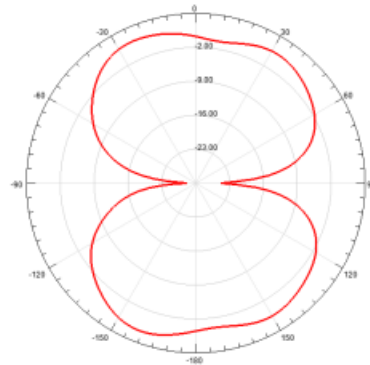
2G XY plane



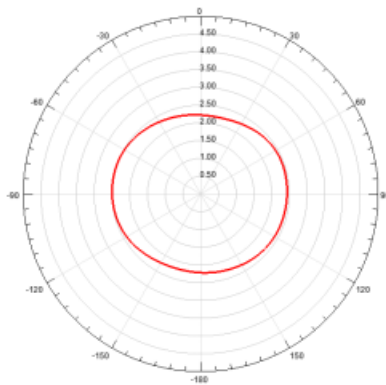
2G XZ plane



5G 3D radiation



5G XY plane



5G XZ plane

Note: Test use a plastic plane simulate customer' s product shell.