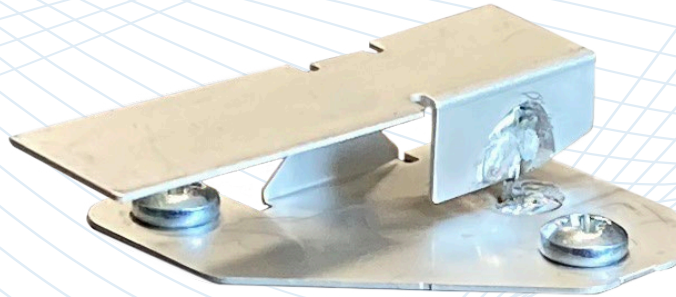


# Tri-Band Inverted-F Antenna for 2.4/5/6 GHz Wi-Fi

## Wi-Fi Antennas

EMB-910002



### Description

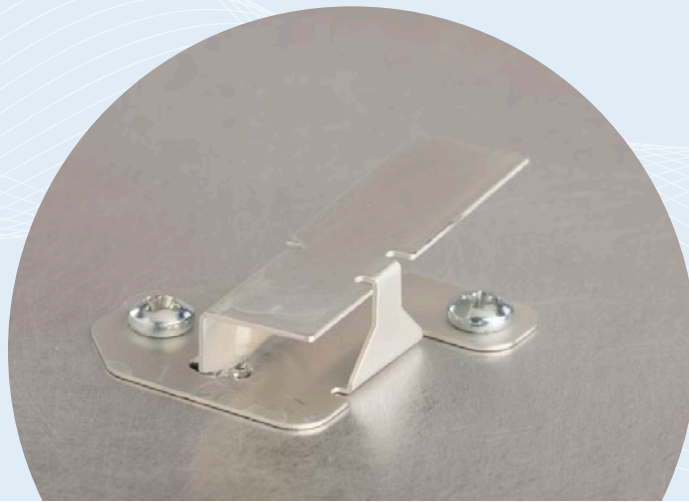
Tri-band antenna covers the 2.4 GHz, 5 GHz, and 6 GHz Wi-Fi bands

### Technologies

- Wi-Fi
- Bluetooth®
- Zigbee

### Features

- Easy to deploy: the antenna mounts directly to a metal ground plane using two screws
- Small and low-profile: the antenna can be integrated into small spaces and is tuned for proximate radome loading
- Radiation properties are consistent over a reasonable range of ground plane shapes and sizes
- The antenna is approved for use with the PCTEL RM-WIFI-AC-2X2-HP 5 GHz radio module



## Tri-Band Inverted-F Antenna for 2.4/5/6 GHz Wi-Fi

### Wi-Fi Antennas

The EMB-910002 antenna element is a tri-band “inverted-F” antenna that covers the 2.4 GHz, 5 GHz, and 6 GHz Wi-Fi frequency bands. It is a low profile solution (<8 [mm] tall) that is easily mounted to an external ground plane using screws. The mixed-polarized, broad radiation patterns are ideal for many applications including indoor high-density access point deployments and high-ceiling deployments common in retail and industrial settings. The element is designed for integration in wireless systems to support applications that require wide, hemispherical coverage. Additionally, the EMB-910002 is approved for use with the PCTEL RM-WIFI-AC-2X2-HP 5 GHz radio module.

### Features

- Easy to deploy using common hardware
- Low-profile
- Mixed-polarized, broad radiation patterns enable wireless connectivity over a hemisphere
- Solid mechanical construction and cable attachment
- Approved for use with the PCTEL RM-WIFI-AC-2X2-HP 5 GHz radio module

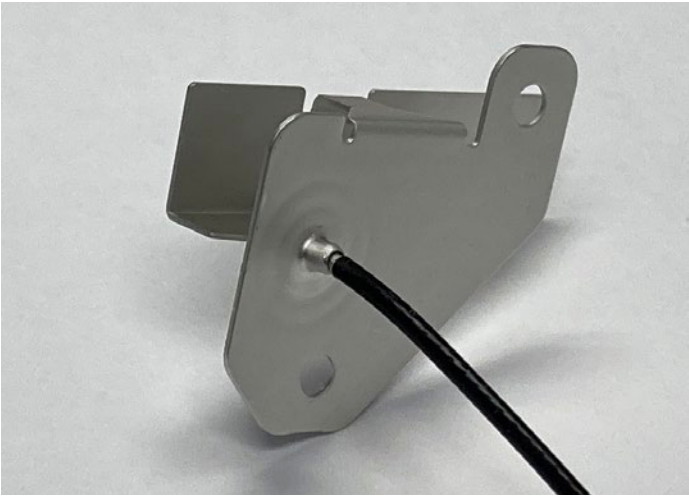
# Tri-Band Inverted-F Antenna for 2.4/5/6 GHz Wi-Fi

## Wi-Fi Antennas

### Specifications

	2.4 GHz Band	5 GHz Band	6 GHz Band
Antenna Type	Bent Metal Inverted-F Antenna		
Frequency Range	2400 - 2500 MHz	5150 - 5875 MHz	5925 - 7125 MHz
VSWR	1.5:1 nominal, 2:1 maximum (integration-dependent)		
Peak Gain	3.4 dBi	4.8 dBi	5.1 dBi
Antenna Dimensions	32.7 mm x 28.2 mm x 7.4 mm		
Recommended Radome Separation	> 2.5 mm		
Fastening Method	#3-48 pan head machine screws (hardware not included)		
Cable	1.37 mm Ø microcoax		
Connector	U.FL-style plug		
Ground Plane Clearance Hole	4 mm Ø		
Operating Temperature Range	-40°C to +85°C		

*All performance parameters were measured with the antenna mounted on a 4"x4" ground plane loaded by a 100 mil-thick polycarbonate radome spaced 15 [mm] above the ground plane.*

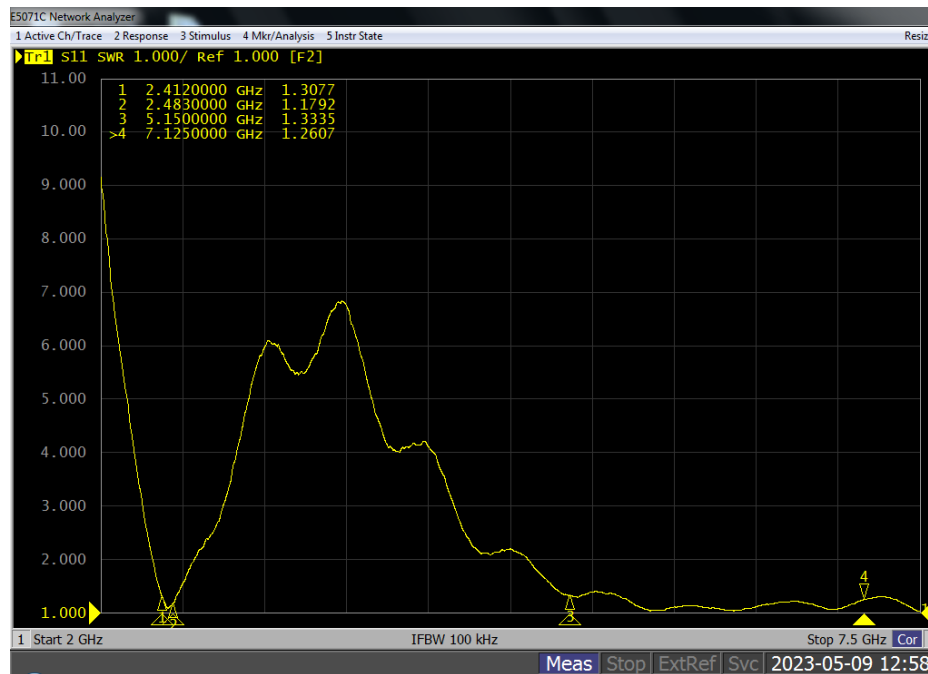


*The extruded hole formed in the base of the element strengthens the attachment of the outer conductor of the coaxial cable to the antenna.*

# Tri-Band Inverted-F Antenna for 2.4/5/6 GHz Wi-Fi

## Wi-Fi Antennas

### VSWR – EMB-910002



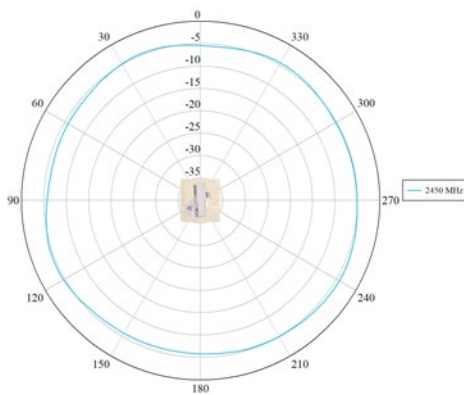
The VSWR of the antenna measured from 2 - 7.5 GHz.

## Tri-Band Inverted-F Antenna for 2.4/5/6 GHz Wi-Fi

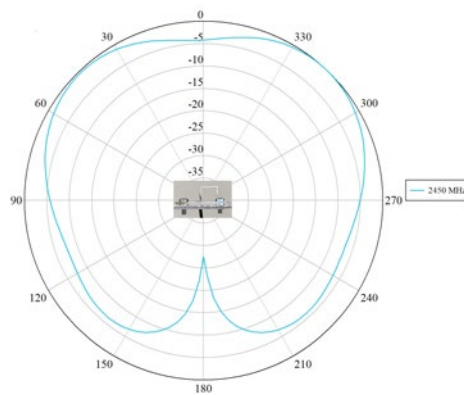
### Wi-Fi Antennas

#### 2.4 GHz Radiation Patterns

Azimuth Plane

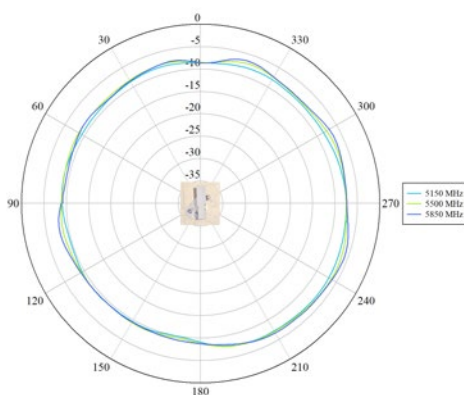


Elevation Plane

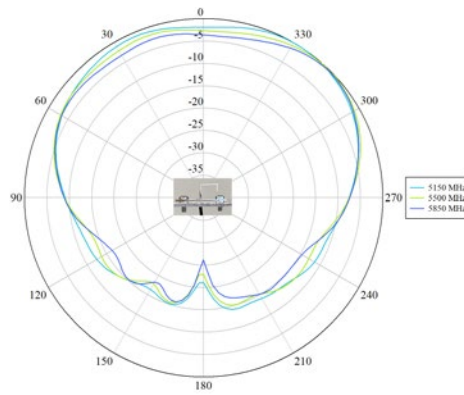


#### 5 GHz Radiation Patterns

Azimuth Plane

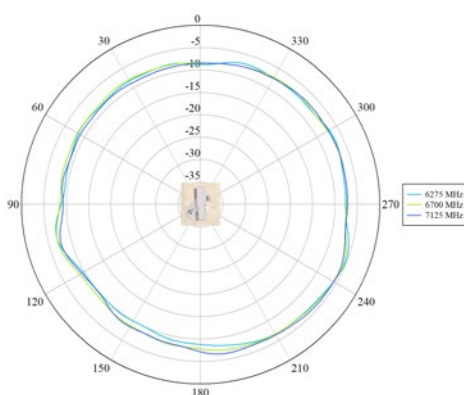


Elevation Plane

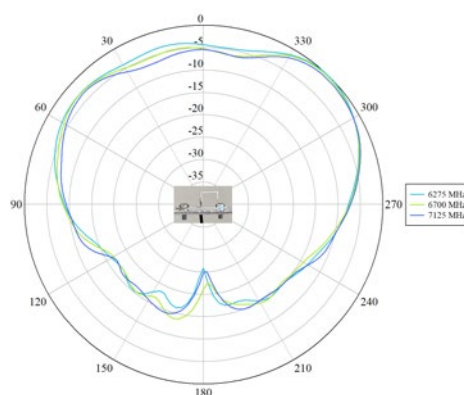


#### 6 GHz Radiation Patterns

Azimuth Plane



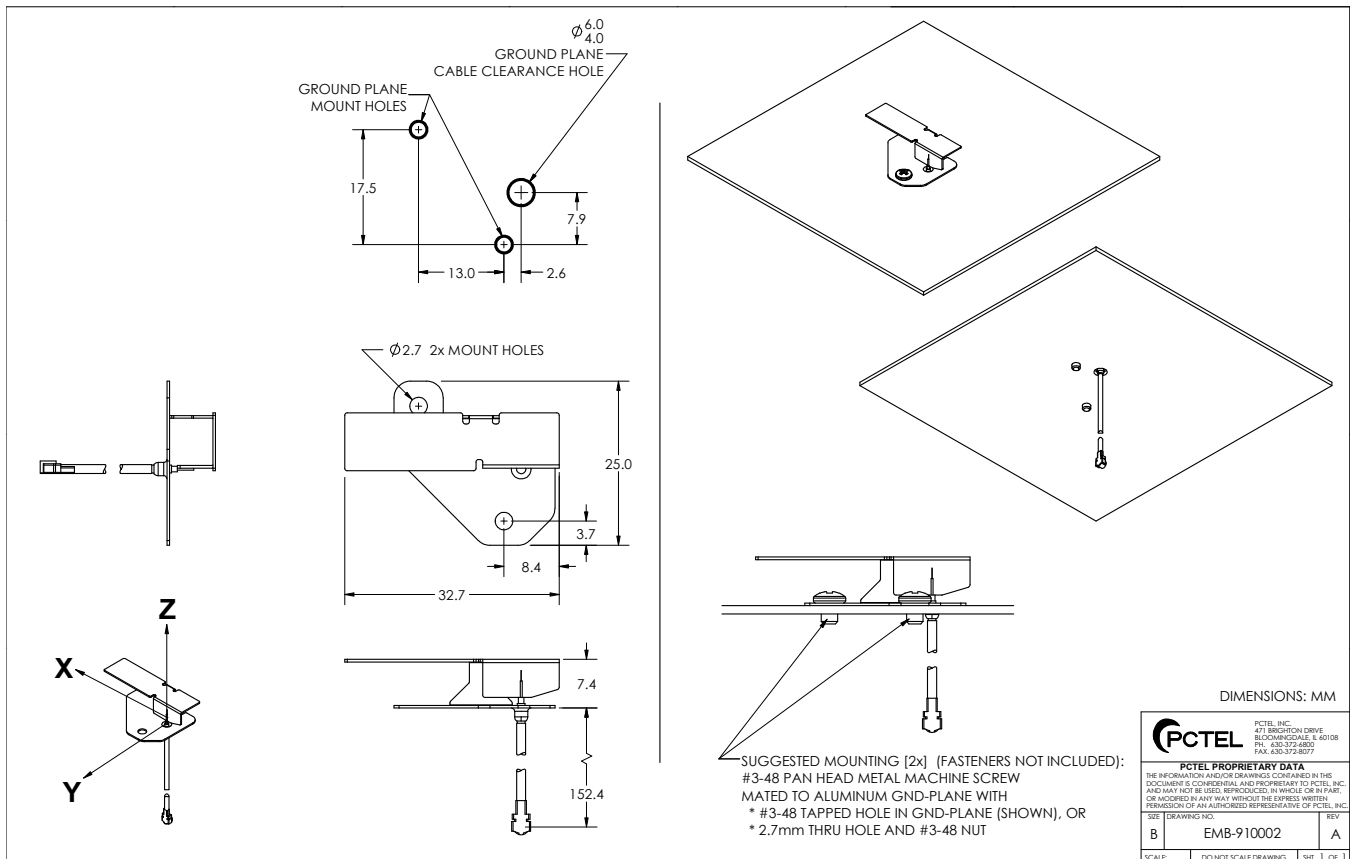
Elevation Plane



# Tri-Band Inverted-F Antenna for 2.4/5/6 GHz Wi-Fi

## Wi-Fi Antennas

### Mechanical Drawing



## CONTACT US

For more information about  
this product contact us

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## WHERE TO BUY

To order the EMB-910002, please contact your  
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