NANE13X123WTMS868M2MF

868 & 915 MHz ISM/LoRa External Antenna

9001:2015 CERTIFIED

ROHS/REACH COMPLIANT HALOGEN FREE

NIC Components Corp.

Description

NANE13X123WTMS868M2MF is an External Whip antenna designed for ISM/LoRa applications. It operates within the frequency ranges of 868 MHz / 915 MHz and making it perfect for LoRaWAN , Sigfox, Weightless-P, and WiFi HaLow, ISM and remote control applications .

Features

- Supports: 868 & 915 MHz ISM Bands
- Up to 90° flexibility
- RoHs Complaint

Part Number Breakdown

NANE 13X123 W T M S 868M 2 M F

- **F** — **RoHS Compliant**
- **M** — **Connector Code**: M = SMA Male
- **2** — **Number of Frequency Bands**
- **868M** — **Center Frequency**
- **S** — **Protocol Code**: S = ISM
- **M** — **Internal Production Code**
- **T** — **Antenna Shape**: T = Tilt
- **W** — **Antenna Type**: W = Whip
- **13X123** — **Size (in mm)**
- **NANE** — **Series**

Part Numbers Options

Part Number	Protocol	Connector
NANE13X123WTMS868M2MF	ISM	SMA Male

The table represents assembled part numbers available on www.niccomp.com. For options not listed above please contact NIC

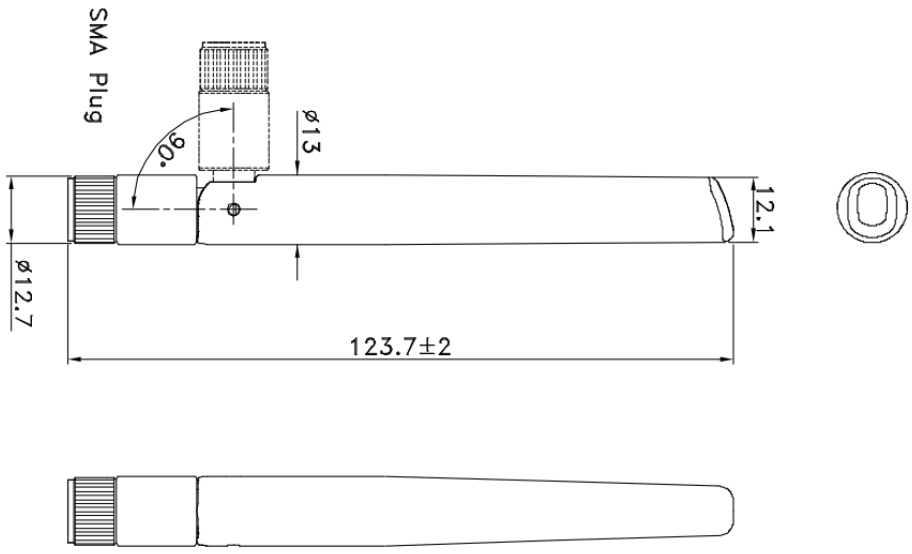
NANE13X123WTMS868M2MF

868 & 915 MHz ISM/LoRa External Antenna

Specifications

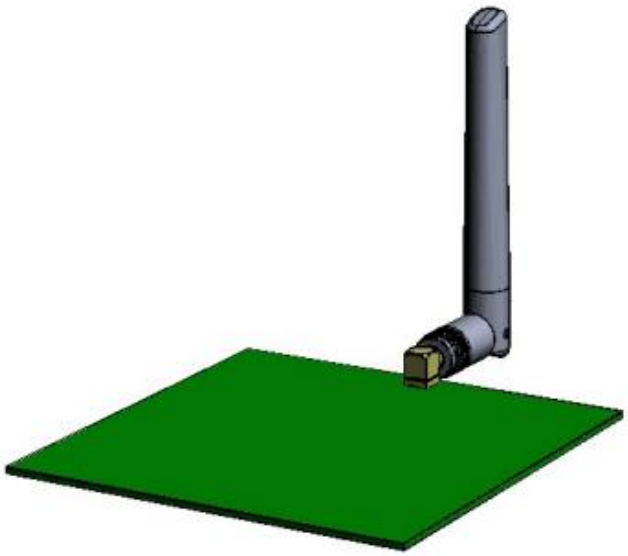
Electrical		
Frequency Range	862 ~ 876 MHz	902 ~ 930 MHz
Peak Gain	2.3 dBi	2.2 dBi
Average Gain	-1.4 dBi	
Efficiency	72%	73%
VSWR	1.8	1.9
Polarization	Linear	
Radiation	Omni directional	
Max Power	1 W	
Electrical Type	Monopole	
Impedance	50Ω	
Environmental		
Operating Temperature -	-30°C~+70°C	
Weight	13 g	
Antenna Color	Black	
RoHS Compliant	Yes	

Dimensions



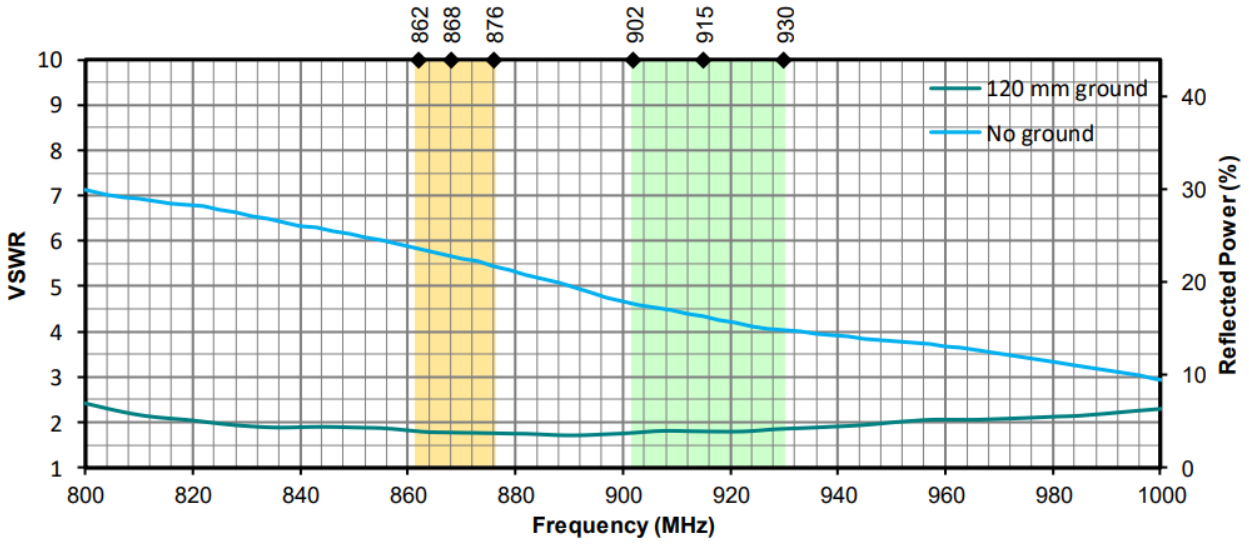
Antenna Orientation

This antenna is characterized in 90 degrees bent antenna orientation with an adjacent ground plane (120 mm x 120 mm) as shown in the below figure. The antenna is a 1/4-wave monopole antenna requiring a ground plane to achieve high performance. The charts on the following pages represent data taken with the antenna oriented at the edge of the ground plane, bent 90 degrees (Edge-Bent).



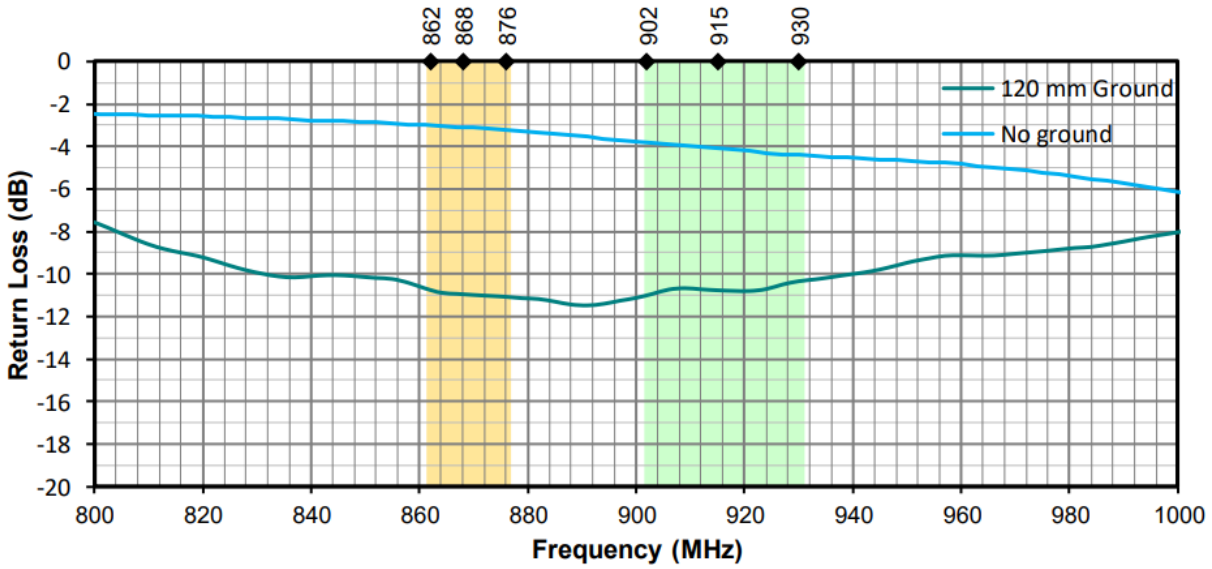
On edge of ground plane, bent 90 degrees

VSWR



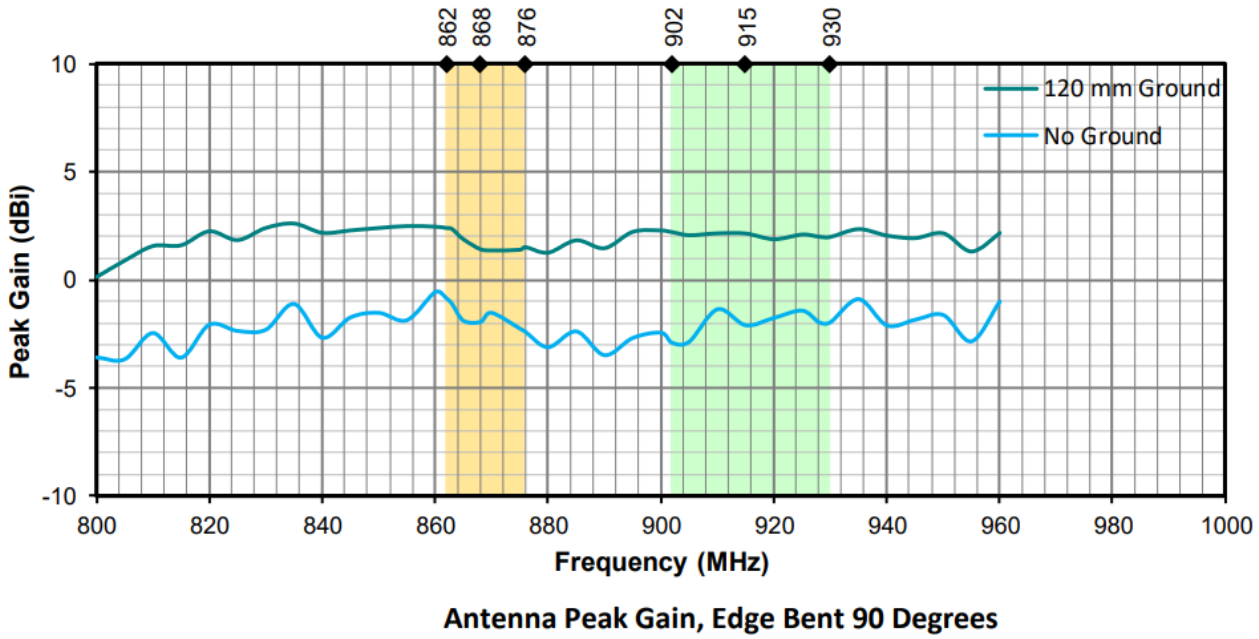
Antenna VSWR, Edge Bent 90 Degrees

Return Loss



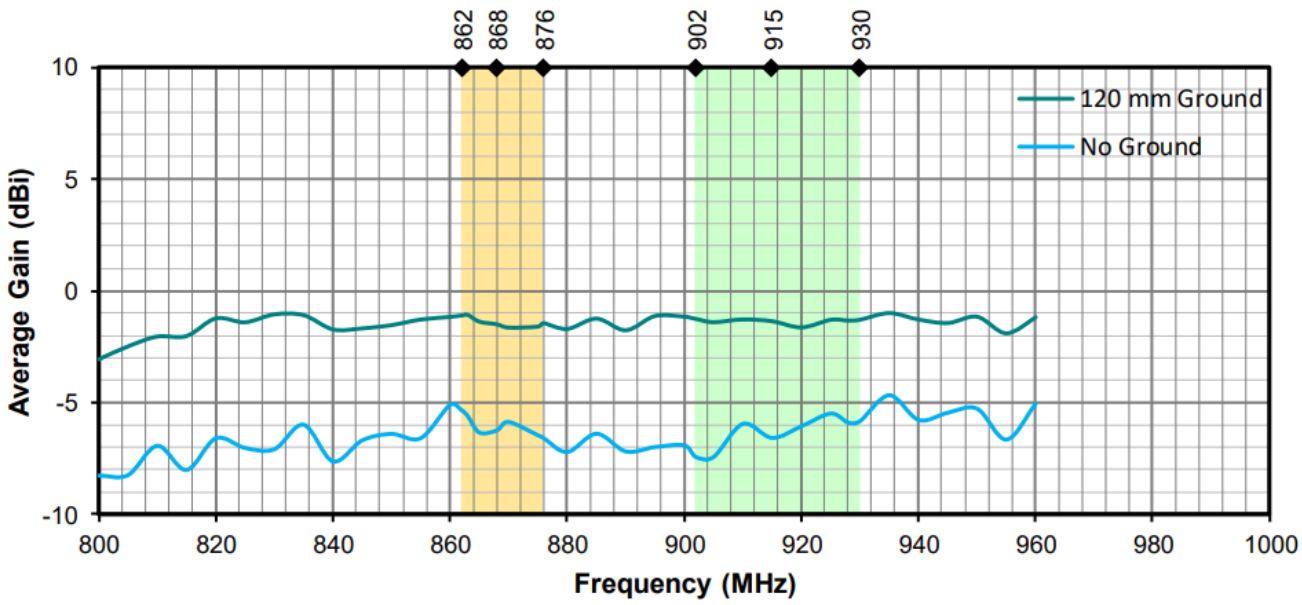
Antenna Return Loss, Edge Bent 90 Degrees

Peak Gain



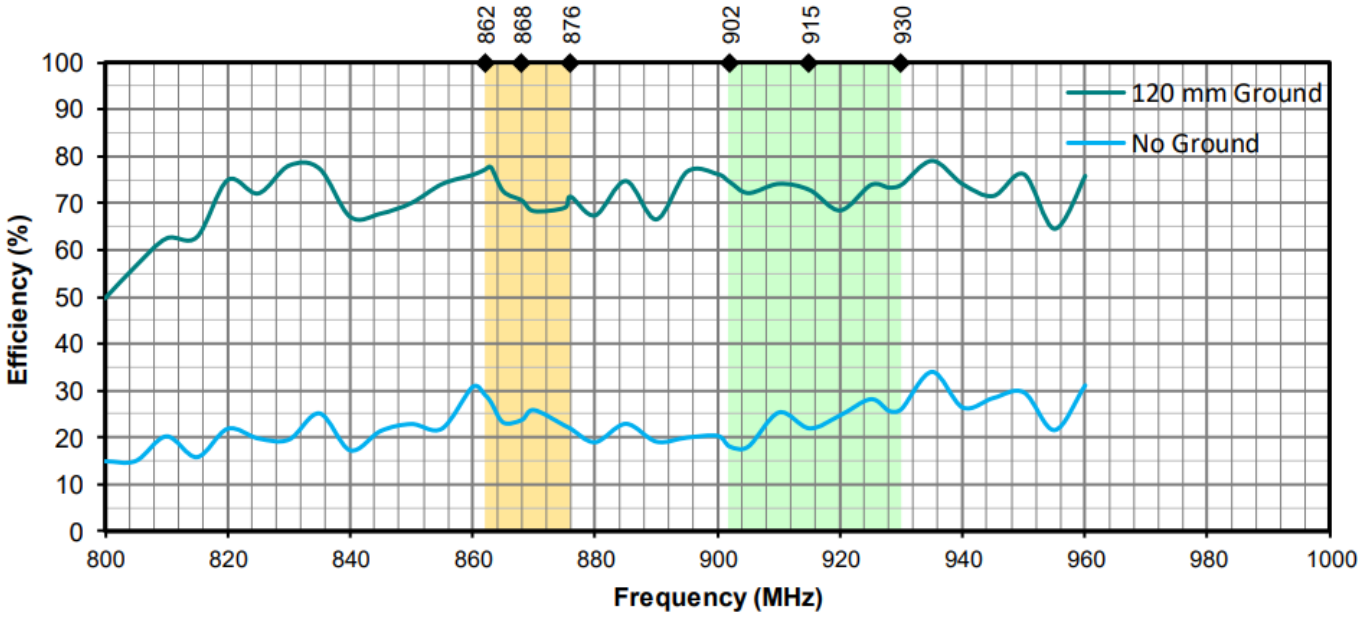
Antenna Peak Gain, Edge Bent 90 Degrees

Average Gain



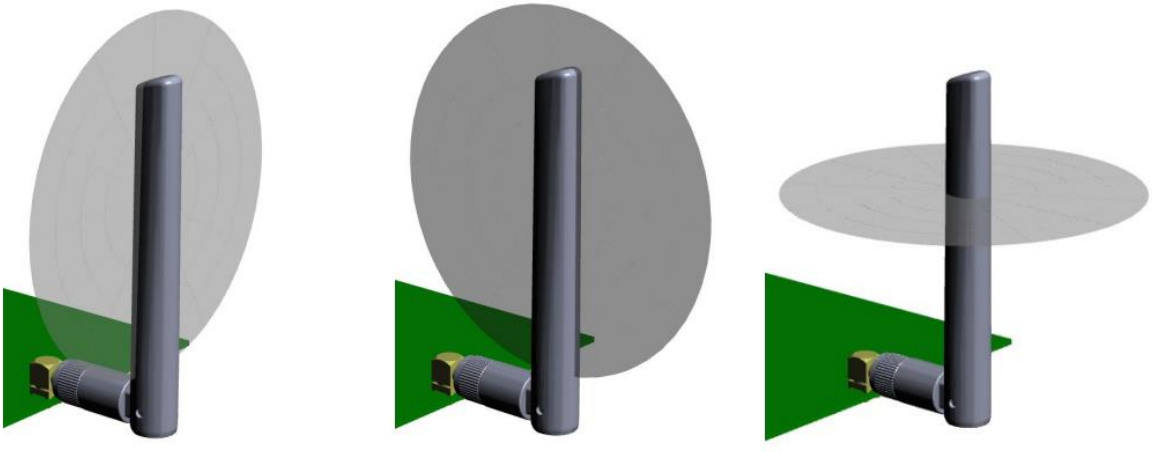
Antenna Average Gain, Edge Bent 90 Degrees

Radiation Efficiency



Antenna Efficiency, Edge Bent 90 Degrees

Radiation Patterns

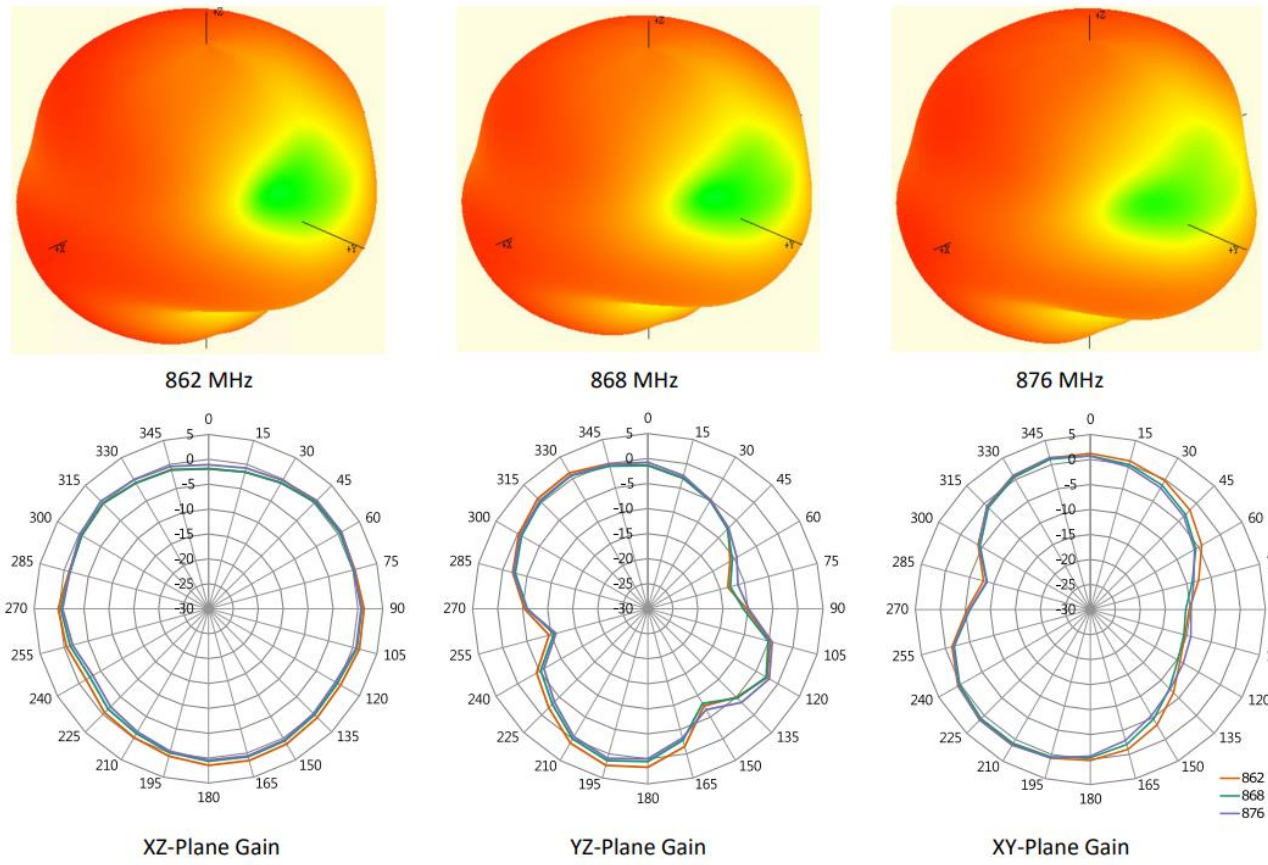


XZ-Plane Gain

YZ-Plane Gain

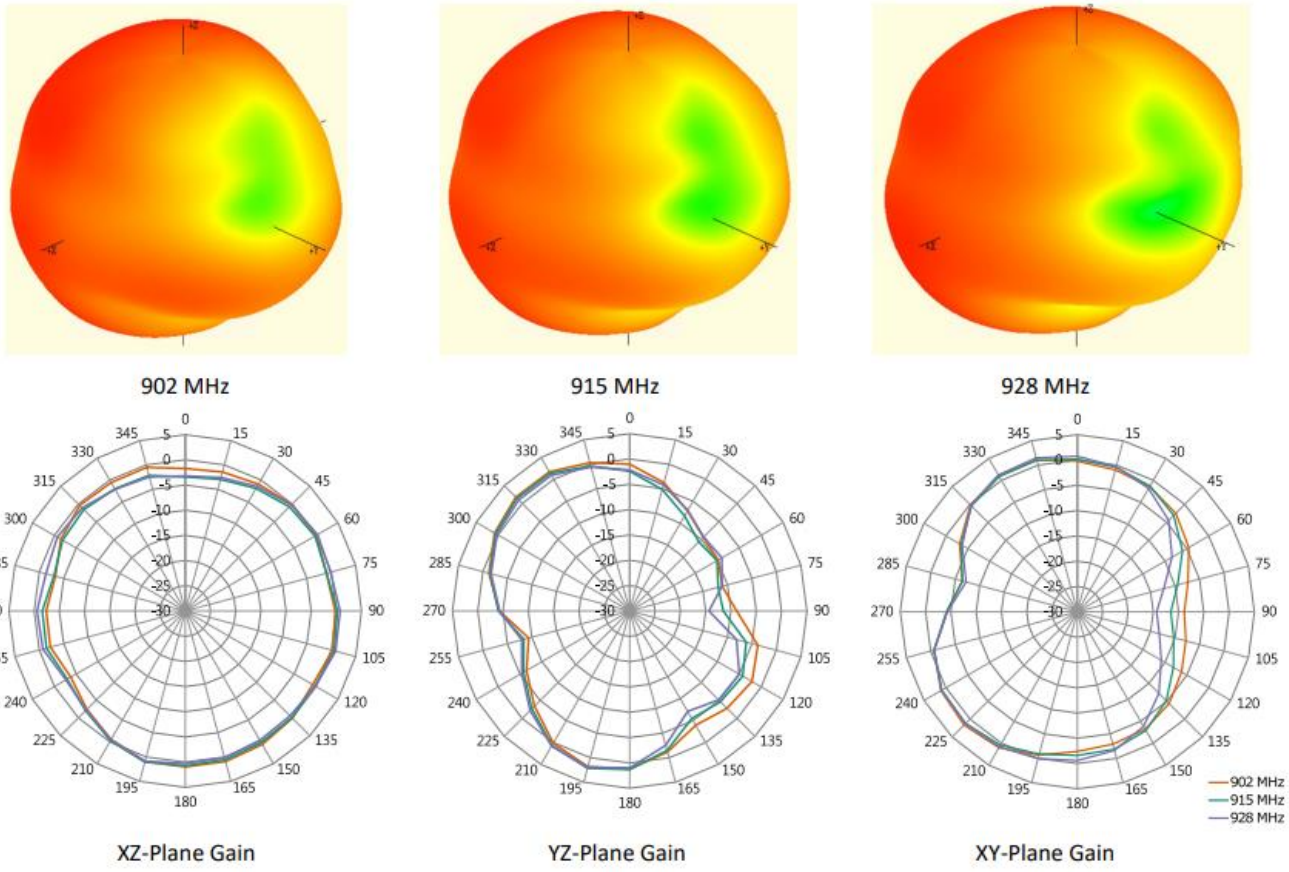
XY-Plane Gain

862 MHz ~ 876 MHz (868 MHz)



Antenna Radiation Patterns, Edge Bent 90 Degrees

902 MHz ~ 928 MHz (915 MHz)



Antenna Radiation Patterns, Edge Bent 90 Degrees