



TAOGLAS®

Datasheet

Barracuda

Part No:
OMB.410.B06F21

Description:

410-425MHz 6dBi Omni Antenna with N Type Female Connector and U-Bolt

Features:

- 410-425MHz Coverage
- Omni-Directional Radiation Pattern with 6dBi Peak Gain
- Robust Fiberglass Housing Enclosure
- IP67 Waterproof Rating
- Wind resistant to 200km/h
- Length: 1500mm
- N-type Female Connector as Standard
- Wall / Pole Mounting Bracket Included
- RoHS & Reach Compliant

| | |
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1. Introduction



The OMB.410.B06F21 is a 6dBi gain, fiberglass omnidirectional outdoor antenna, which is designed to cover frequency bands from 410-425MHz. The antenna is designed for applications such as smart grid, smart metering, industrial/environmental monitoring, remote asset monitoring, and mesh network applications.

The OMB.410 operates in the newly awarded Smart Grid frequency band between 410-425MHz with a >6dBi peak gain across the band with an omnidirectional antenna radiation pattern in the azimuth providing excellent coverage over long distances. Coupled with a very low VSWR, this characteristic provides the best performance because the antenna gives maximum coverage range in the horizontal plane over 360 degrees, thus minimizing the number of nodes needed for a mesh network.

The UV resistant fiberglass housing enables the OMB antenna to be utilized in all kinds of harsh environments, making it more robust and safer than traditional whip antennas. It can be connected directly to the access point or telemetry unit or can be mounted on a wall or device surface via the N-type connector.

An industry standard N-type Female connector is used as standard but can be customized upon request and is subject to MOQ. Contact your regional Taoglas customer support team for details.

An alternate model, OMB.410.B03F21, with 3dBi peak gain, is also available.

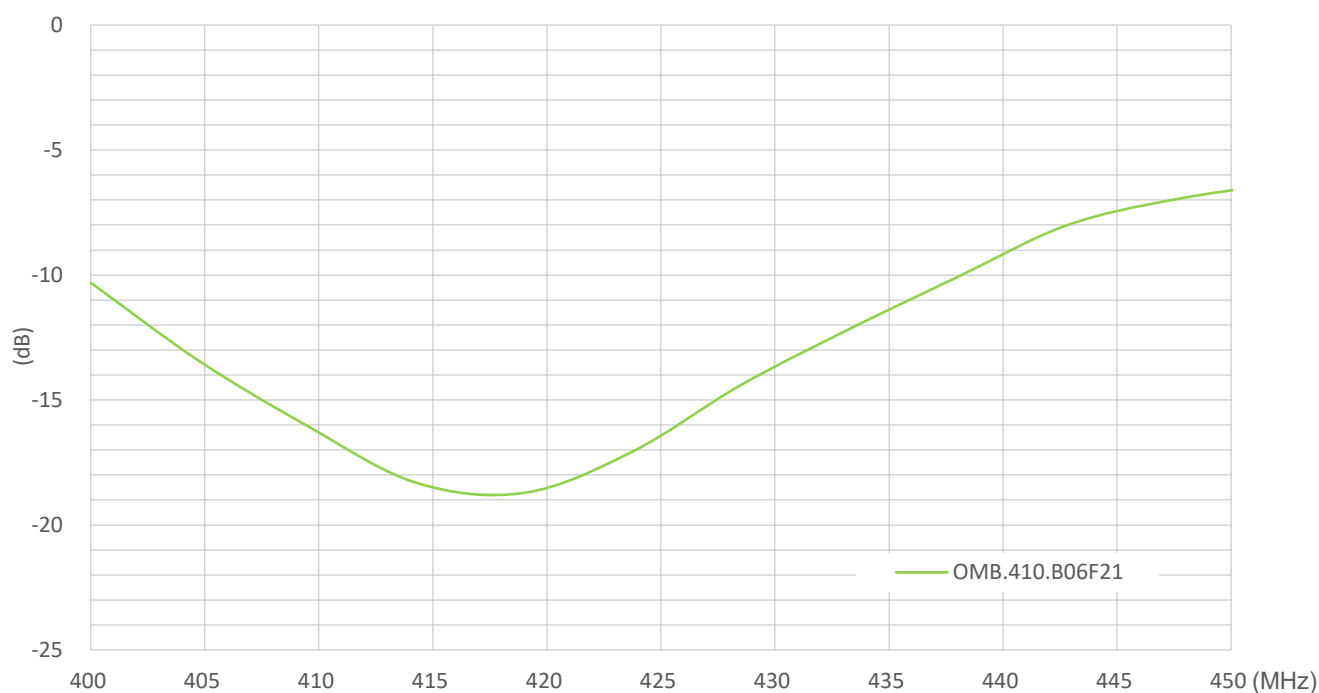
2. Specifications

| Electrical | | | | | | | | |
|----------------------------------|-----------------|----------------------------|-------------------|-----------------|--------|-----------|--------------|-------------------|
| Band | Frequency (MHz) | Efficiency (%) | Average Gain (dB) | Peak Gain (dBi) | VSWR | Impedance | Polarization | Radiation Pattern |
| Cellular Band 87,126 | 410~425 | 88.9 | -0.5 | 6 | <1.2:1 | 50 Ω | Linear | Omni |
| Power rating at the antenna port | | 50W | | | | | | |
| Maximum transmit power | | 50W | | | | | | |
| Mechanical | | | | | | | | |
| Dimensions | | 1500(L) x 80(W) x 65(D) | | | | | | |
| Diameter | | Ø34mm | | | | | | |
| Connector | | N-Type, Female | | | | | | |
| Antenna Weight | | 1300g | | | | | | |
| Radome Material | | GFRP (White) | | | | | | |
| Wind Resistance | | 200 km/h | | | | | | |
| Wind Load @150Km/h | | 20N | | | | | | |
| Waterproof | | IP67 | | | | | | |
| Mounting | | Pole Mount & Wall Mount | | | | | | |
| Environmental | | | | | | | | |
| Temperature Range | | -40°C to 55°C | | | | | | |
| Humidity | | Non-condensing 65°C 95% RH | | | | | | |

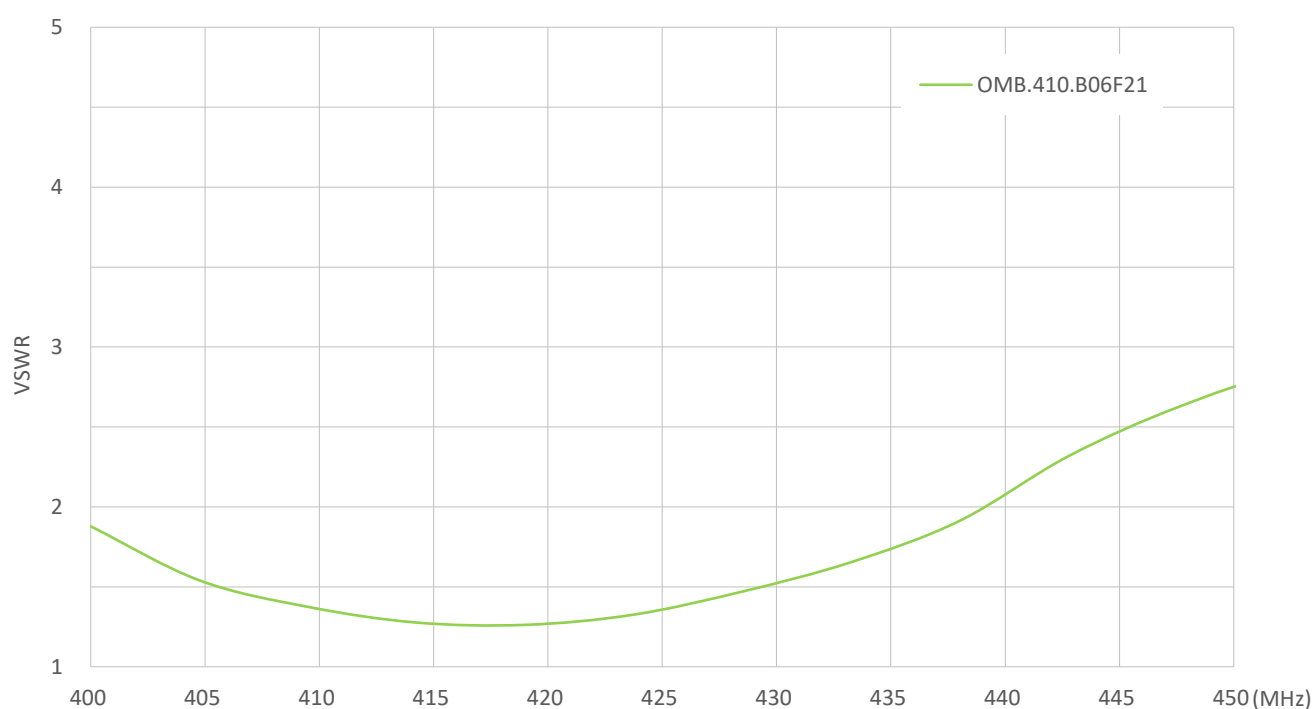
*Results measured in free space

3. Antenna Characteristics

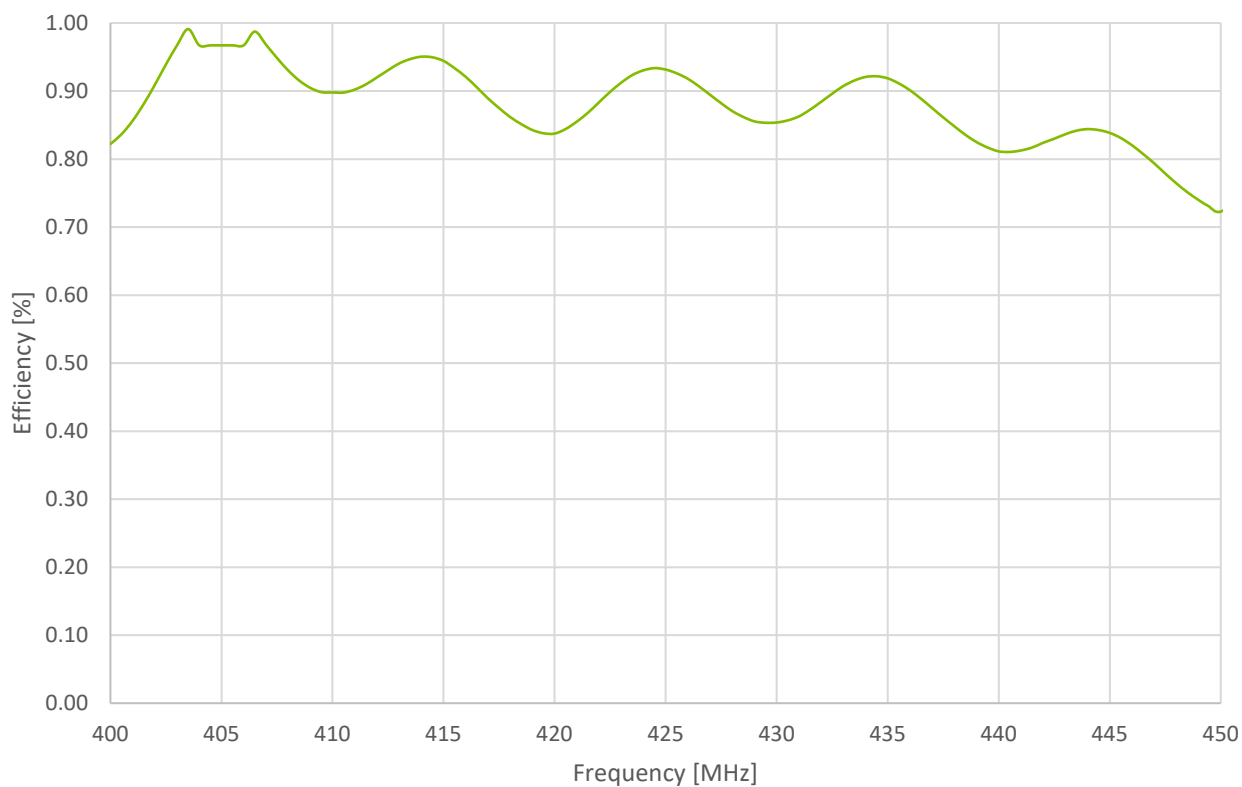
3.1 Return Loss



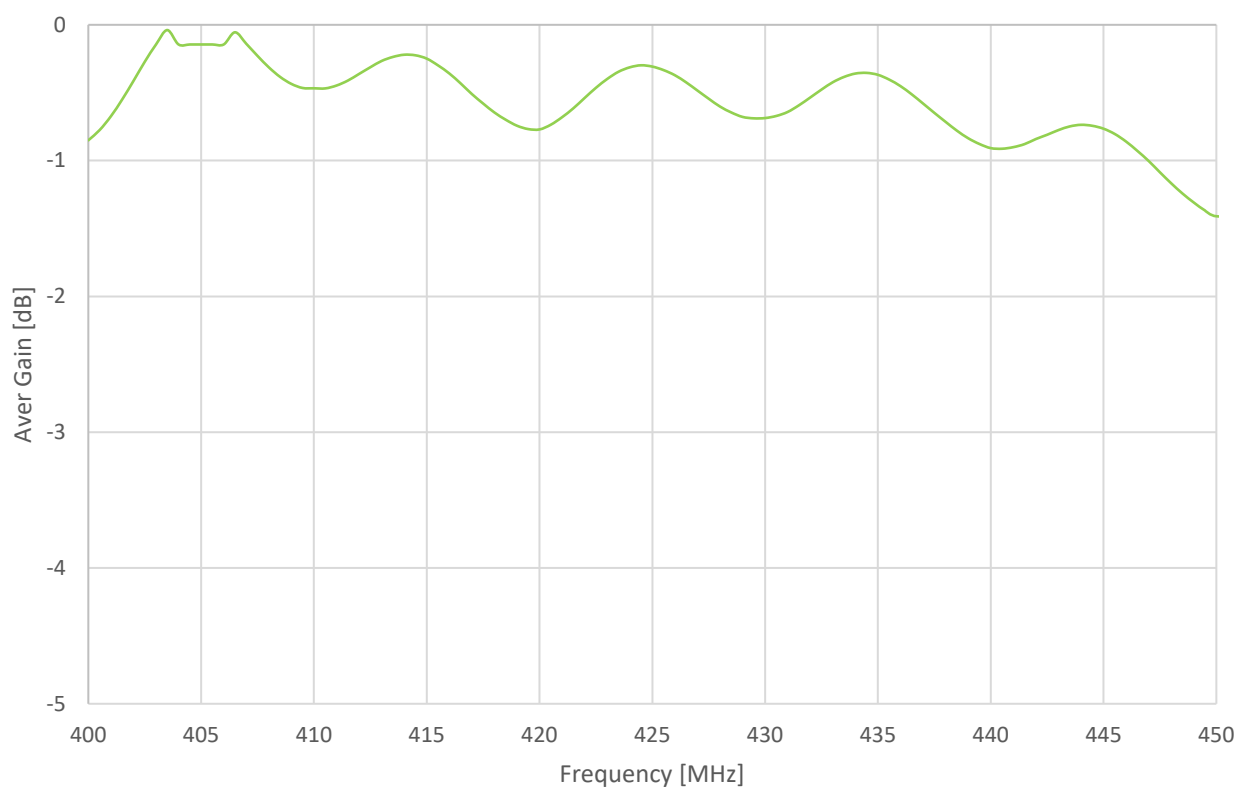
3.2 VSWR



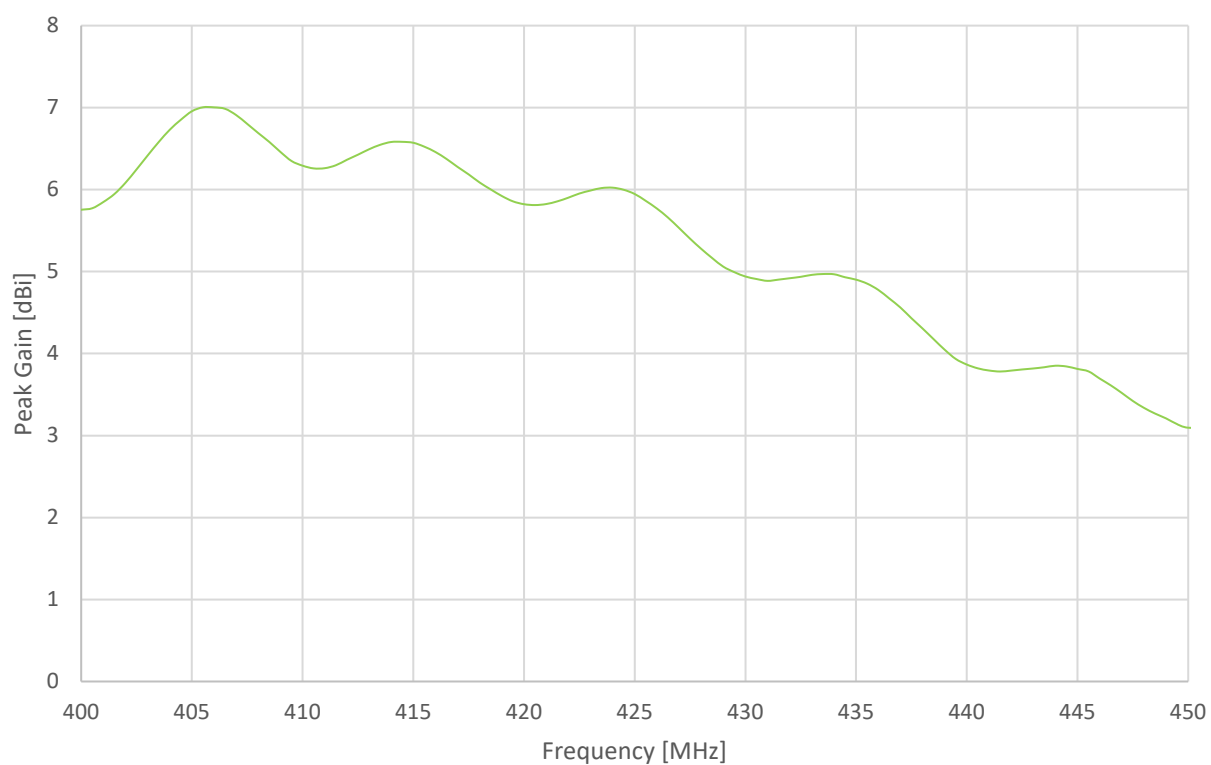
3.2 Efficiency



3.3 Average Gain



3.4 Peak Gain

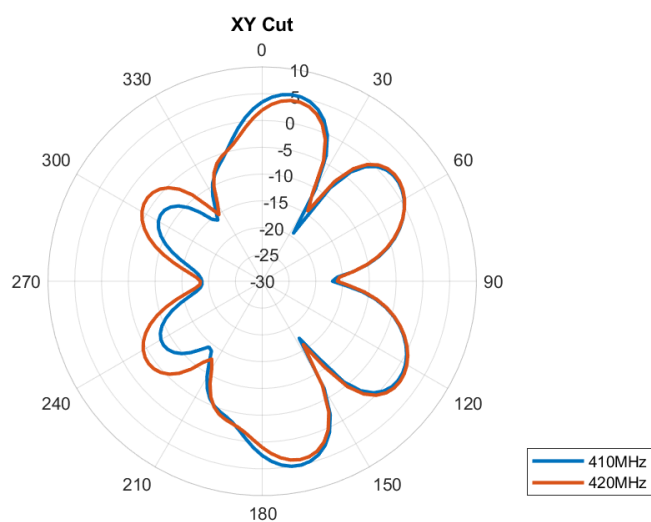
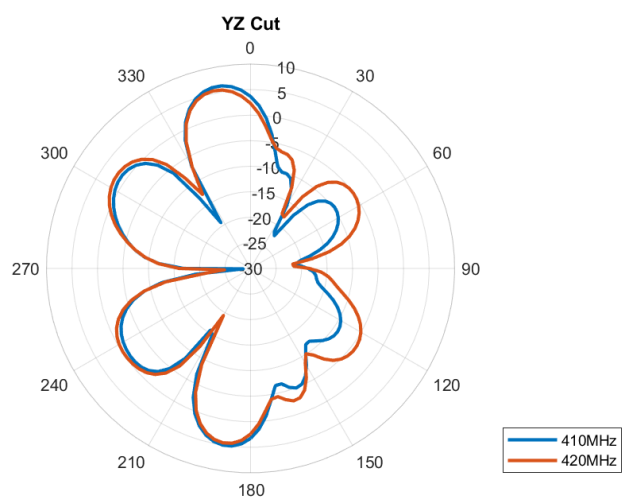
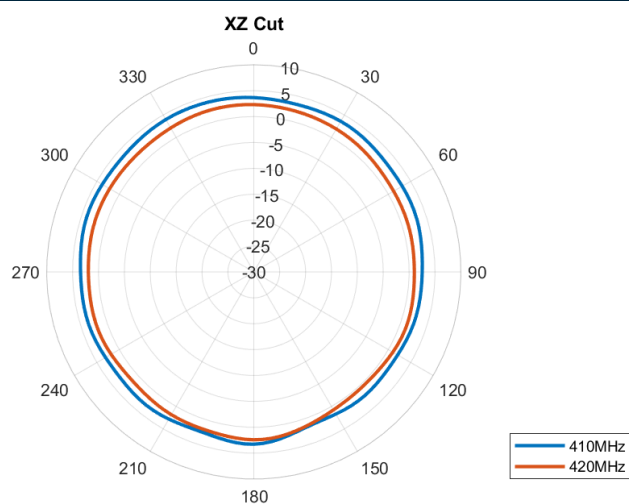


4. Radiation Patterns

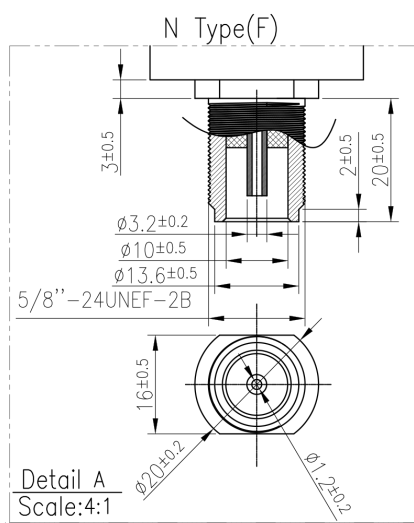
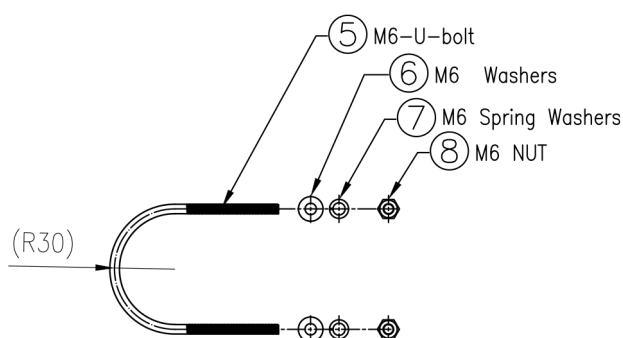
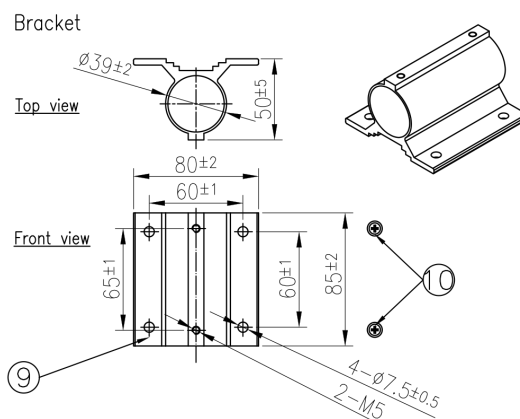
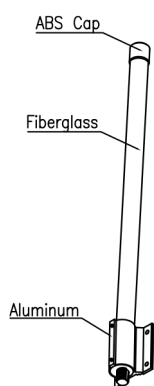
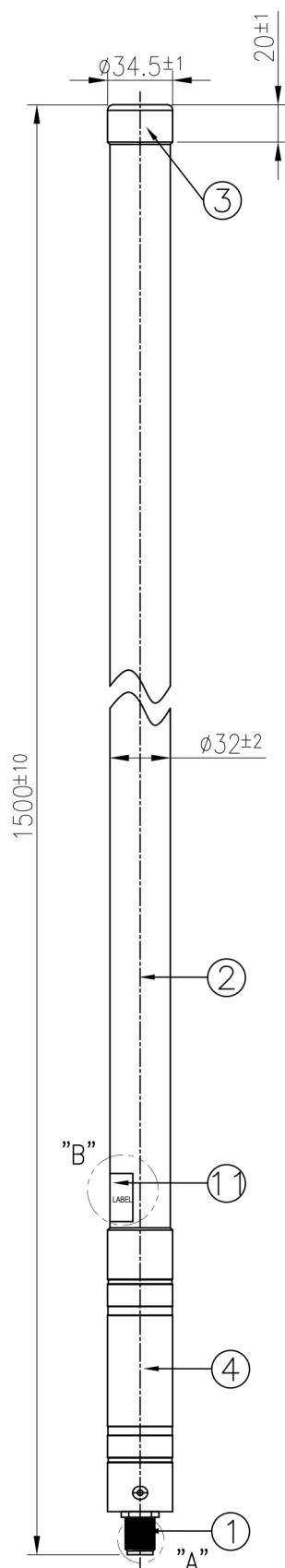
4.1 Test Setup



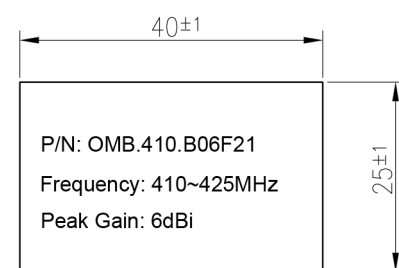
410 – 420MHz



5. Mechanical Drawing (Units: mm)



Label content



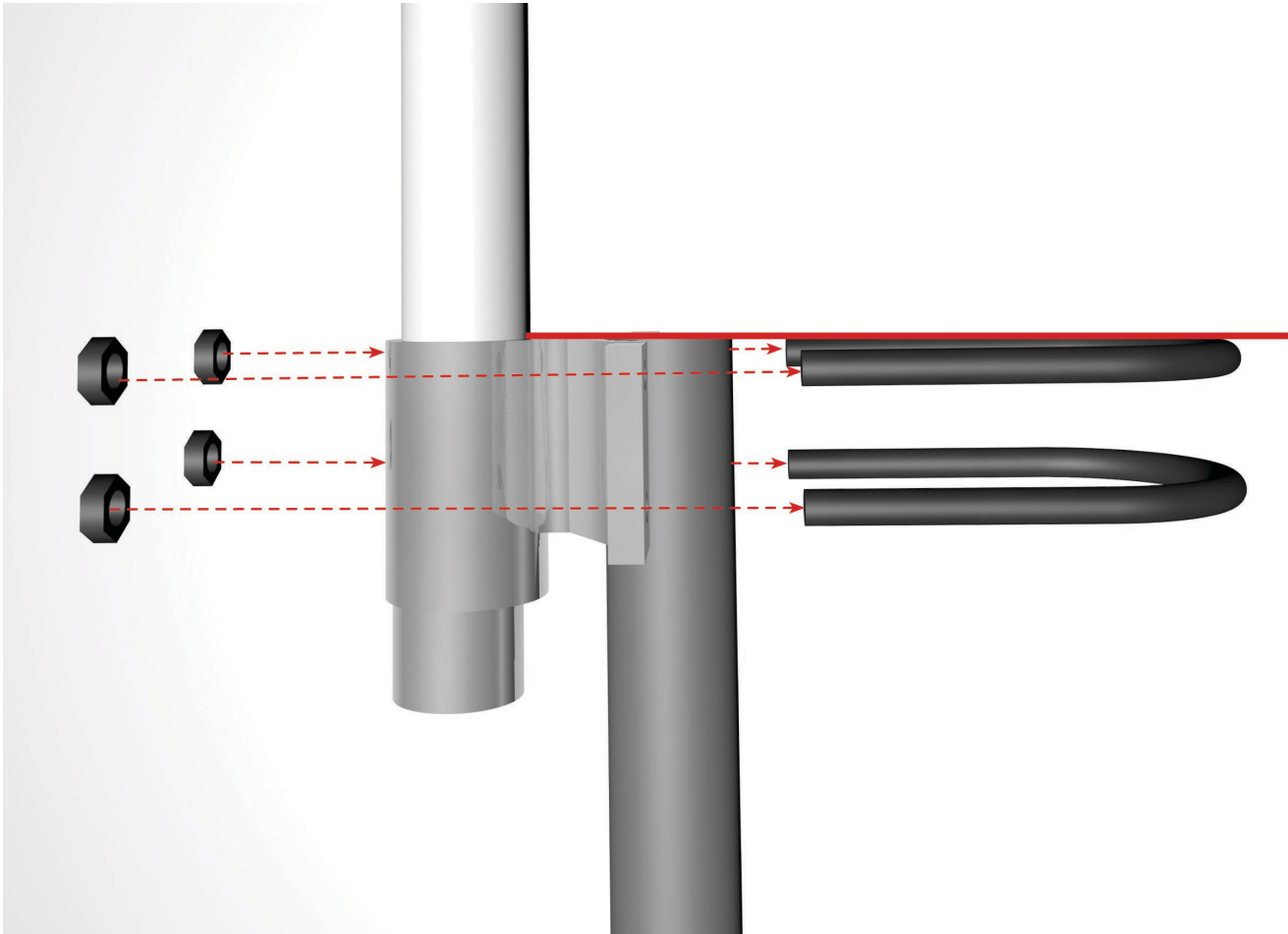
Label information

P/N : OMB.410.B06F21
Frequency : 410~425MHz
Peak Gain : 6dBi

Detail B
Scale: 2:1

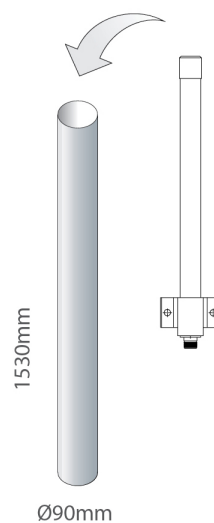
| | Name | Material | Finish | QTY |
|----|------------------|---------------------|-----------|-----|
| 1 | N Type (F) | Brass | Ni Plated | 1 |
| 2 | OMB.410 Antenna | Fiberglass | White | 1 |
| 3 | Cap | ABS | White | 1 |
| 4 | Ferrule | Aluminum Alloy/6063 | Silver | 1 |
| 5 | M6 U-bolt | Iron/Q235 | Silver | 2 |
| 6 | M6 Washer | Iron | Ni Plated | 4 |
| 7 | M6 Spring Washer | Iron | Ni Plated | 4 |
| 8 | M6 Nut | Iron | Ni Plated | 4 |
| 9 | Bracket | Aluminum Alloy/6063 | Silver | 1 |
| 10 | M5*11 Screw | SUS304 | Silver | 2 |
| 11 | Label | UG | Silver | 1 |

6. Installation Instructions

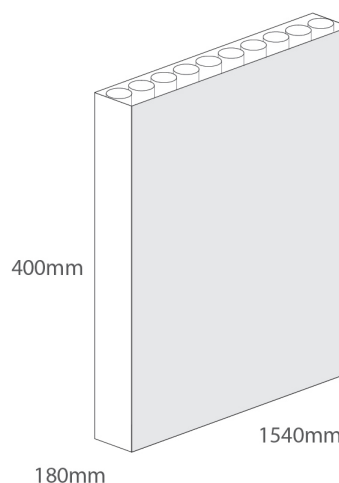


7. Packaging

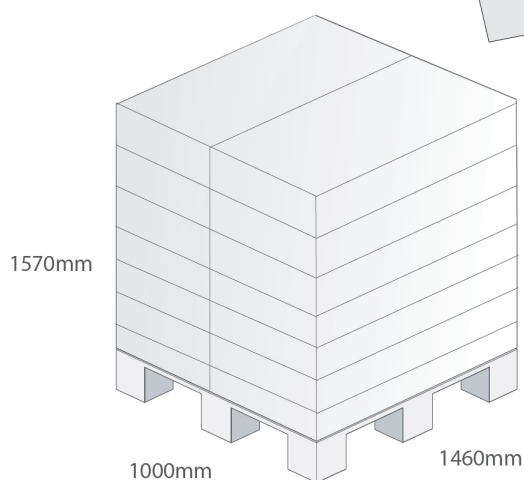
1 OMB.410.B06F21 per tube
 Tube Dimensions - Ø90mm*Height 1530mm
 Total Weight - 1557.5g



10 tubes per carton
 Carton Dimensions - 1540*400*180mm
 Weight - 17.29Kg



Pallet Dimensions 1570mm*1000mm*1460mm
 14 Cartons per Pallet
 2 Cartons per layer
 7 Layers



Changelog for the datasheet

SPE-20-8-066 - OMB.410.B06F21

| Revision: A (Original First Release) | |
|--------------------------------------|-----------------|
| Date: | 2020-12-04 |
| Notes: | Initial Release |
| Author: | Jack Conroy |

Previous Revisions

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