Datasheet

Barracuda

Part No:
OMB.433.B03F21

Description:

Barracuda - 433MHz 3dBi Omni Directional Outdoor Antenna with N Type Female Connector, U-Bolt, 523mm Length

Features:

- Omni-Directional Radiation Pattern
- Collinear
- 3dBi Peak gain, 433 MHz
- Fiberglass Housing
- Robust design for all weather operation
- IP65 Waterproof
- Length: 553mm, Weight: 350g
- N type Female connector
- Wall/Pole Mount bracket included
- RoHS & Reach Compliant

1. Introduction

The OMB.433.B03F21 is a fiberglass Omni-directional outdoor antenna, operating in the 433 MHz ISM band. The antenna is designed for applications such as metering, industrial / environmental monitoring, remote asset monitoring, and mesh network applications.

The OMB.433 operates at 433MHz, one of the most widely used license free ISM bands, with a 3dBi peak gain. The omni-directional antenna radiates uniformly in the azimuth. This collinear design characteristic provides the best performance, giving optimized coverage and therefore longer range in the horizontal plane over 360 degrees, thus minimizing the amount 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 wall or device surface via the N-type connector.

Another larger model, the OMB.433.B06F21 with 6dBi peak gain, also working in the 433MHz ISM band, is also available. Gain and connector customizable, subject to MOQ.

2. Specifications

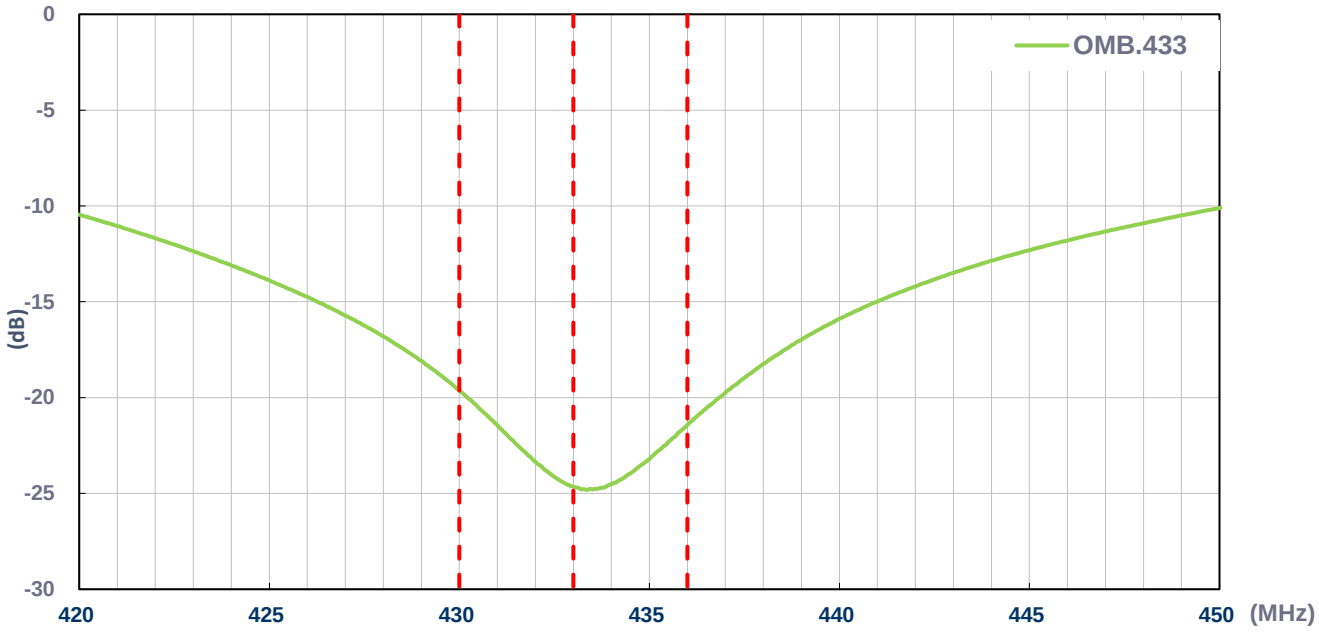
Electrical	
Frequency (MHz)	433
Antenna Type	Collinear Dipole Array
Peak Gain	3 dB
Polarization	Vertical
Impedance	50 ohms
Max Input Power	100 watts
VSWR	1.5:1
Radiation	Omni-Directional
Vertical Beamwidth	60 Deg
Horizontal Beamwidth	360 Deg
Internal Material	Copper
Connector	N Type Female
Mechanical	
Length	553 mm (Max)
Radome Diameter	24mm
Bracket Dimension	70 x 53mm (Max)
Antenna Weight	350g
Mounting Accessories Weight	70g
Application	Indoor/Outdoor
Radome Material	White Fiberglass
Bracket Material	Aluminium
Mount Style	Pole Mount/Wall Mount
U Bolt	Stainless Steel
Wind Resistance	>150mph (>241km/h)
Waterproof	IP65

Environmental	
Storage Temperature	-40°C to +85°C
Operating Temperature	-40°C to +85°C
Operating Humidity	10%~90% non-condensing
Storage Humidity	5%~90% non-condensing

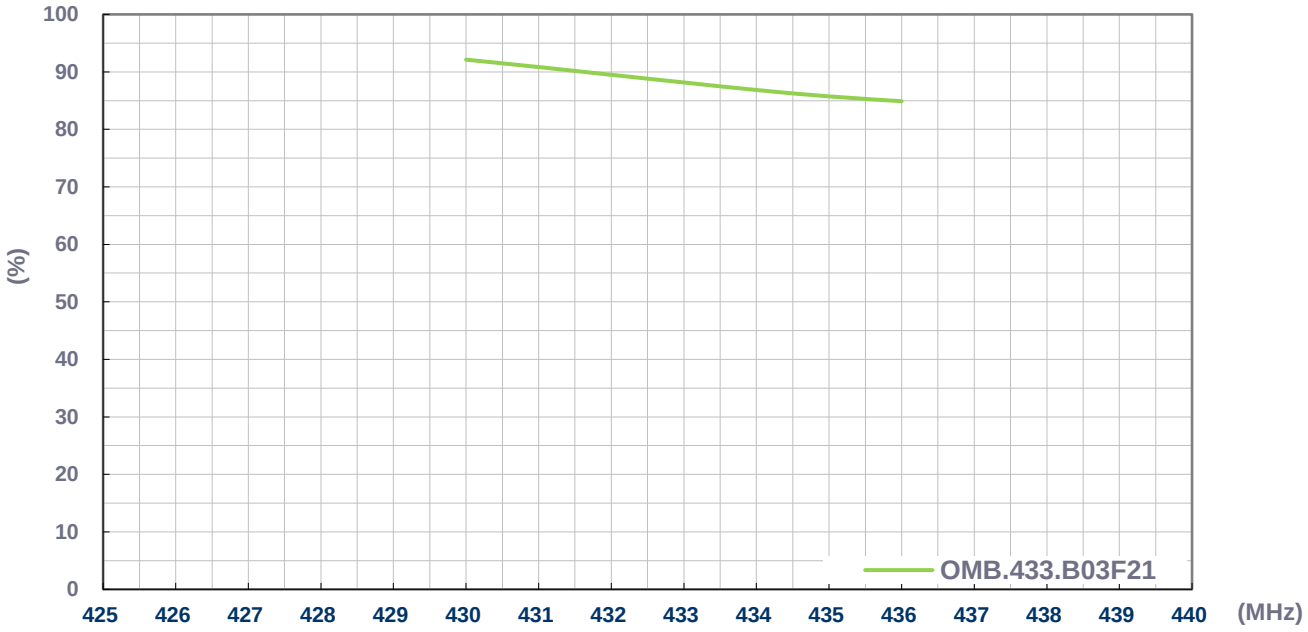
3. Antenna Characteristics

3.1 ISM 433

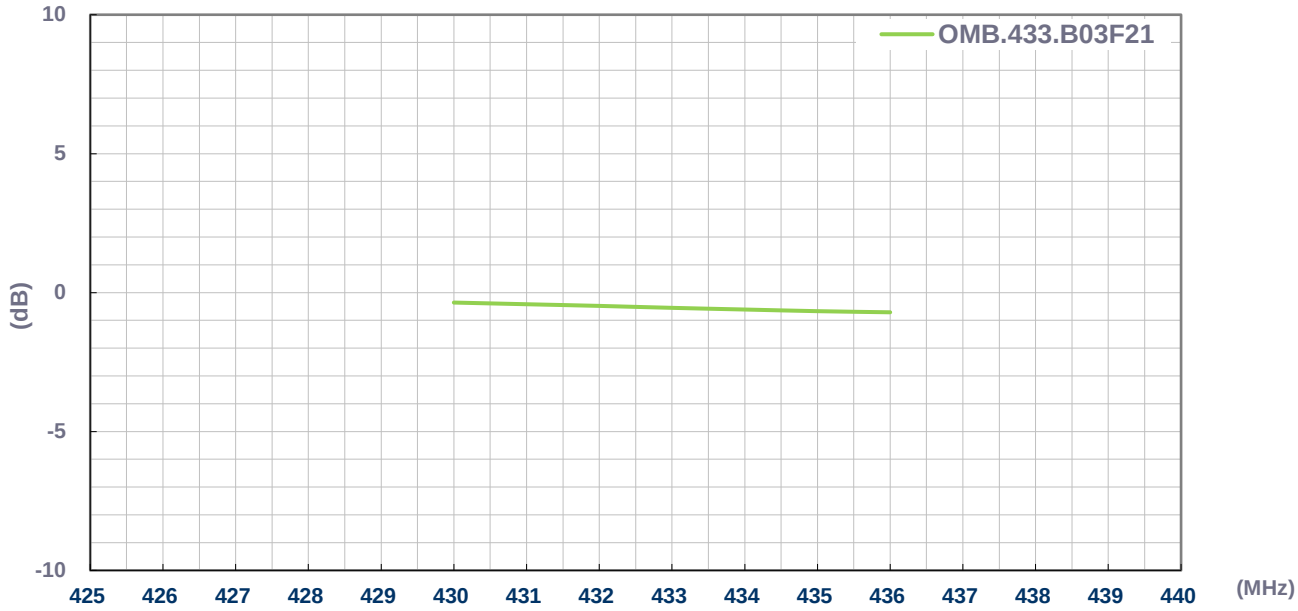
Return Loss



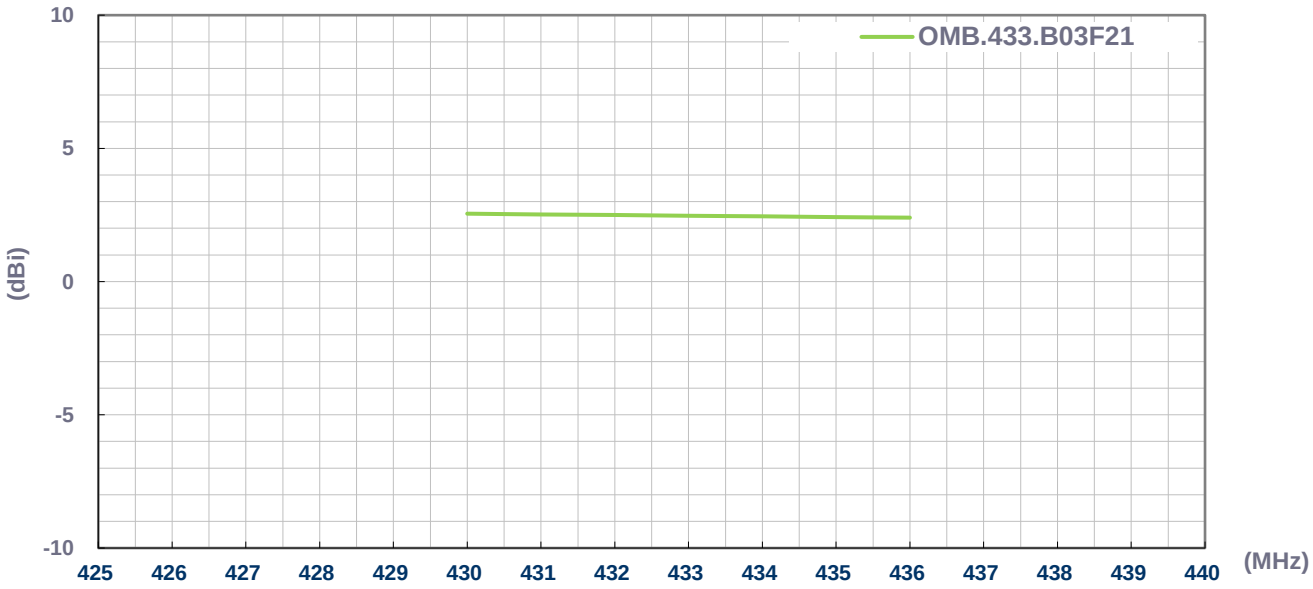
Efficiency



Average Gain

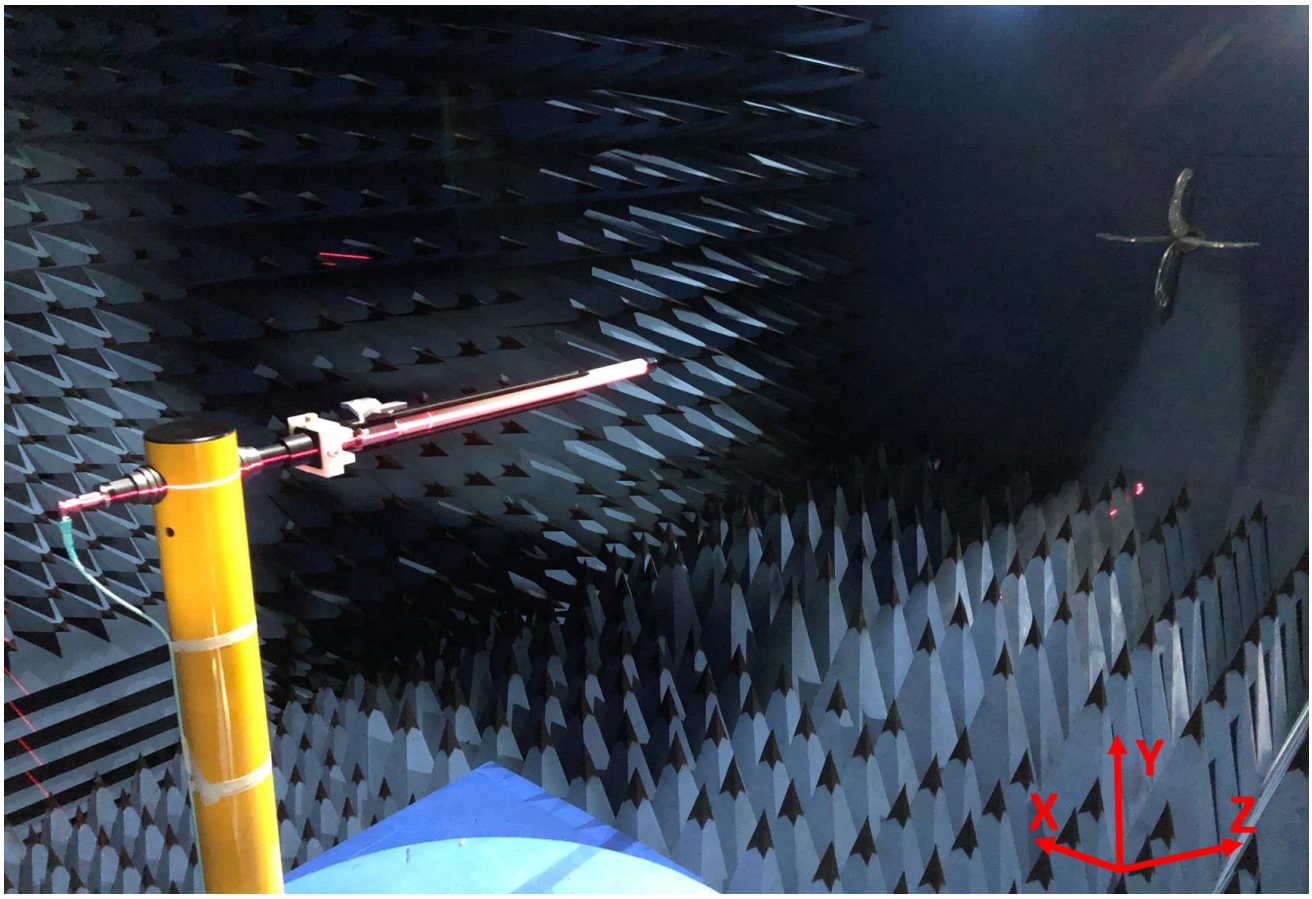


Peak Gain

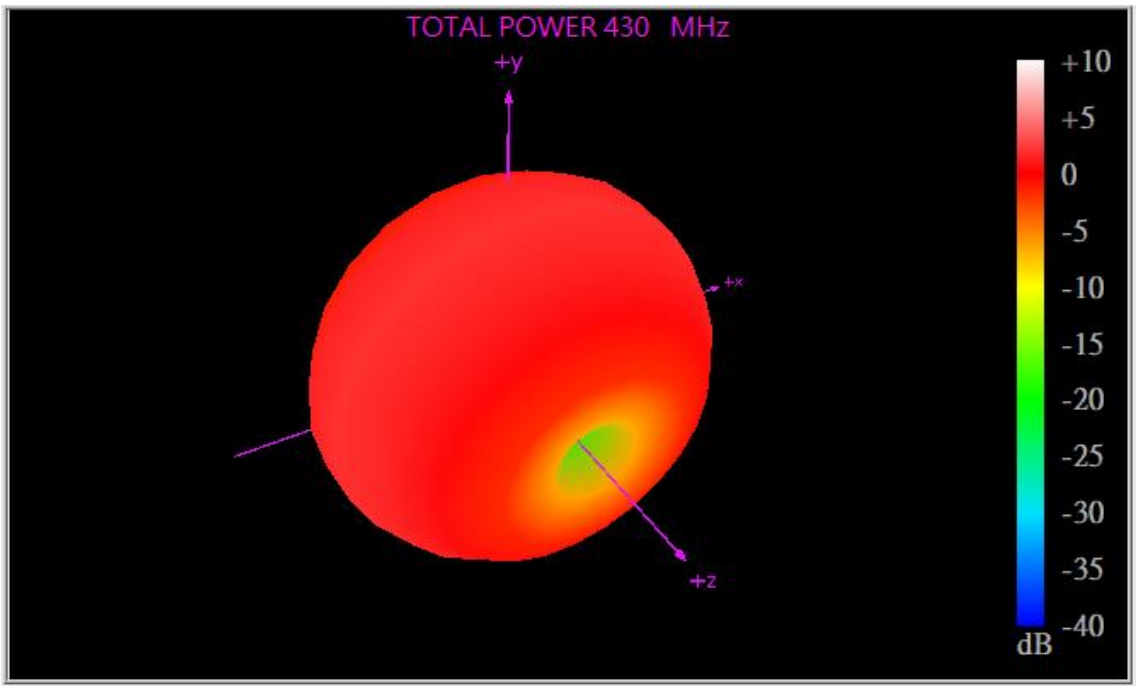


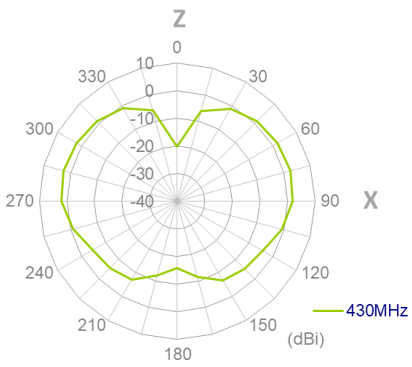
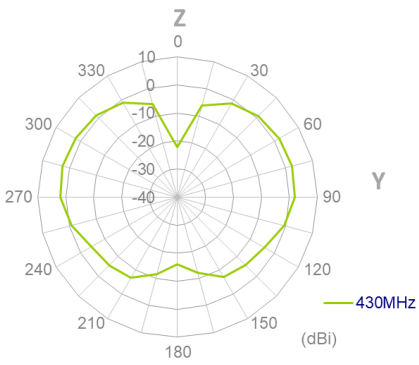
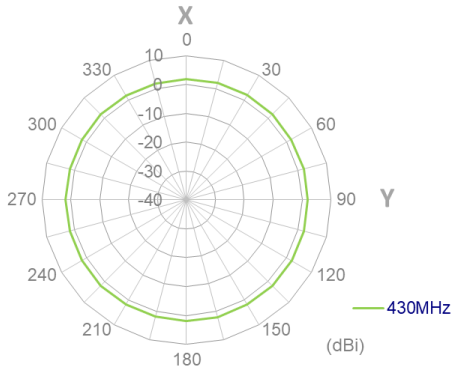
4. Radiation Patterns

4.1 Test Setup

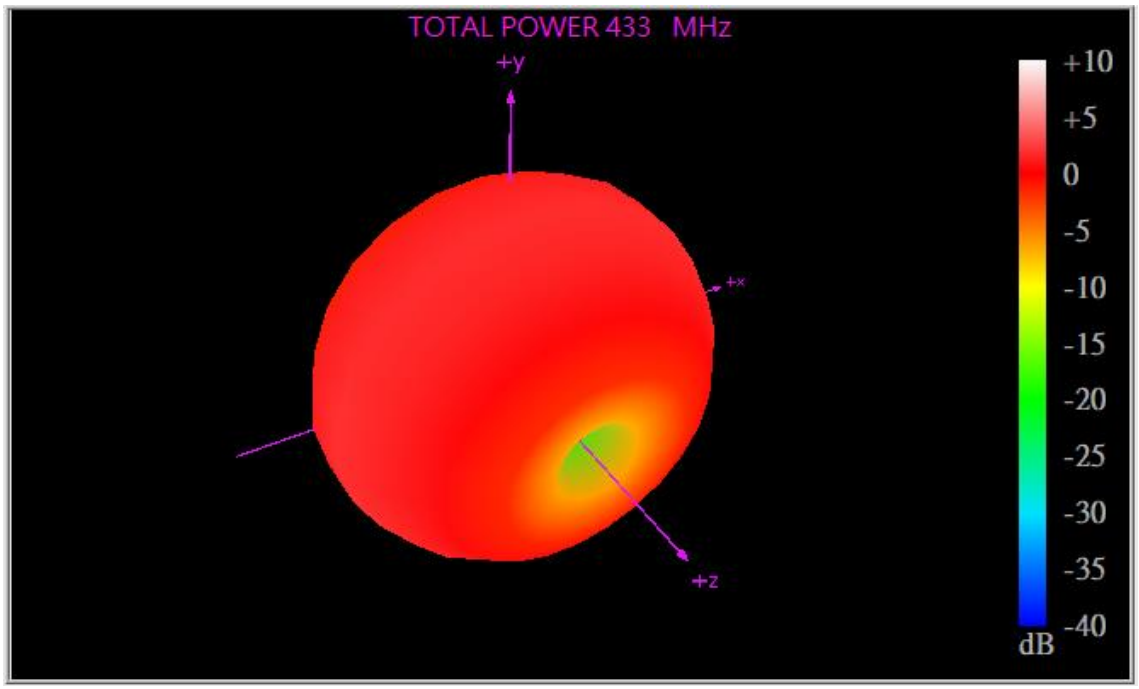


4.2 430MHz 3D and 2D Radiation Patterns

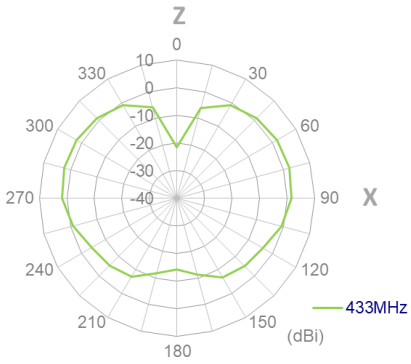


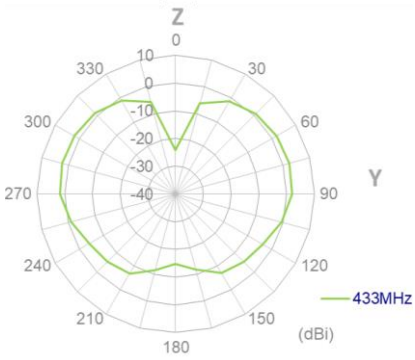
XZ Plane	YZ Plane	XY Plane
		

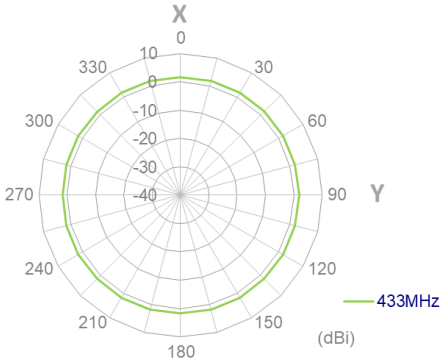
4.3 433 MHz 3D and 2D Radiation Patterns



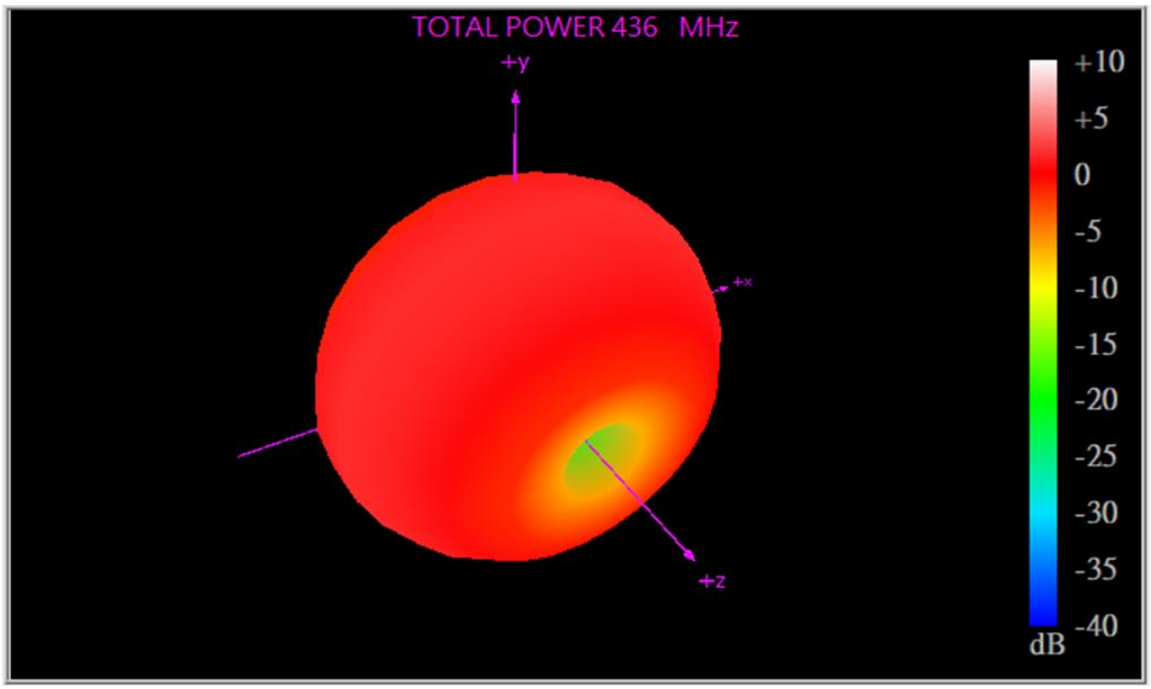
XZ Plane	YZ Plane	XY Plane



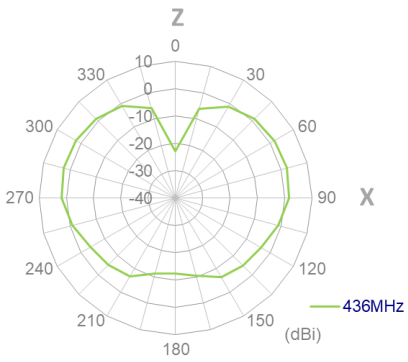


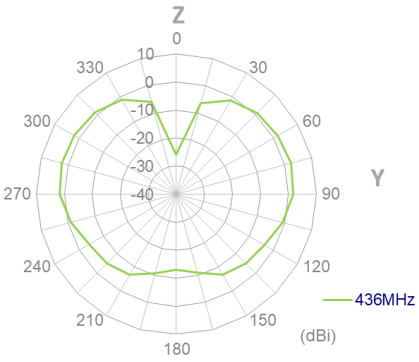


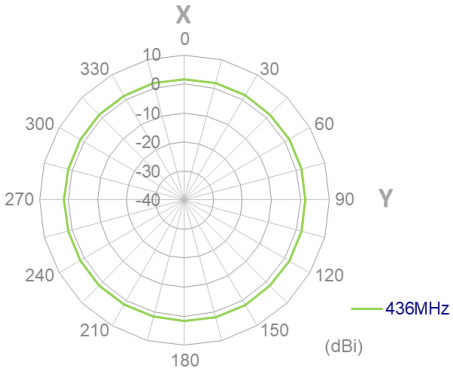
4.4 436 MHz 3D and 2D Radiation Patterns



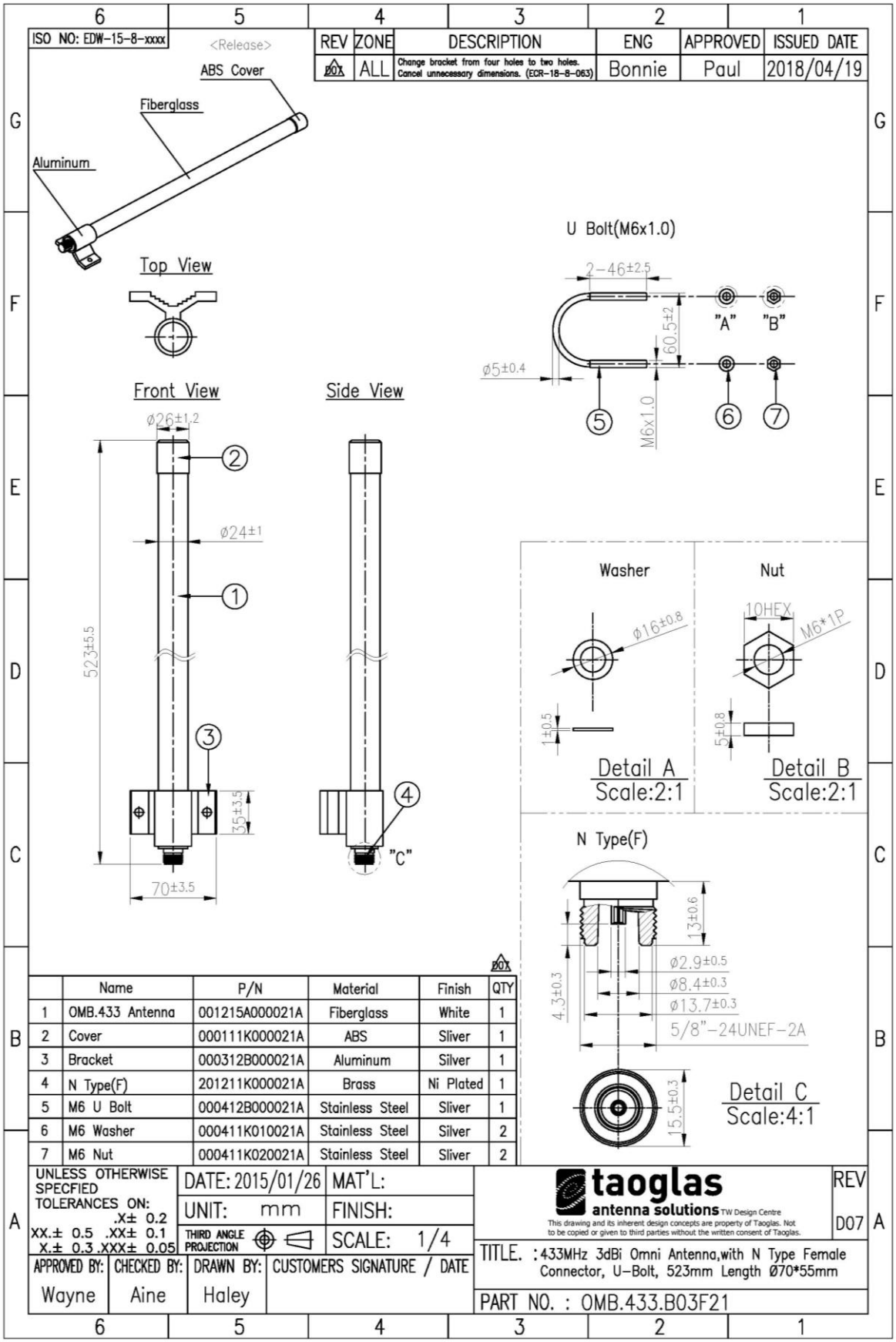
XZ Plane	YZ Plane	XY Plane







5. Mechanical Drawing (Units: mm)

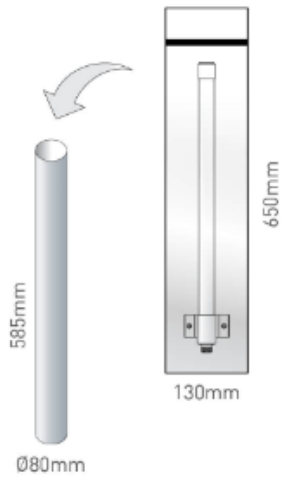


	Name	P/N	Material	Finish	QTY
1	OMB.433 Antenna	001215A000021A	Fiberglass	White	1
2	Cover	000111K000021A	ABS	Sliver	1
3	Bracket	000312B000021A	Aluminum	Silver	1
4	N Type(F)	201211K000021A	Brass	Ni Plated	1
5	M6 U Bolt	000412B000021A	Stainless Steel	Sliver	1
6	M6 Washer	000411K010021A	Stainless Steel	Silver	2
7	M6 Nut	000411K020021A	Stainless Steel	Sliver	2

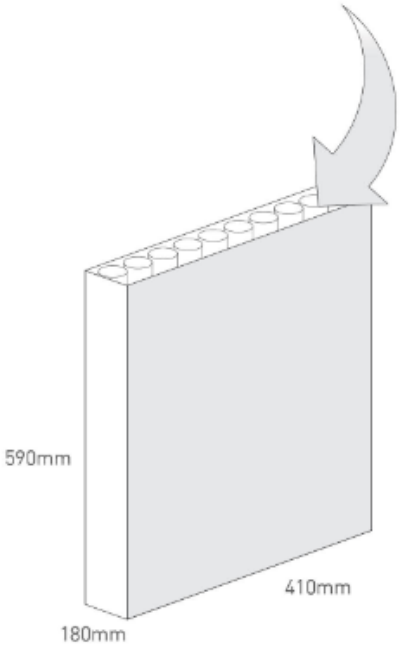
6. Packaging

OMB.433.B03F21

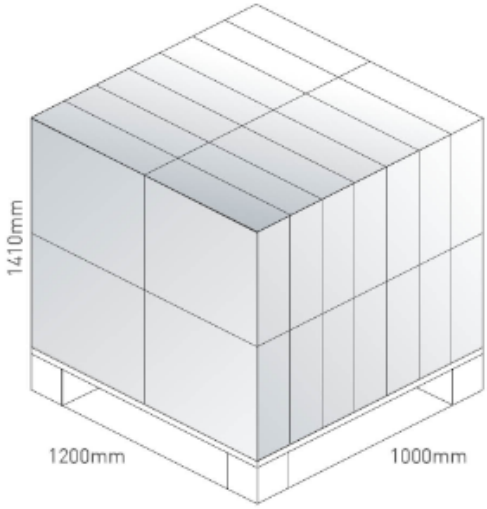
Packaging Specifications



1 OMB.433.B03F21 per PE Bag
Bag Dimensions 130mm*650mm
1 PE Bag per Tube
Tube Dimensions - Ø80mm*Height 585mm
Total Weight - 620g

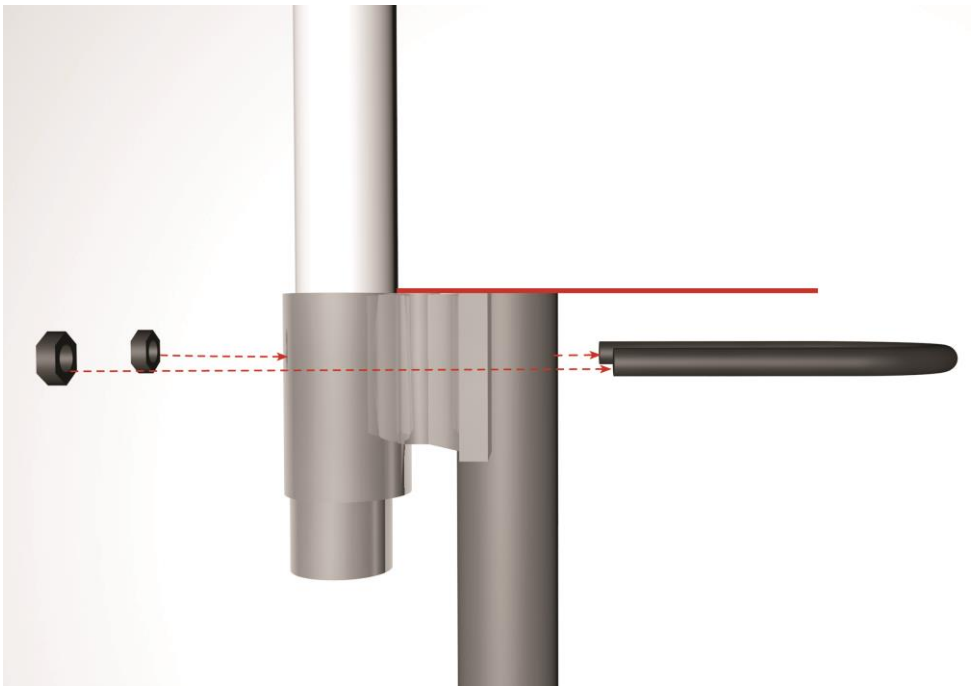


10 tubes per carton
Carton Dimensions - 590*410*180mm
Weight - 7.26Kg



Pallet dimensions 1200*1000*1410mm
28 Cartons per pallet

7. Antenna Installation Guide



Changelog for the datasheet

SPE-16-8-019 – OMB.433.B03F21

Revision: F (Current Version)	
Date:	2019-09-02
Notes:	Updated template, added Return Loss, Efficiency, Average Gain
Author:	Yu Kai Yeung

Previous Revisions

TAOGLAS®

www.taoglas.com