Datasheet

Barracuda

Part No:
OMB.433.B06F21

Description:

Barracuda - 433MHz 6dBi Omni Directional Outdoor Antenna with N Type Female Connector

Features:

Omni-Directional Radiation Pattern
Collinear
6dBi Peak gain, 433 MHz
Fiberglass Housing
Robust design for all weather operation
IP65 waterproof
Length: 1473mm | Weight: 1300g
N type Female connector
Mounting bracket included
RoHS & Reach Compliant

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1. Introduction

The OMB.433.B06F21 is a 6dBi fiberglass omni-directional outdoor antenna, operating in 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 6dBi peak gain. The omni-directional antenna radiates uniformly in the azimuth providing 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 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.

A smaller model, OMB.433.B03F21, with 3dBi peak gain, is also available.

2. Specifications

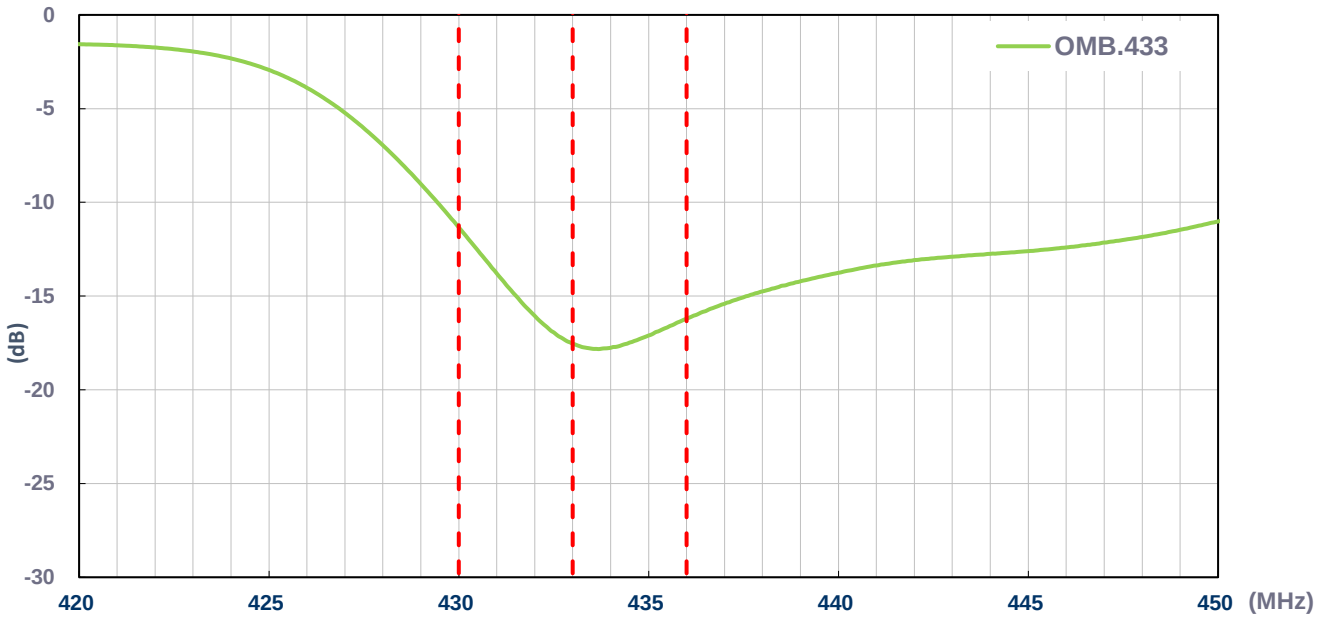
Electrical	
Frequency (MHz)	433
Antenna Type	Collinear Dipole Array
Peak Gain	6 dBi
Polarization	Vertical
Impedance	50 ohms
Max Input Power	100 watts
VSWR	1.5:1
Radiation	Omni-Directional
Vertical Beamwidth	13 Deg
Horizontal Beamwidth	360 Deg
Internal Material	Copper
Connector	N Type Female
Mechanical	
Length	1473 mm(Max)
Radome Diameter	24mm
Bracket Dimension	70 x 73mm(Max)
Antenna Weight	1040g
Mounting Accessories Weight	70g
Application	Indoor/Outdoor
Radome Material	White Fiberglass
Bracket Material	Aluminum
Mount Style	Pole Mount/Wall Mount
Mount Hardware Material	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

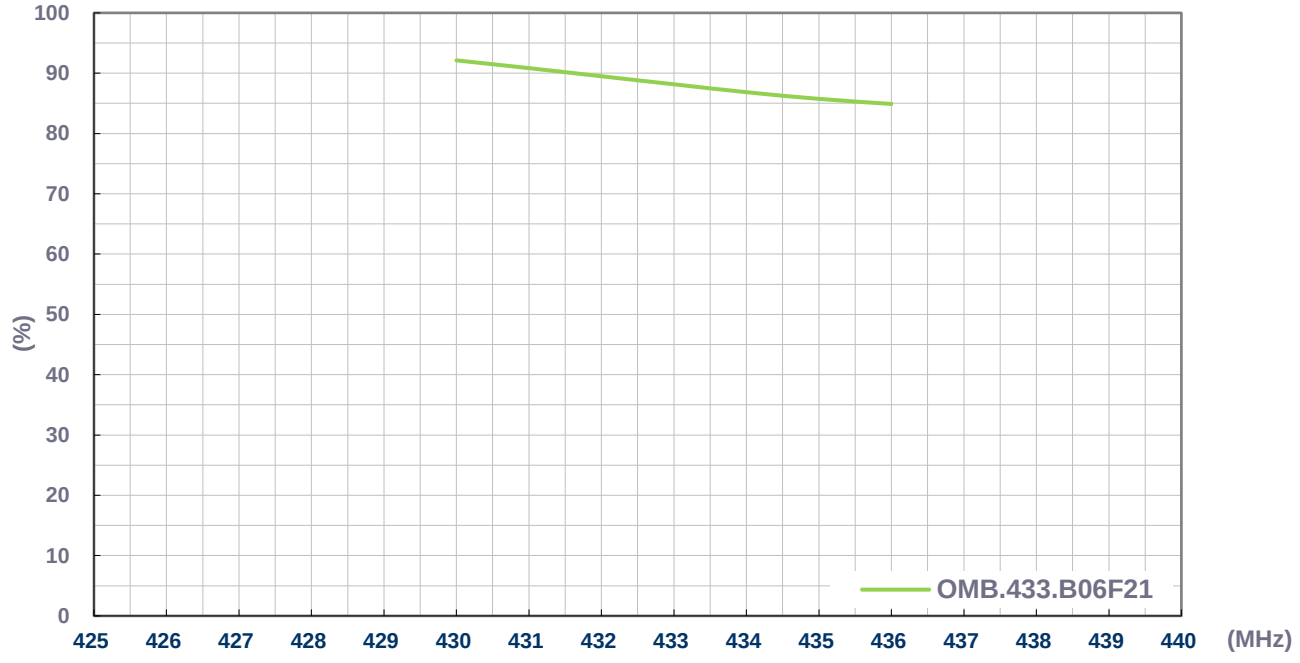
3. Antenna Characteristics

3.1 ISM 433

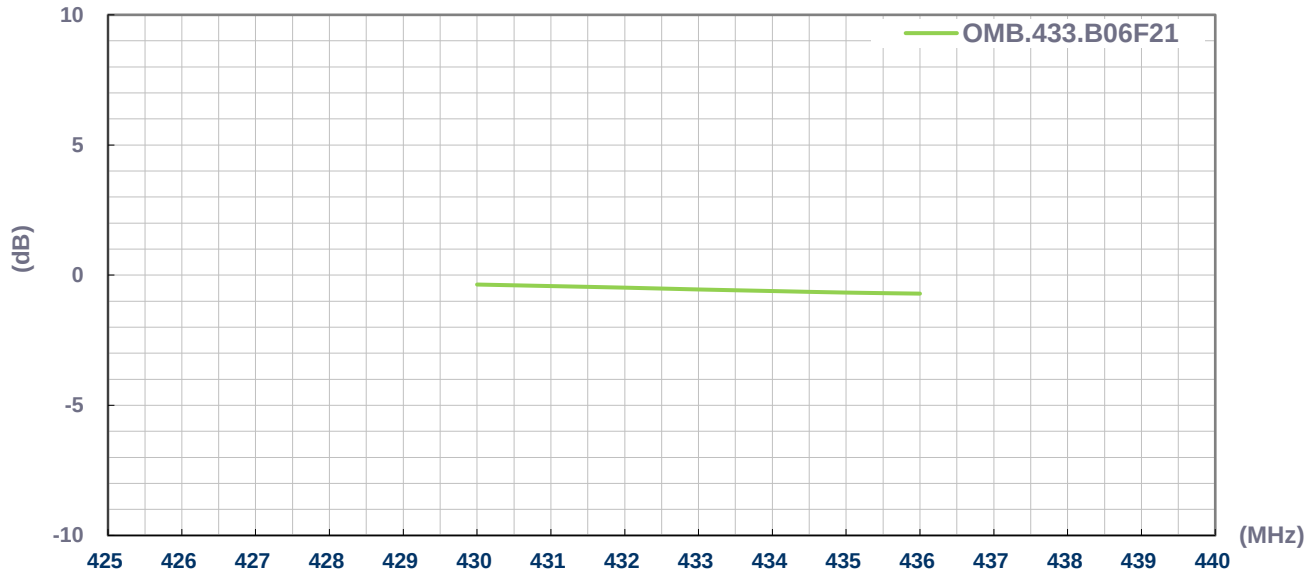
Return Loss



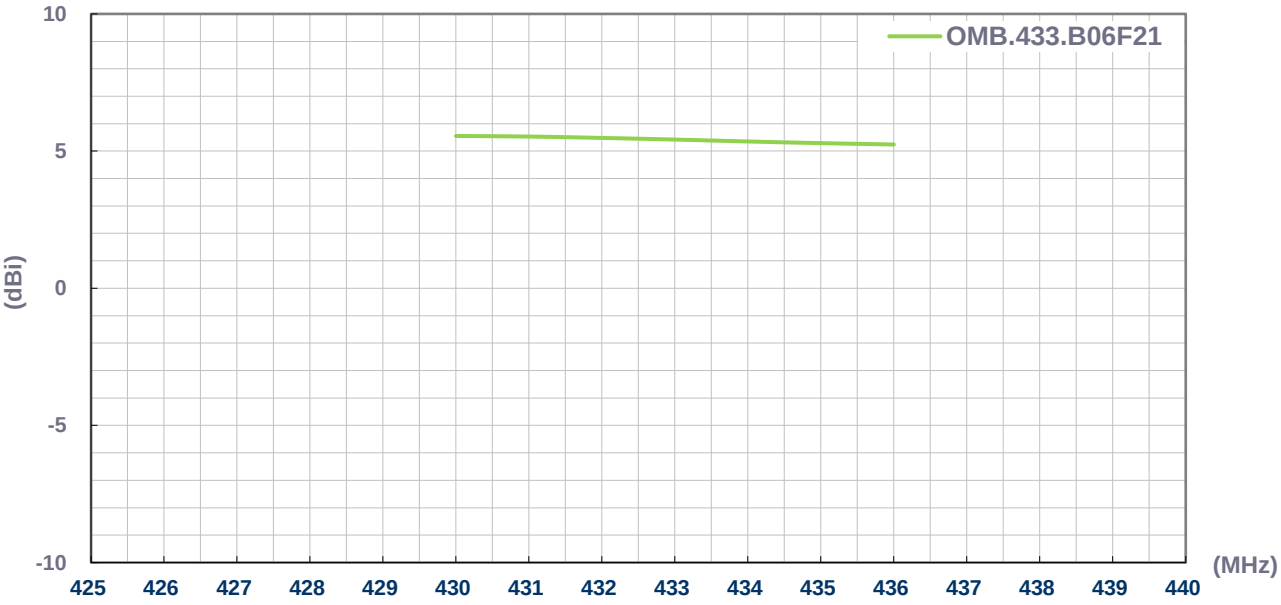
Efficiency



Average Gain

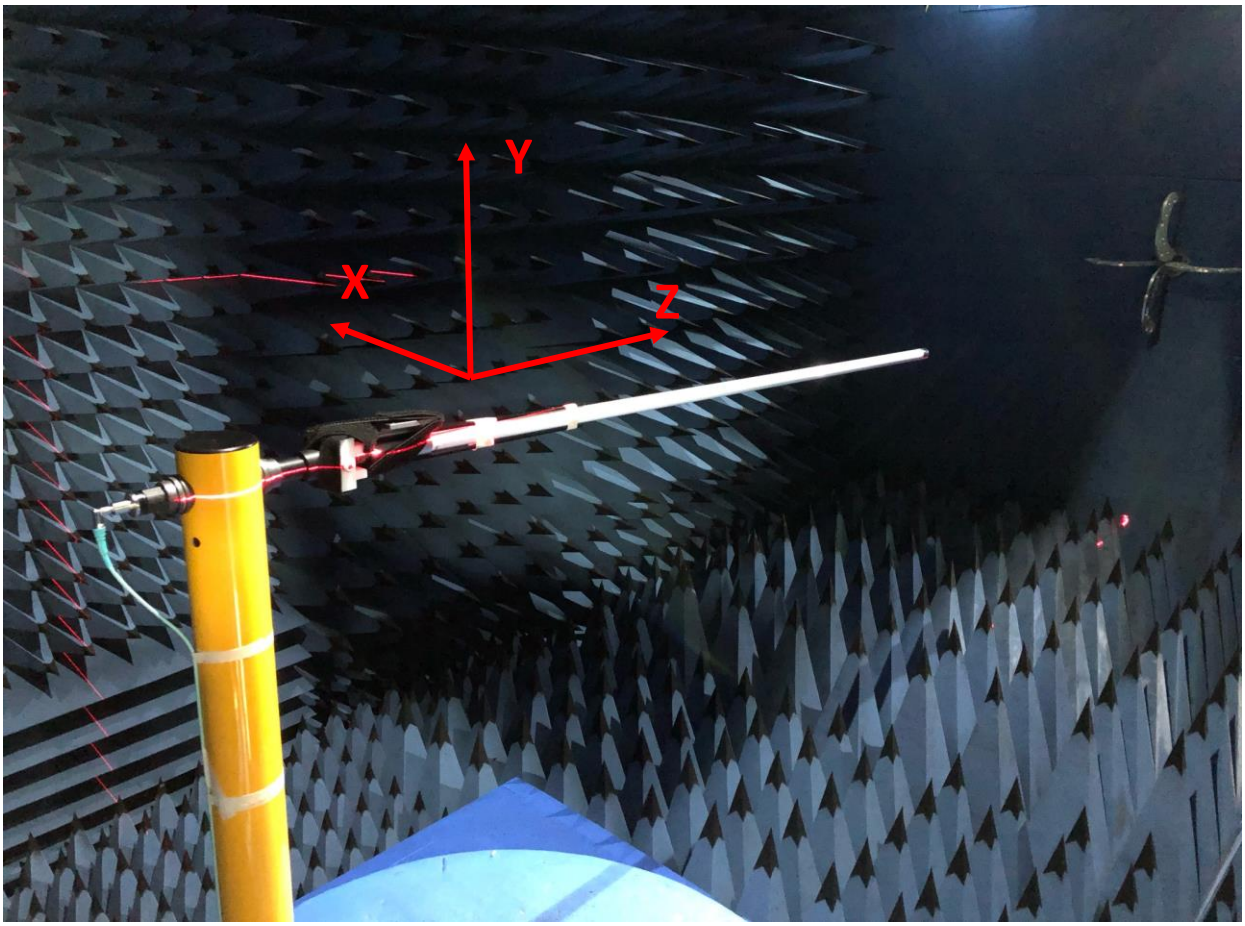


Peak Gain

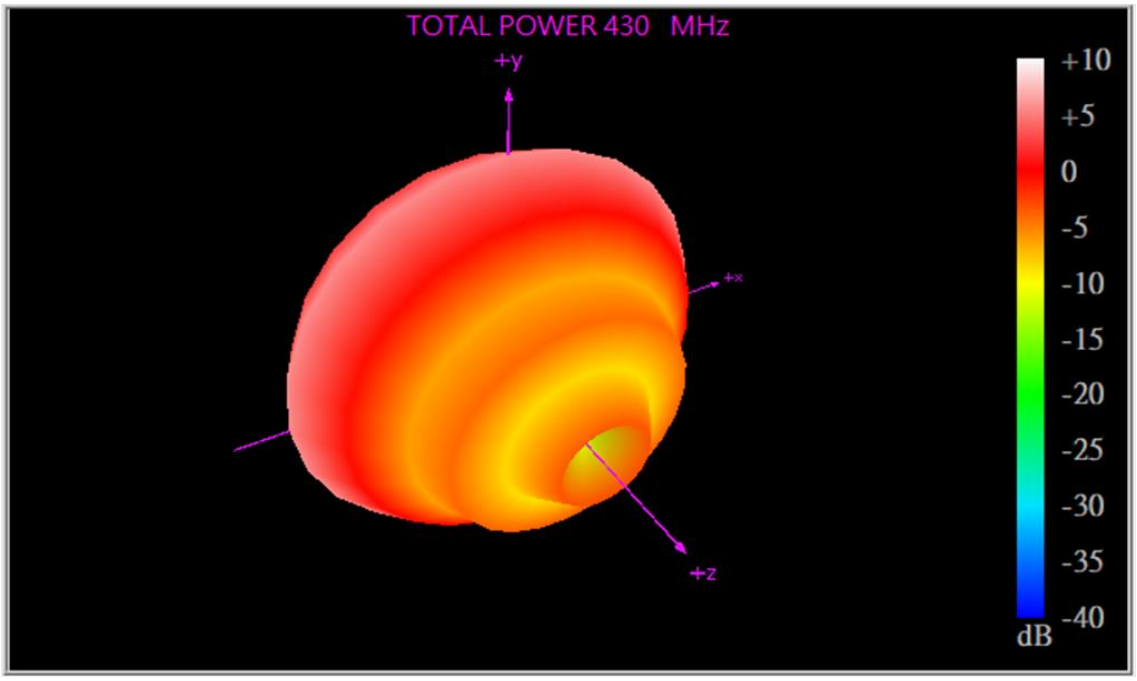


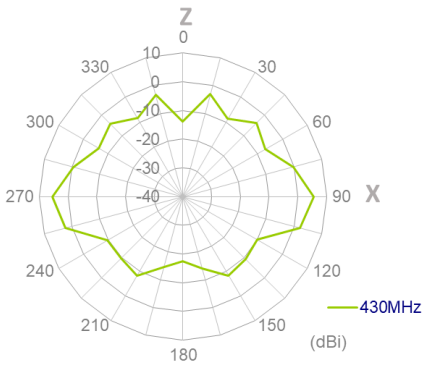
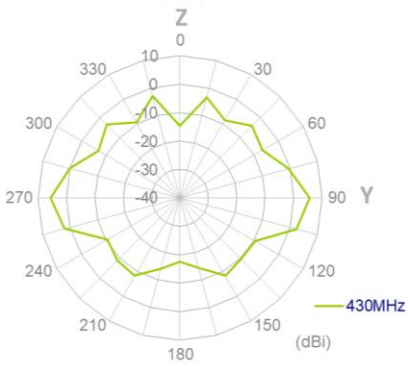
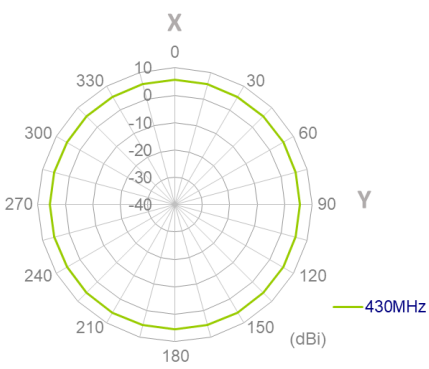
4. Radiation Patterns

4.1 Test Setup

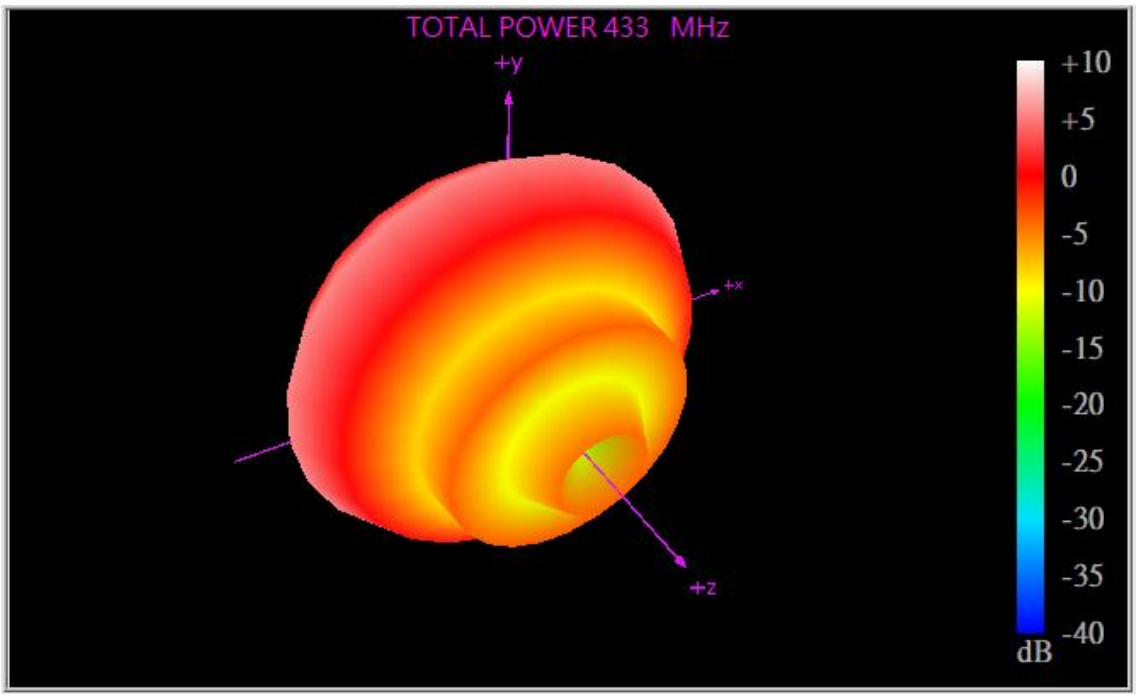


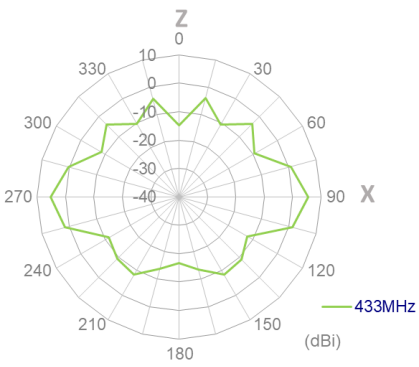
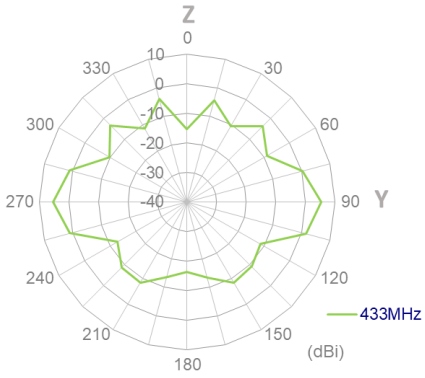
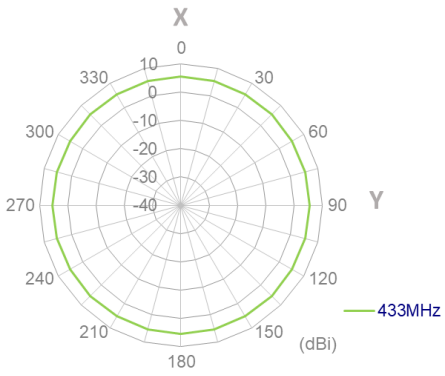
4.2 430MHz 3D and 2D Radiation Patterns



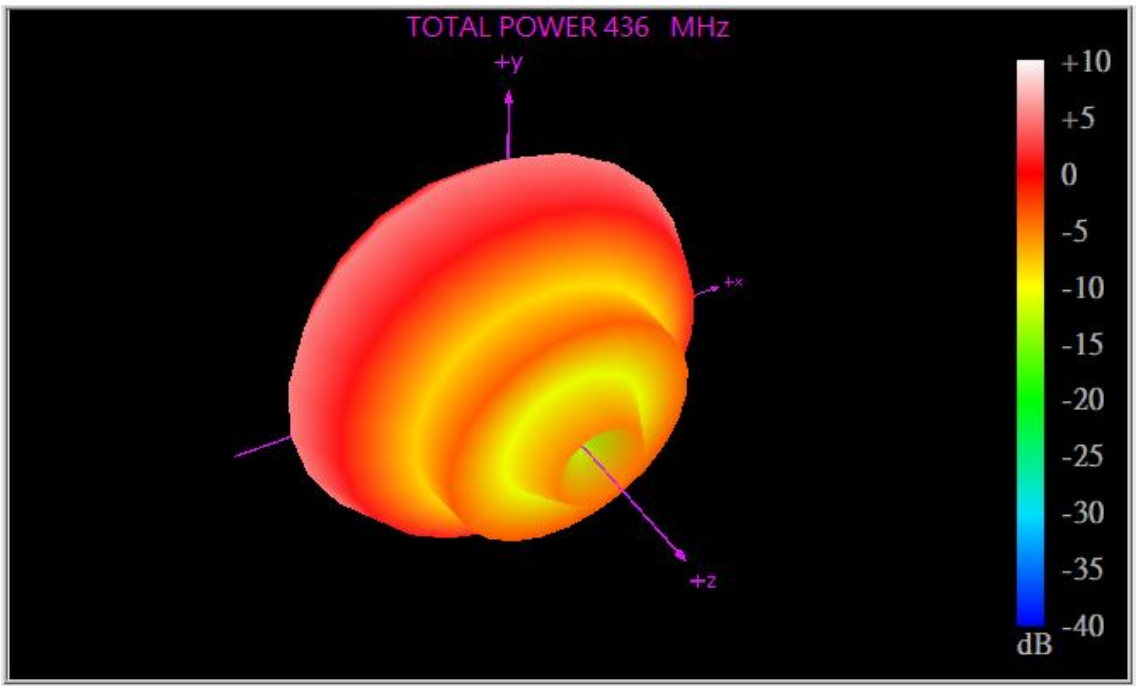
XZ Plane	YZ Plane	XY Plane
		

4.3 433 MHz 3D and 2D Radiation Patterns

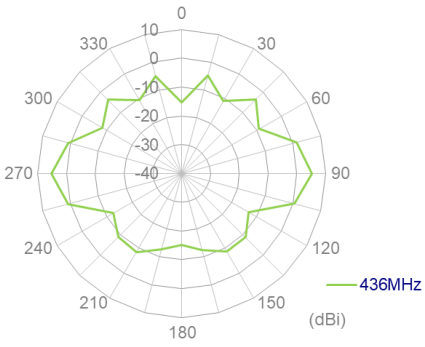


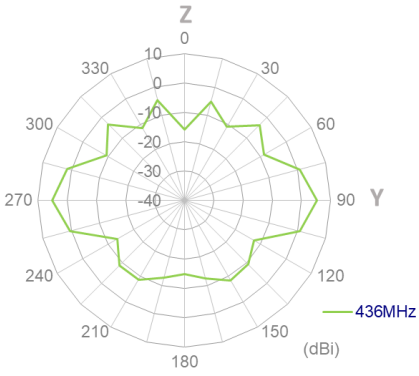
XZ Plane	YZ Plane	XY Plane
		

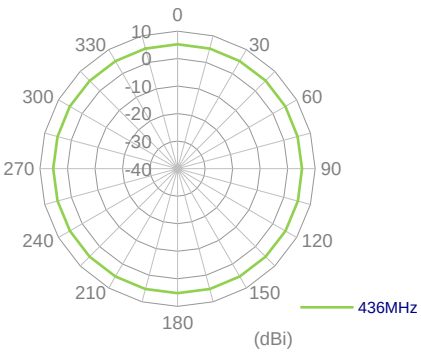
4.4 436 MHz 3D and 2D Radiation Patterns



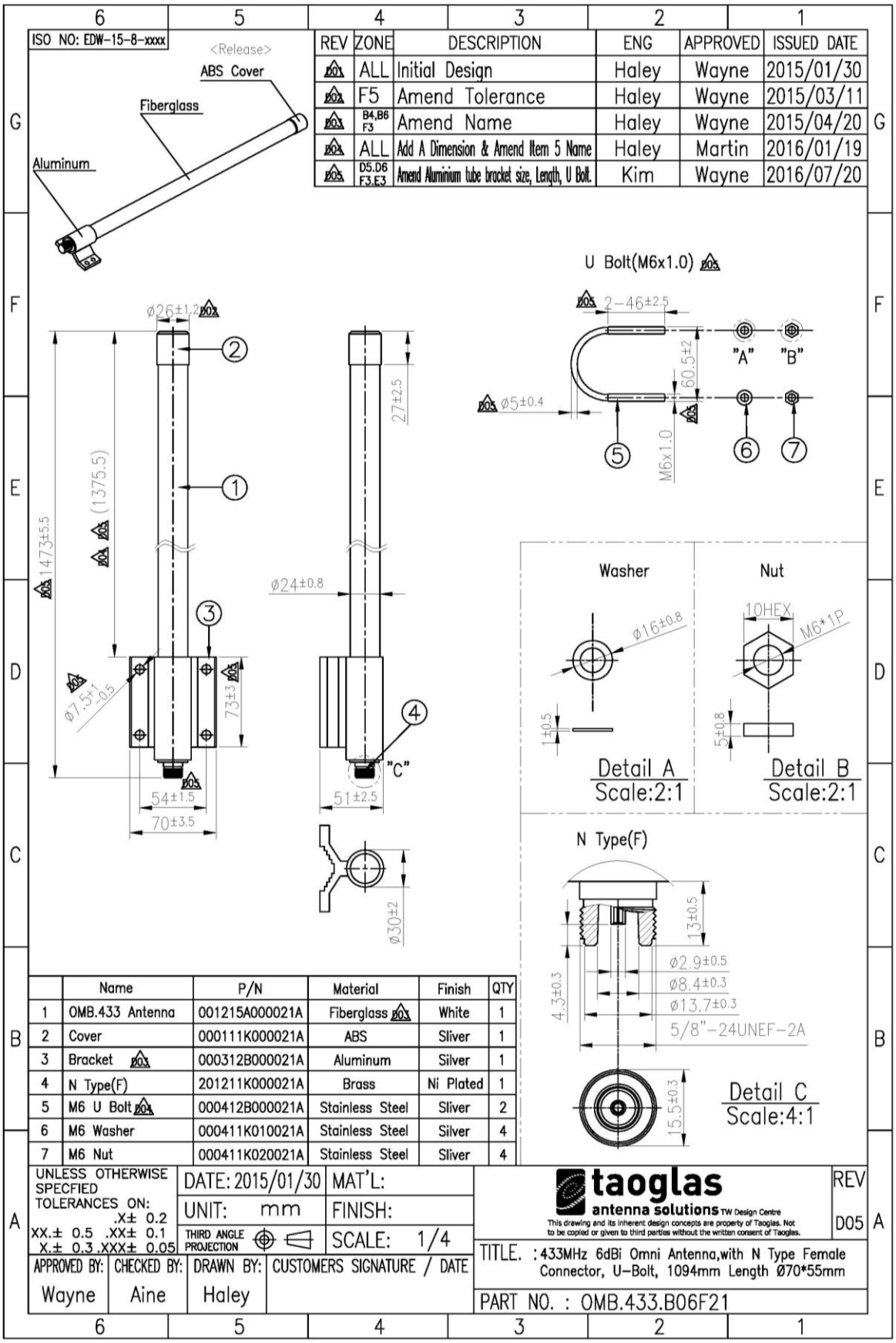
XZ Plane	YZ Plane	XY Plane







5. Mechanical Drawing (Units: mm)



REV	ZONE	DESCRIPTION	ENG	APPROVED	ISSUED DATE
D01	ALL	Initial Design	Haley	Wayne	2015/01/30
D02	F5	Amend Tolerance	Haley	Wayne	2015/03/11
D03	B4,B6 F3	Amend Name	Haley	Wayne	2015/04/20
D04	ALL	Add A Dimension & Amend Item 5 Name	Haley	Martin	2016/01/19
D05	D5.D6 F3.E3	Amend Aluminium tube bracket size, Length, U Bolt.	Kim	Wayne	2016/07/20

	Name	P/N	Material	Finish	QTY
1	OMB.433 Antenna	001215A000021A	Fiberglass D03	White	1
2	Cover	000111K000021A	ABS	Sliver	1
3	Bracket D03	000312B000021A	Aluminum	Silver	1
4	N Type(F)	201211K000021A	Brass	Ni Plated	1
5	M6 U Bolt D04	000412B000021A	Stainless Steel	Sliver	2
6	M6 Washer	000411K010021A	Stainless Steel	Silver	4
7	M6 Nut	000411K020021A	Stainless Steel	Sliver	4

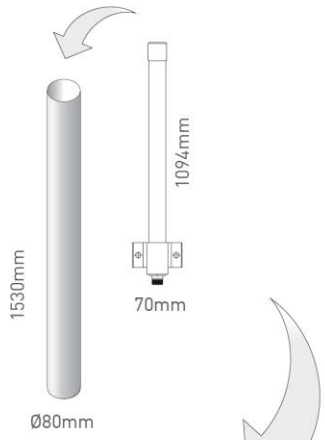
UNLESS OTHERWISE SPECFIED TOLERANCES ON: .X± 0.2 XX.± 0.5 .XX± 0.1 X.± 0.3 .XXX± 0.05	DATE: 2015/01/30	MAT'L:
	UNIT: mm	FINISH:
	THIRD ANGLE PROJECTION	SCALE: 1/4

APPROVED BY:	CHECKED BY:	DRAWN BY:	CUSTOMERS SIGNATURE / DATE
Wayne	Aine	Haley	

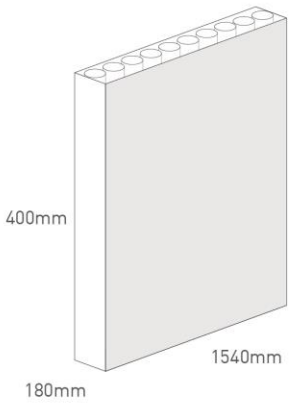
REV D05

6. Packaging

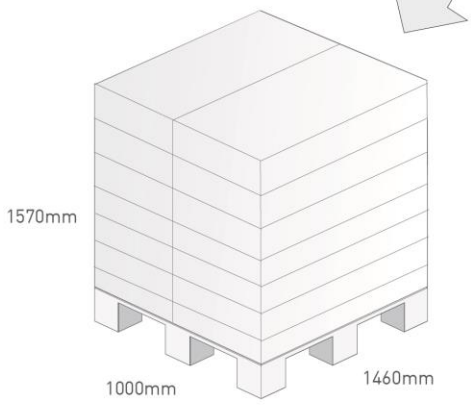
1 OMB.433.B06F21 per tube
Tube Dimensions - Ø80mm*Height 1530mm
Total Weight - 1557.5g



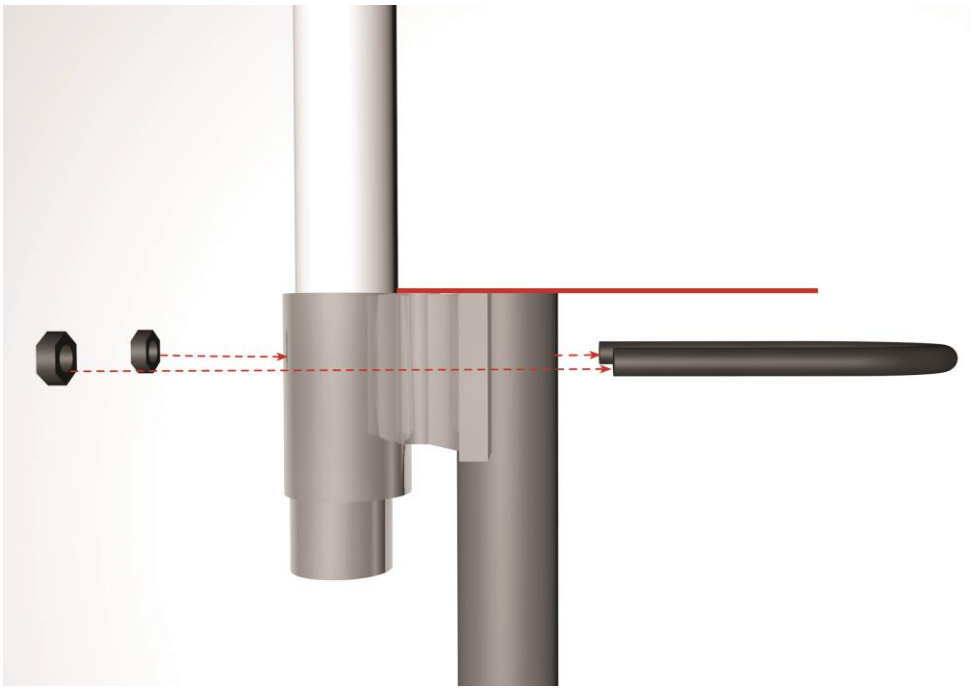
10 tubes per carton
Carton Dimensions - 1540*400*180mm
Weight - 17.29Kg



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



7. Antenna Installation Guide



Changelog for the datasheet

SPE-16-8-020 – OMB.433.B06F21

Revision: E (Current Version)	
Date:	2019-08-29
Notes:	Updated template, added Return Loss, Efficiency, Average Gain
Author:	Yu Kai Yeung

Previous Revisions

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