SPECIFICATION

4.4-5.0 GHz Public Safety Band Dipole Antenna

Part No.	:	**OMB.445.05F21**
Product Name	:	Barracuda - Omni-Directional Indoor/Outdoor Antenna 4.4GHz-5GHz Public Safety Band 7dBi
Feature	:	Suitable to use in robust outdoor environment **RoHS compliant**



1. Introduction

The 4.4-5.0GHz Barracuda ISM Indoor/Outdoor antenna is designed to provide long distance coverage for Public Safety applications. Omni-directional 7dBi gain ensures constant reception and transmission. The UV resistant coating with fiberglass housing makes this antenna suitable to be mounted in robust outdoor environments.

Many module manufacturers specify peak gain limits for any antennas that are to be connected to that module. Those peak gain limits are based on free-space conditions. In practice, the peak gain of an antenna tested in free-space can degrade by at least 1 or 2dBi when put inside a device. So ideally you should go for a slightly higher peak gain antenna than mentioned on the module specification to compensate for this effect, giving you better performance.

Upon testing of any of our antennas with your device and a selection of appropriate layout, integration technique, or cable, Taoglas can make sure any of our antennas' peak gain will be below the peak gain limits. Taoglas can then issue a specification and/or report for the selected antenna in your device that will clearly show it complying with the peak gain limits, so you can be assured you are meeting regulatory requirements for that module.

For example, a module manufacturer may state that the antenna must have less than 2dBi peak gain, but you don't need to select an embedded antenna that has a peak gain of less than 2dBi in free-space. This will give you a less optimized solution. It is better to go for a slightly higher free-space peak gain of 3dBi or more if available. Once that antenna gets integrated into your device, performance will degrade below this 2dBi peak gain due to the effects of GND

plane, surrounding components, and device housing. If you want to be absolutely sure, contact Taoglas and we will test. Choosing a Taoglas antenna with a higher peak gain than what is specified by the module manufacturer and enlisting our help will ensure you are getting the best performance possible without exceeding the peak gain limits.

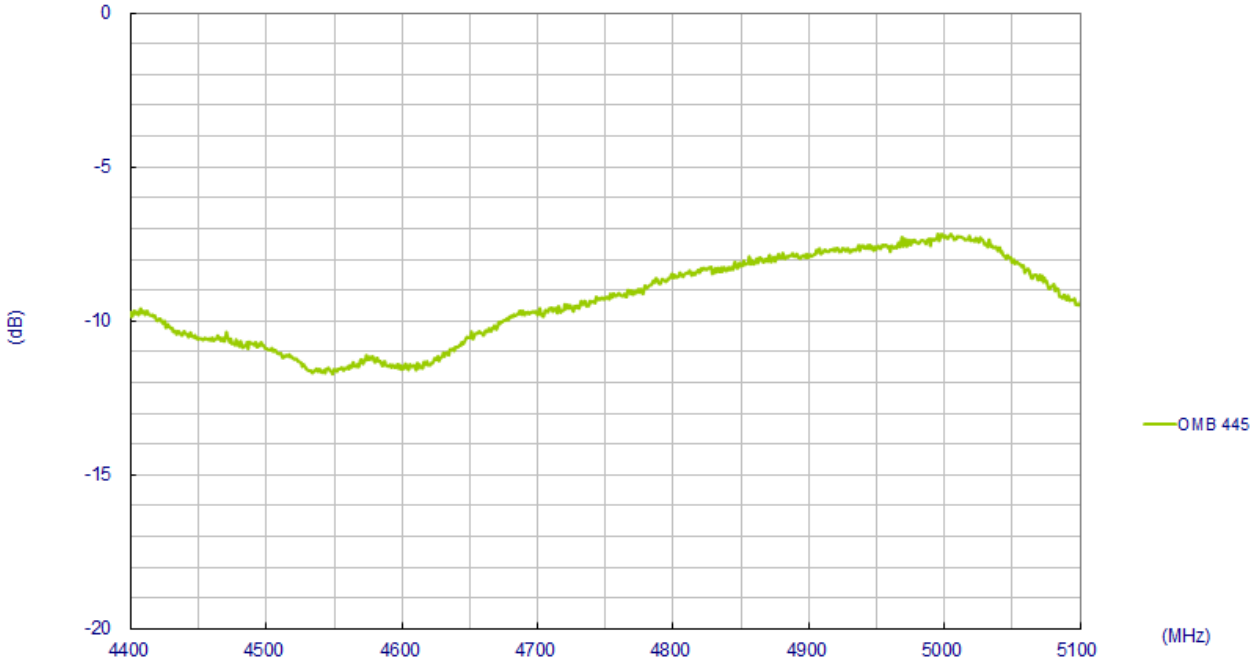
A bracket suitable for pole-mounting and wall-mounting is included.

2. Specification

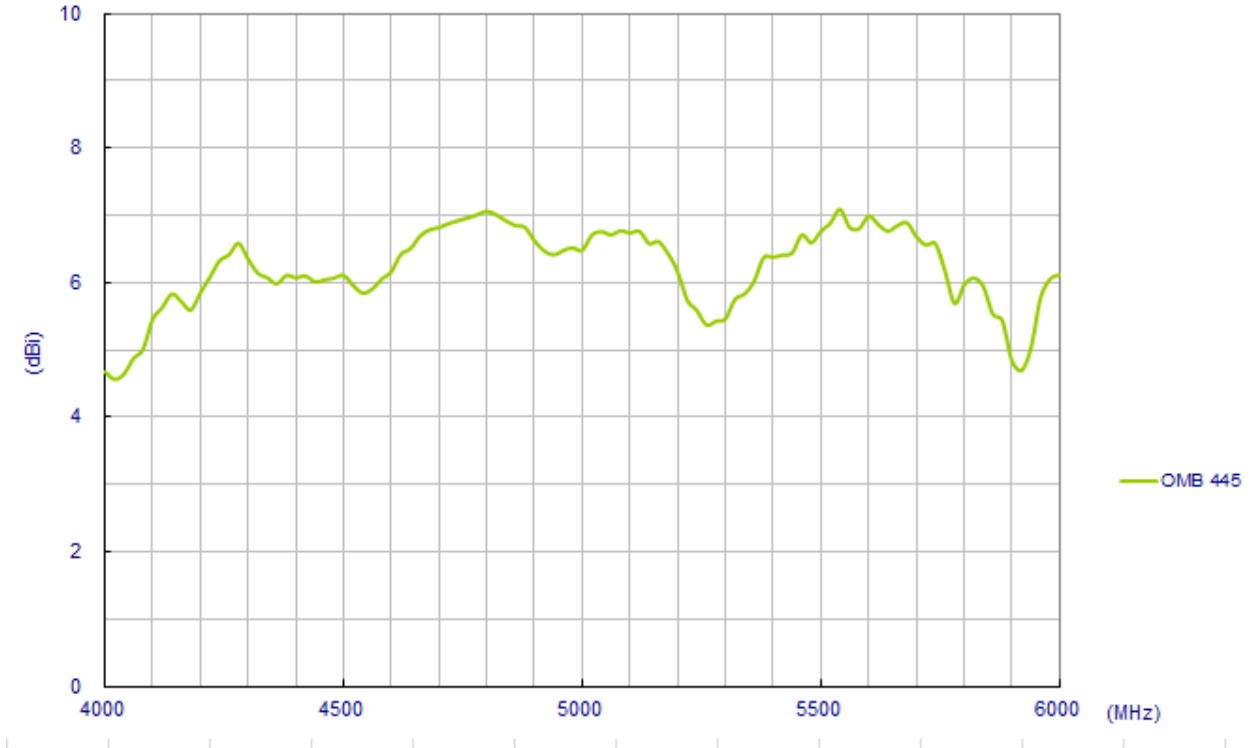
ELECTRICAL	
Standard	Public Safety
Band	4.4~5.0 GHz
Antenna Type	Collinear
Gain(max)	7dBi
Polarization	Vertical
Impedance	50 ohms
Max Input Power	100 watts
VSWR	<1.5:1
Radiation	Omni-Directional
Vertical Beam-width	25 Deg
Horizontal Beam-width	360 Deg
Antenna Design	Dipole Array
Internal Material	Copper
Connector	N Type Female
MECHANICAL	
Length	270mm(Max)
Base Diameter	70*50mm(Max)
Antenna Weight(G.W)	300g
Mounting Accessories(G.W)	70g
Application	Indoor/Outdoor
Radome Material	White Fiberglass
Base Material	Aluminum
Mount Style	Pole Mount/Wall Mount
Mounting	Stainless Steel
Wind Resistance	>150mph(>241km/h)
Housing	Fiberglass
ENVIRONMENTAL	
Storage Temperature	-20°C to +80°C
Operating Temperature	-20°C to +60°C
Operating Humidity	10%~80% non-condensing
Storage Humidity	5%~80% non-condensing

3. Antenna Characteristics

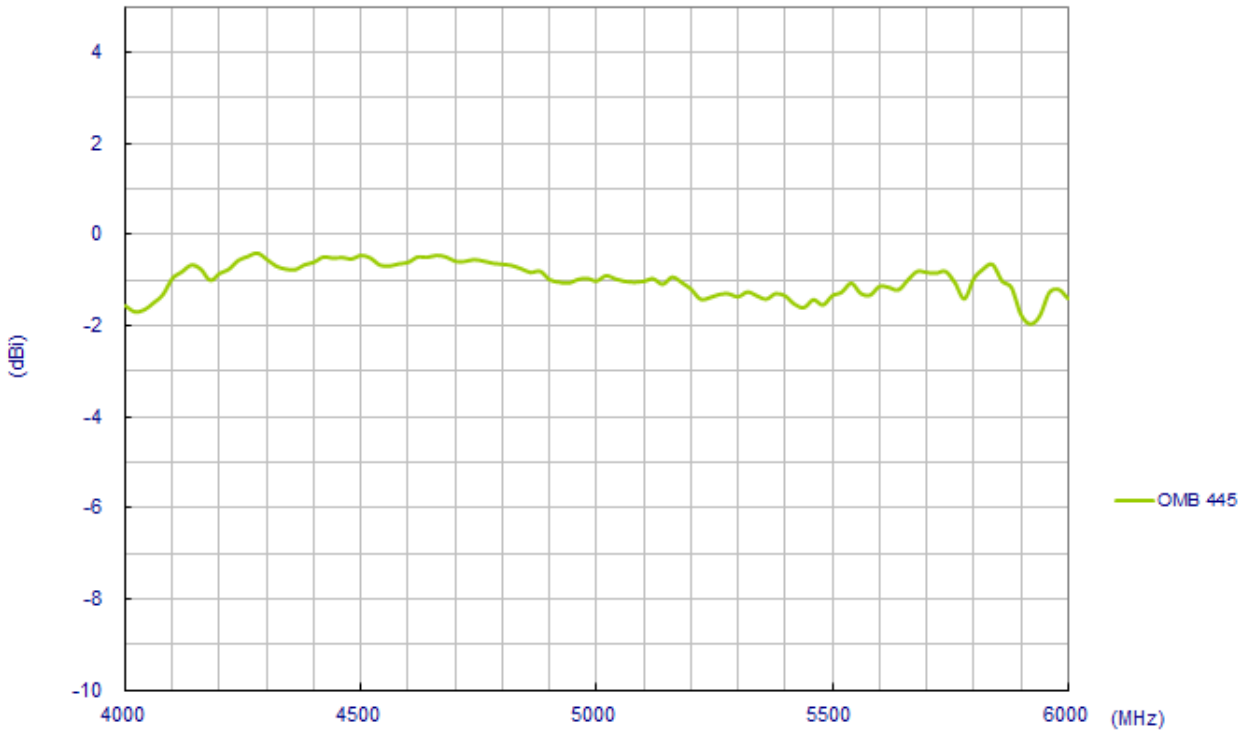
3.1 Return Loss



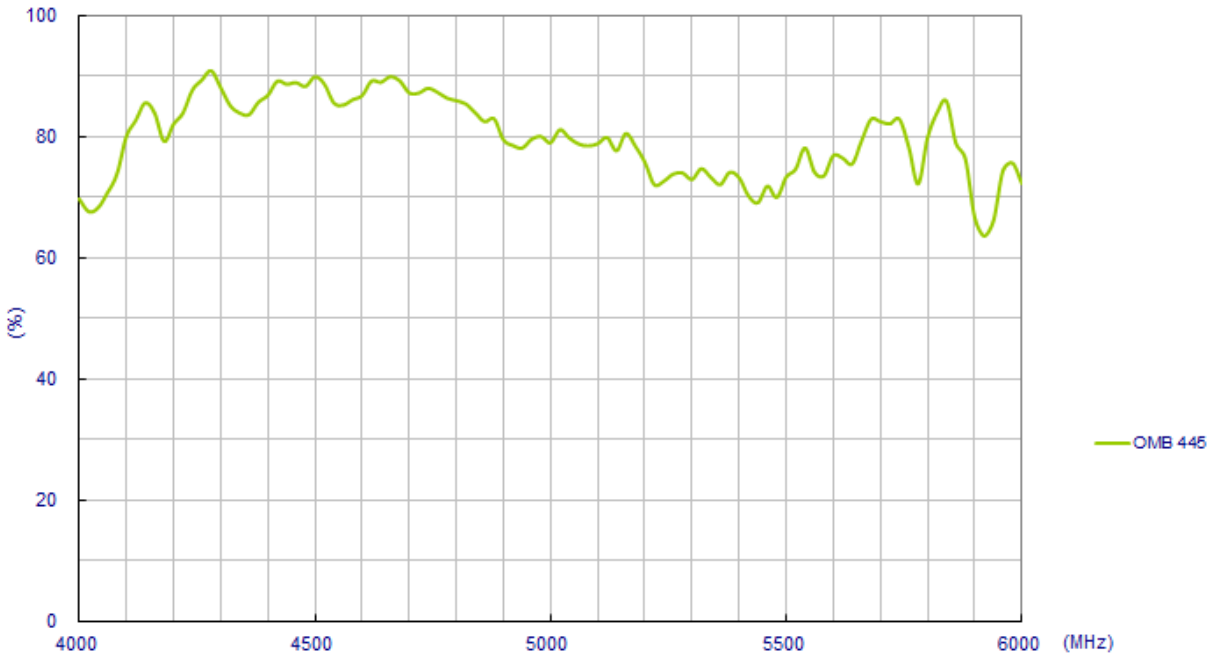
3.2 Maximum Gain



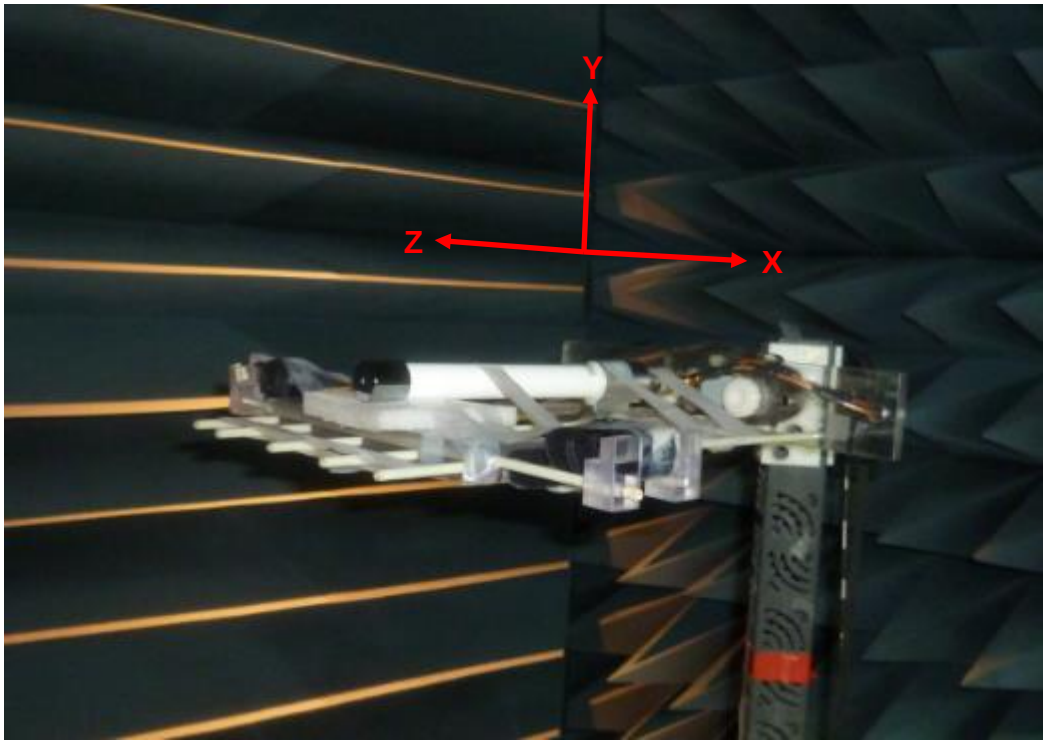
3.3 Average Gain



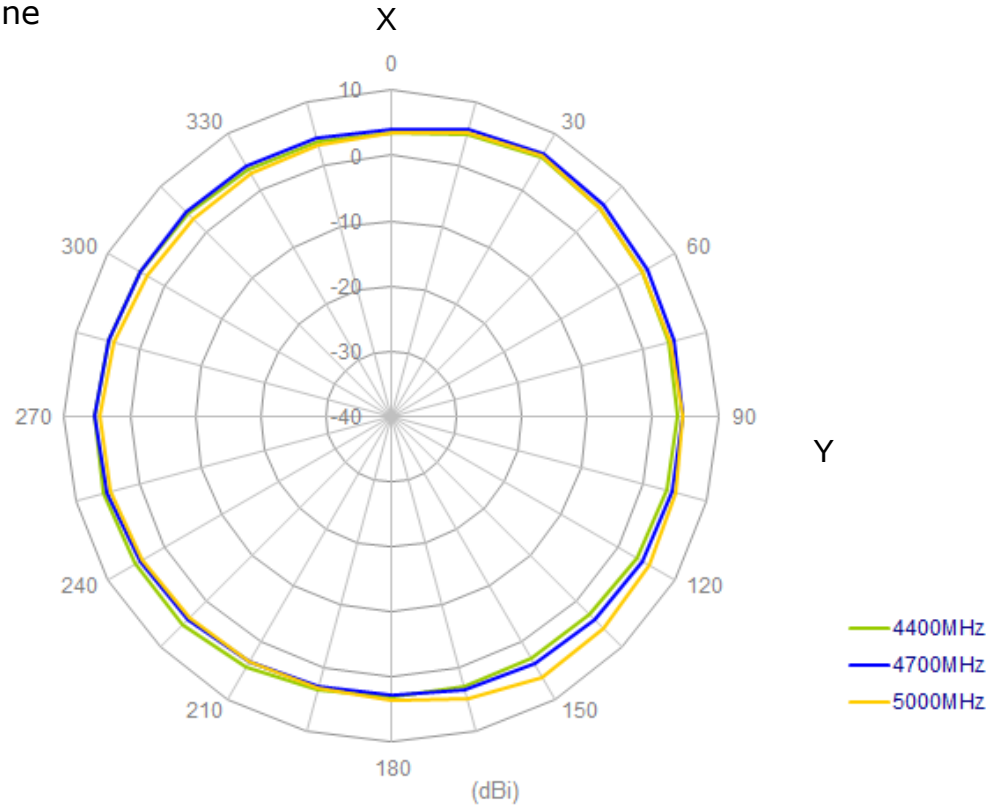
3.4 Efficiency



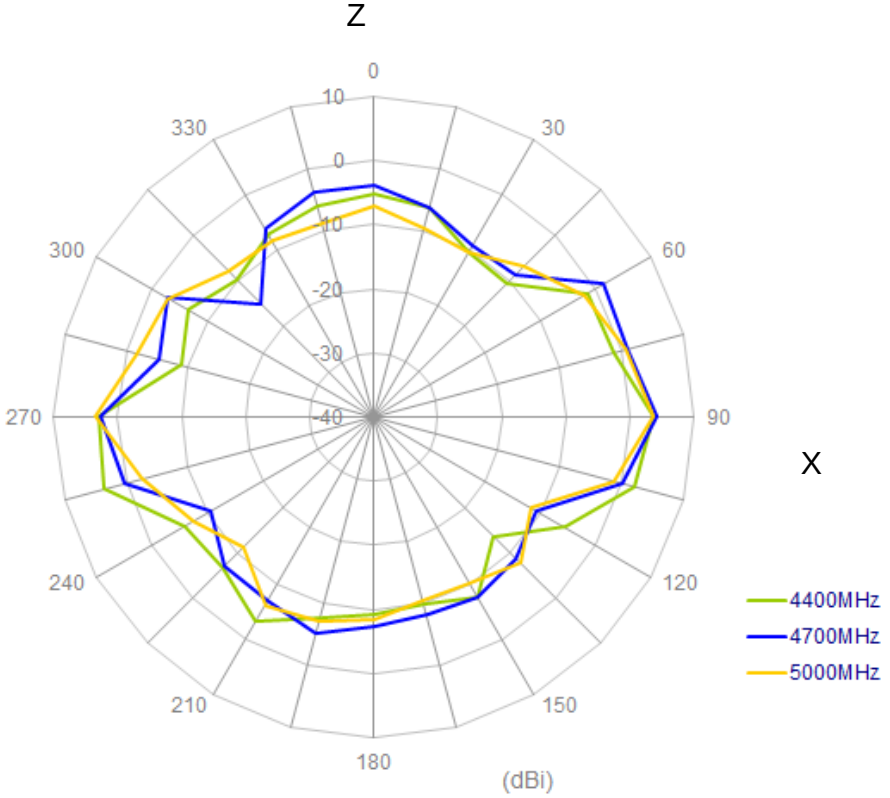
4. 3D Radiation Property



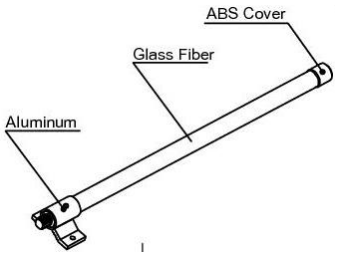
XY – plane

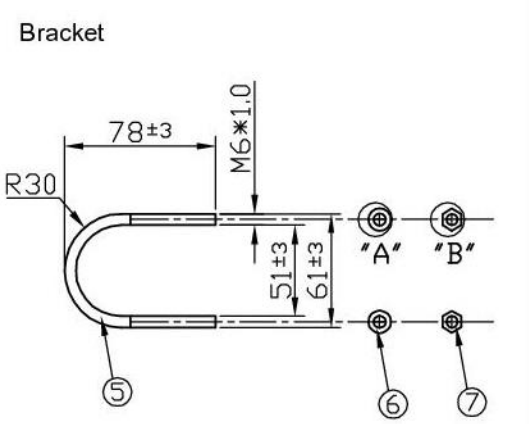


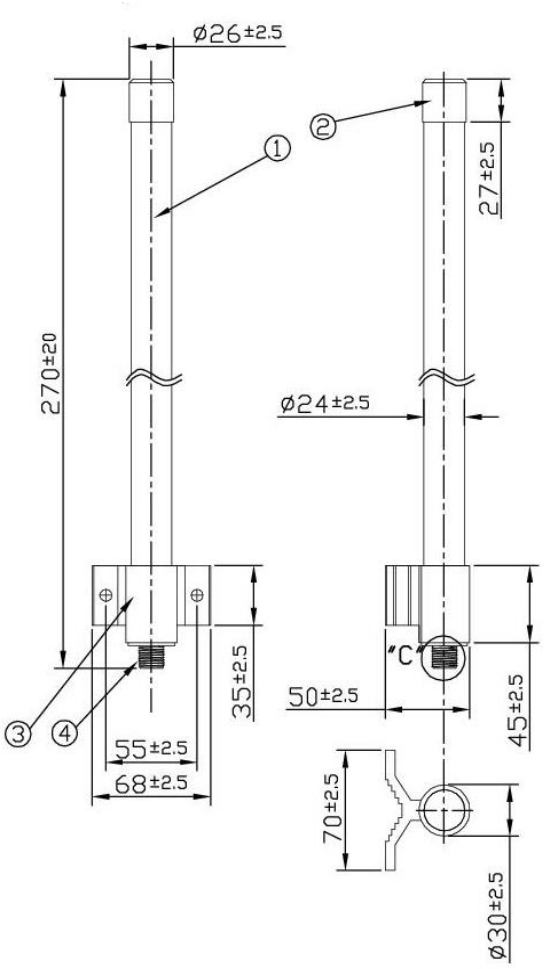
XZ - plane

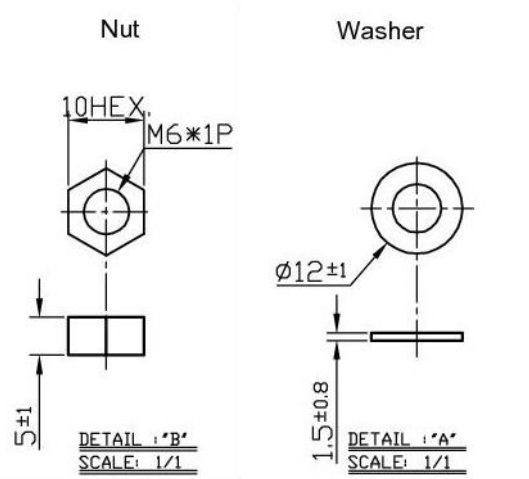


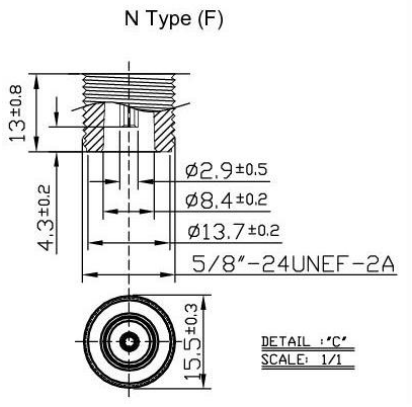
5. Drawing











	Name	P/N	Material	Finish	QTY
1	OMB.445 Antenna	001212D010021A	Glass Fiber	White	1
2	Cover	000111K000021A	ABS	Silver	1
3	Holder	000312B000021A	Aluminum	Silver	1
4	N Type(F)	201211K000021A	Brass	Ni Plated	1
5	M6 U Type Screw	000412B000021A	Stainless Steel	Silver	1
6	M6 Washer	000411K010021A	Stainless Steel	Silver	2
7	M6 Nut	000411K020021A	Stainless Steel	Silver	2