



# TAOGLAS®



## Datasheet

### Meteor

**Part No:**  
FW.43.B.SMA.M

#### **Description:**

Meteor ISM Band 433MHz  
Flexible Whip Monopole Antenna SMA(M) Straight

#### **Features:**

External ISM Band 433MHz  
Monopole Antenna  
Designed for Outdoor Use  
60%+ efficiency\*  
0dBi peak gain\*  
Robust Inner Steel Core  
Antenna Length: 323mm  
SMA Type(M) Straight Connector  
IP65 dust and water-resistant  
\*Tested on 30cm\*30cm Ground Plane  
RoHS Compliant

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## 1. Introduction



The FW.43 is a flexible 433MHz whip antenna with a SMA type (M) connector for outdoor use. It features excellent efficiency (>60%) and peak gain (>0 dBi) at 433MHz on a 30x30 cm ground plane.

Common applications are wireless sensor monitoring, smart metering, remote asset monitoring, and security systems.

The FW.43 has an excellent omnidirectional radiation pattern, ensuring wide coverage. The antenna's high efficiency means that it allows your radio to consume less power than with a lower efficiency antenna when transferring data. It also means a better signal strength and better sensitivity in areas of low signal levels. The antenna performs at its best while attached to a ground plane with dimensions of at least 30x30 cm

The FW.43 whip is made of a flexible inner steel core covered by PE so it is extremely resistant to abrasion and maintains its original shape and RF performance even after shock. This rugged design and IP65 waterproof rating on the housing ensure high reliability.

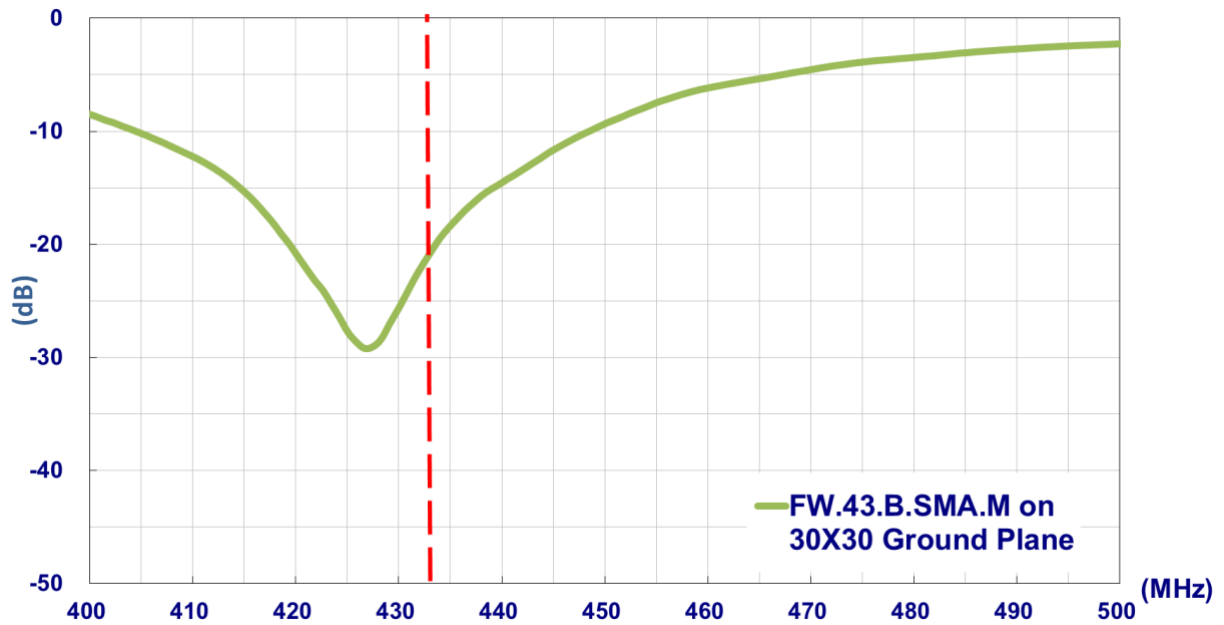
This antenna comes with SMA(M) connector as standard. Other custom variants can be provided subject to NRE and MOQ. Contact your regional Taoglas office for details.

## 2. Specifications

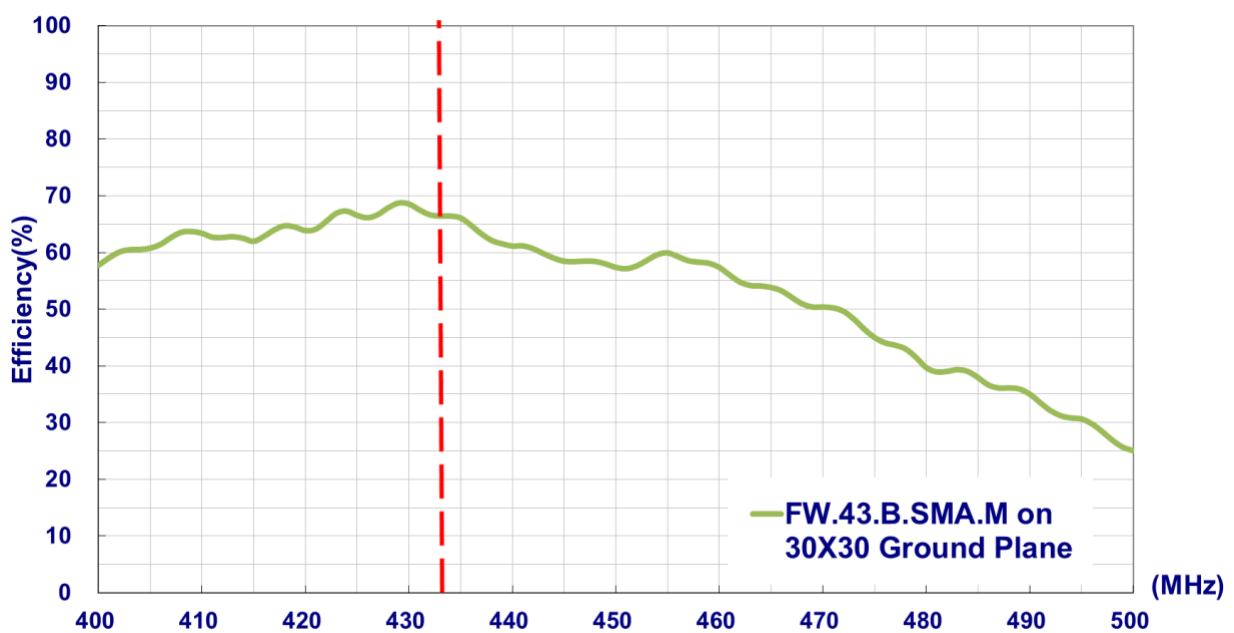
ISM Band 433MHz	
Center Frequency	433MHz
Design Environment	On 30x30cm ground
Efficiency	66.42%
Peak Gain	0.46dBi
Return loss	< -15dB
VSWR	≤ 1.5:1
Impedance	50Ω
Polarization	Linear
Radiation Pattern	Omni-Directional
Input Power	2 W
Total Power	10 W
Mechanical	
Dimensions	Height 323 ± 10 mm
Base Diameter	16 ± 0.6 mm
Whip Diameter	6.2 ± 0.6 mm
Casing	ABS
Connector	SMA Type(M) Straight
Weight	66 g
Dust and Water Resistance	IP65
Environmental	
Temperature Range	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

### 3. Antenna Characteristics

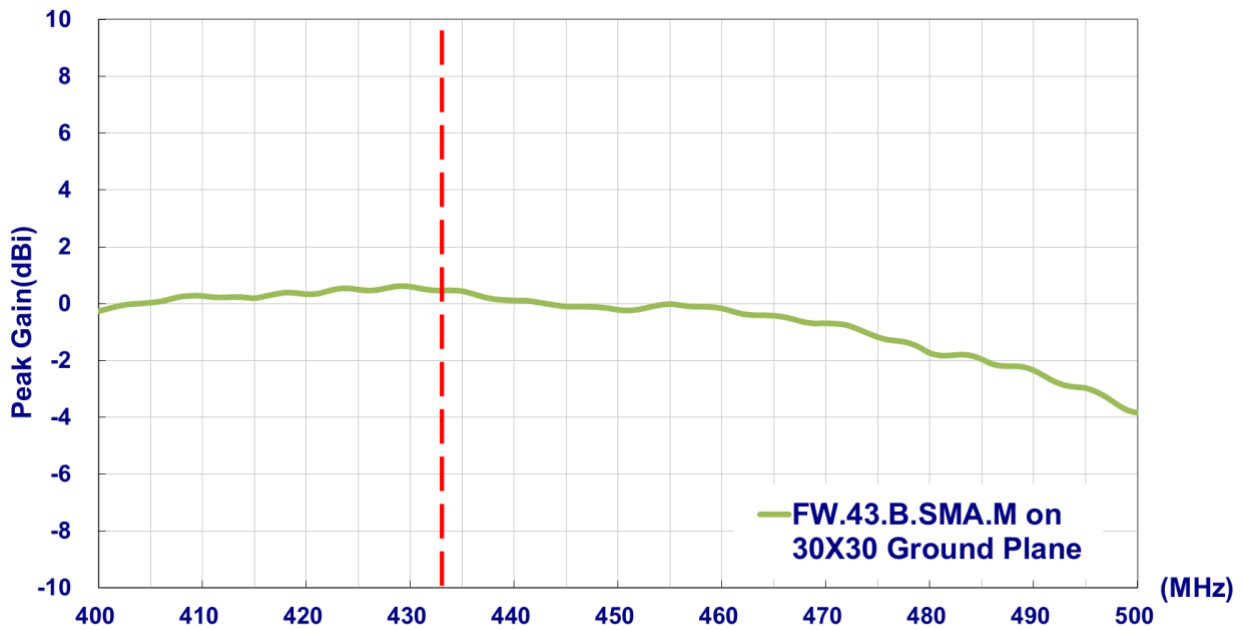
#### 3.1 Return Loss



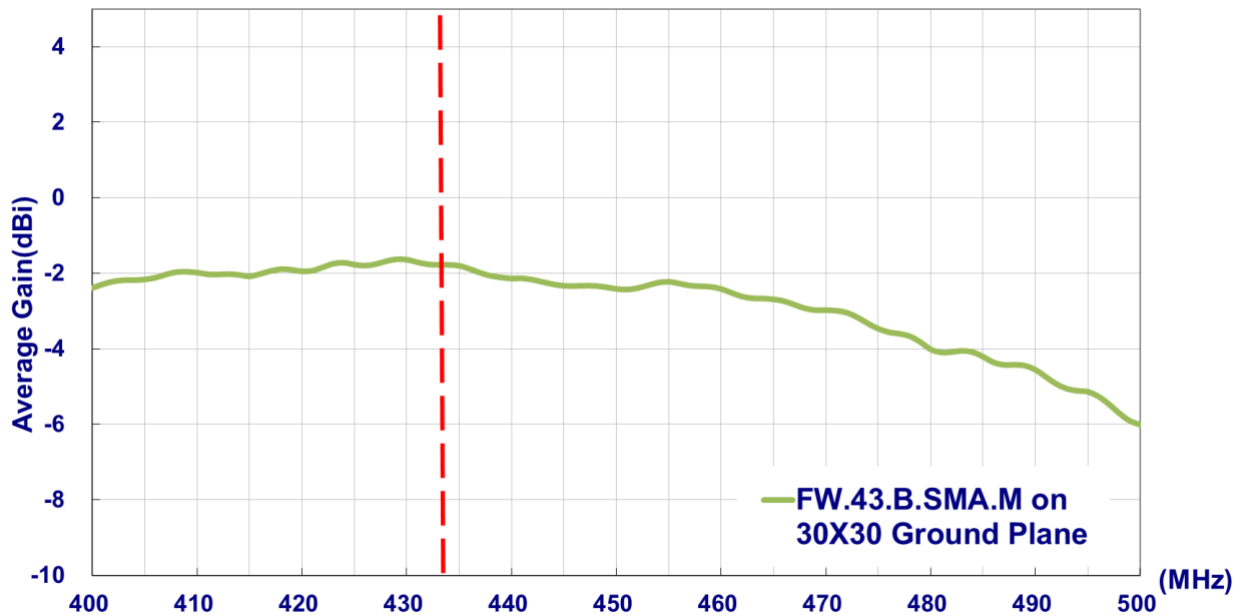
#### 3.2 Efficiency



### 3.3 Peak Gain

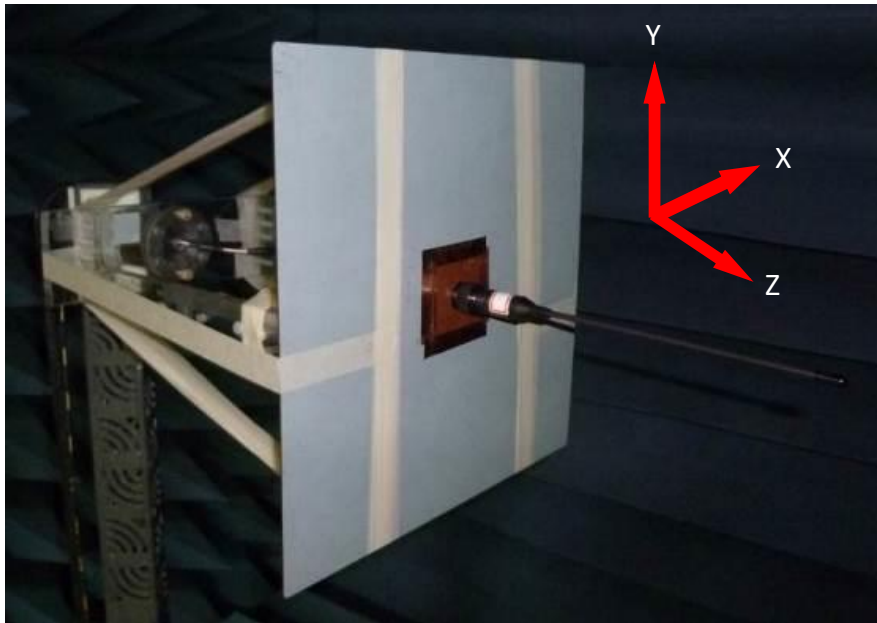


### 3.4 Average Gain



## 4. Radiation Patterns

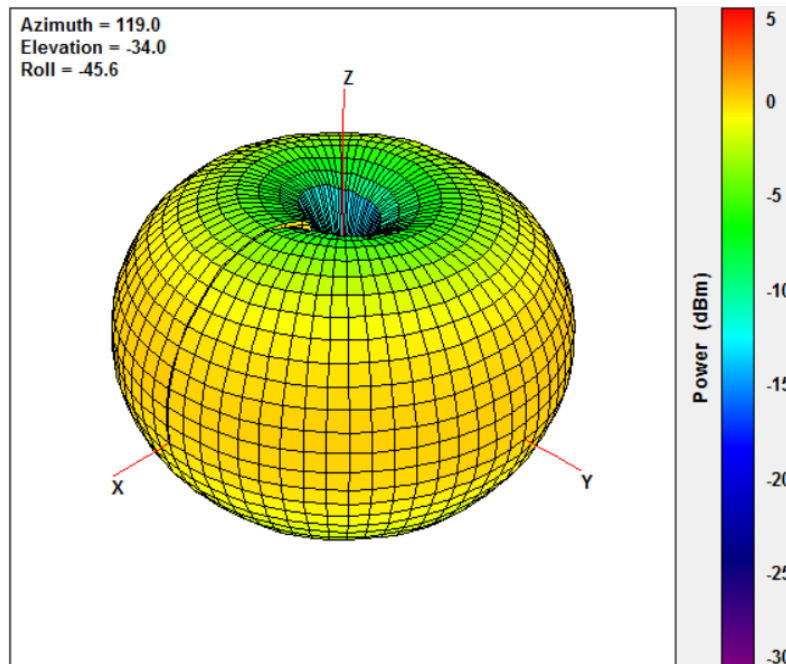
### 4.1 Test Setup



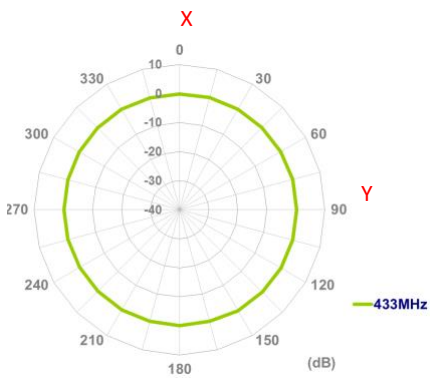
On 30x30 cm ground plane

## 4.2 3D and 2D Radiation Patterns

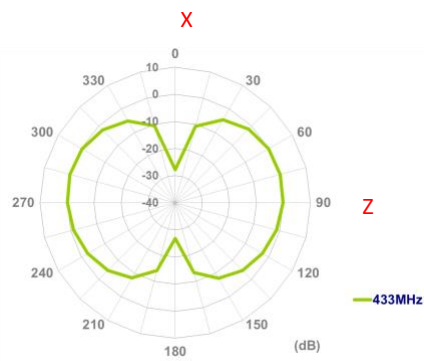
3-D Radiation Pattern on 30cm\*30cm Ground Plane @433MHz



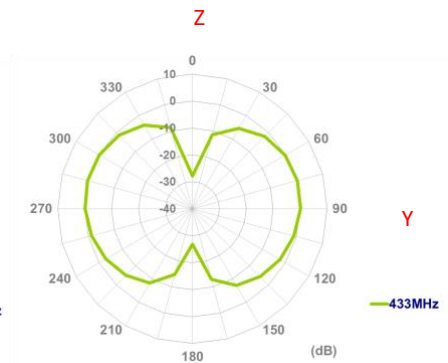
XY Plane



XZ Plane

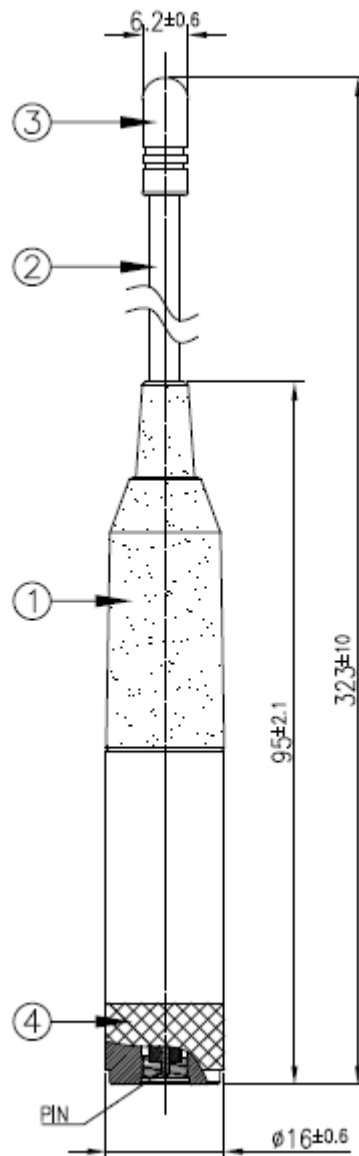


YZ Plane





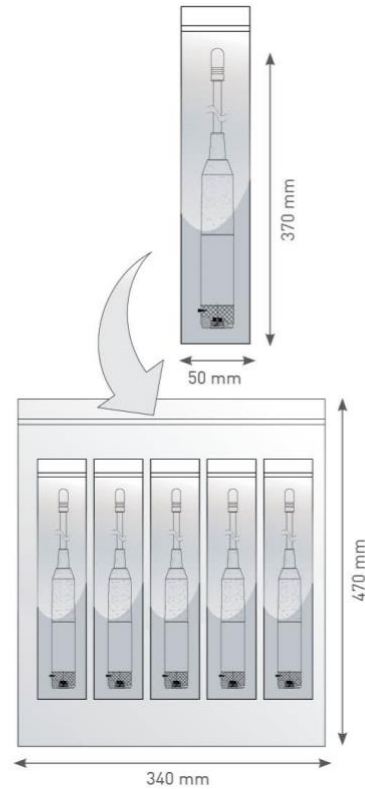
## 5. Mechanical Drawing (Units: mm)



	Name	Material	Finish	QTY
1	Housing	ABS	Black	1
2	Flexible Whip	Steel+PE Jacket	Black	1
3	Cap	ABS	Black	1
4	SMA(M)ST	Brass	Black	1

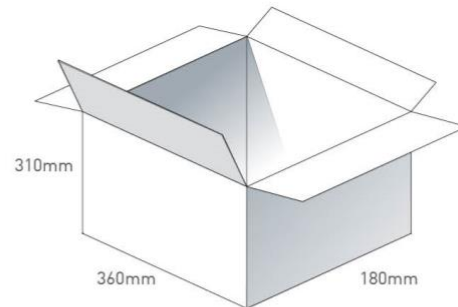
## 6. Packaging

1pcs FW.43.B.SMA.M per PE Bag  
 Bag Dimensions - 370\*50mm  
 Weight - 66g

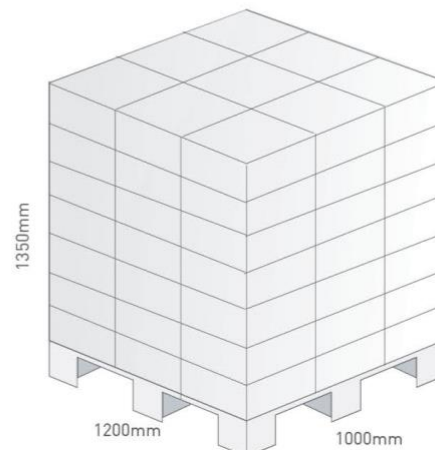


50 PE bags per Large PE Bag  
 50 pcs FW.43.B.SMA.M per Large Polybag  
 Large PE Bag Dimensions - 470\*340mm  
 Weight - 3.4Kg

5 Large PE Bags per Carton  
 250 pcs FW.43.B.SMA.M per Carton  
 Carton Dimensions - 360\*310\*180mm  
 Weight - 17Kg



**Pallet Dimensions:**  
 1200\*1000\*1350mm  
 63 Cartons Per Pallet  
 9 Cartons Per Layer  
 7 Layers



Changelog for the datasheet

**SPE-16-8-004 - FW.43.B.SMA.M**

<b>Revision: C</b>	
Date:	2019-08-16
Changes:	Updated to new format
Changes Made by:	Dan Cantwell

**Previous Revisions**

<b>Revision: B (Current Version)</b>	
Date:	2017-07-01
Changes:	Reformatted specs and added disclaimer
Changes Made by:	Andy Mahoney

<b>Revision: A (Original First Release)</b>	
Date:	2015-12-01
Notes:	
Author:	Wayne Yang



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