



# TAOGLAS®



# Datasheet

## Sighunter 868/915MHz

**Part No:**  
TS.89.4113

### **Description:**

868/915MHz Directional Antenna with  
SMA Male Connector and Flexible Gooseneck Cable

### **Features:**

- Mechanically robust for indoor/outdoor applications
- Direct SMA Connector Mount
- Directional Antenna
- Dimensions: 108 x 118 x 12mm
- Connector: SMA Male
- Gooseneck length: 127mm
- RoHS & REACH Compliant

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# 1. Introduction



The TS.89 Sighunter is a mechanically robust ISM / LoRa / SigFox antenna designed to be directly mounted onto a device via the flexible gooseneck and SMA(M) connector. The adjustable gooseneck cable allows for optimum positioning of the antenna in relation to the device and receive signal. The Sighunter has been designed to operate at either 868MHz or 915MHz frequencies for a fully global LoRa solution. The antenna has greater than 80% efficiency and 3.5dBi peak gain at 868MHz 80% efficiency and 2.7dBi peak gain at ISM 915MHz.

Directional radiation patterns over low angles provide focussed gain in one direction, meaning that it is especially suitable for longer range, applications like mesh networks or remote monitoring. When using this antenna, it should be directed towards the target base station or receiver, the Sighunter allows for this with its' easily adjustable gooseneck and the gain from other directions is reduced ensuring that interference is minimised.

Typical applications include:

- Public safety
- Smart meters and remote monitoring
- Mesh networks
- Smart Home
- Medical Devices

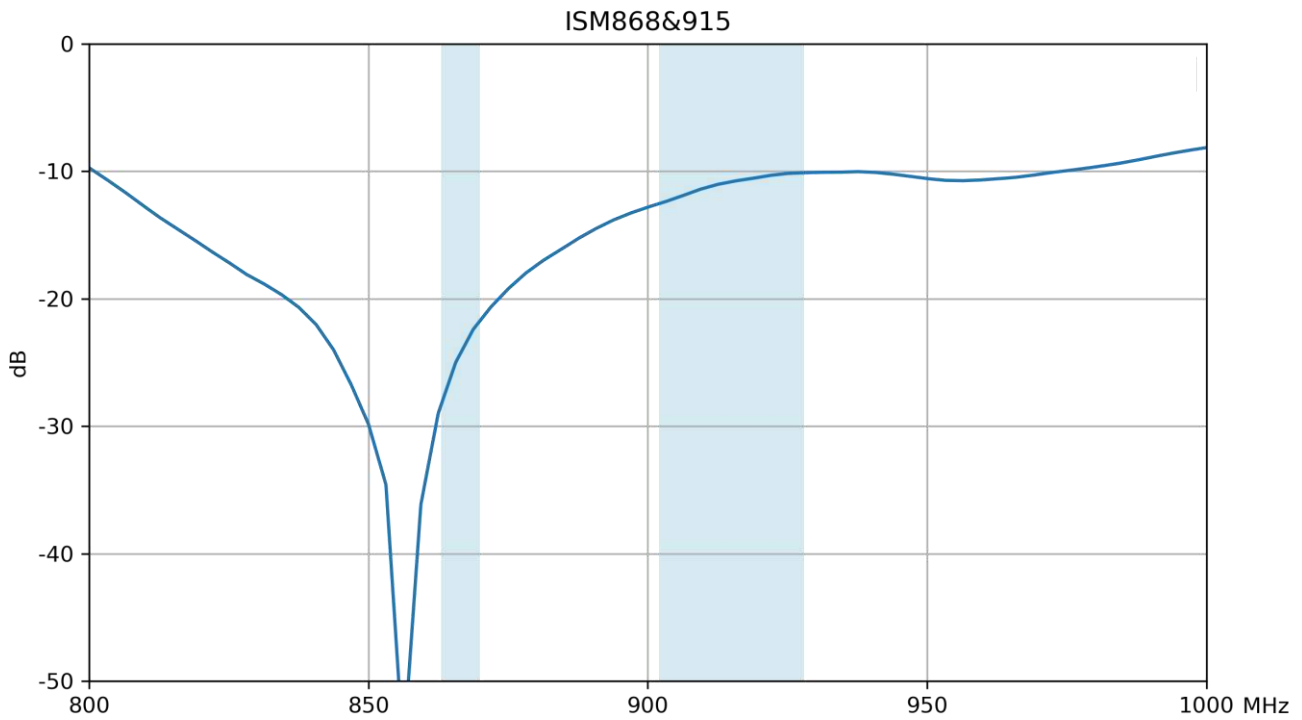
The Connector can be customized subject to NRE, for more information please contact your regional Taoglas Customer Support Team.

## 2. Specifications

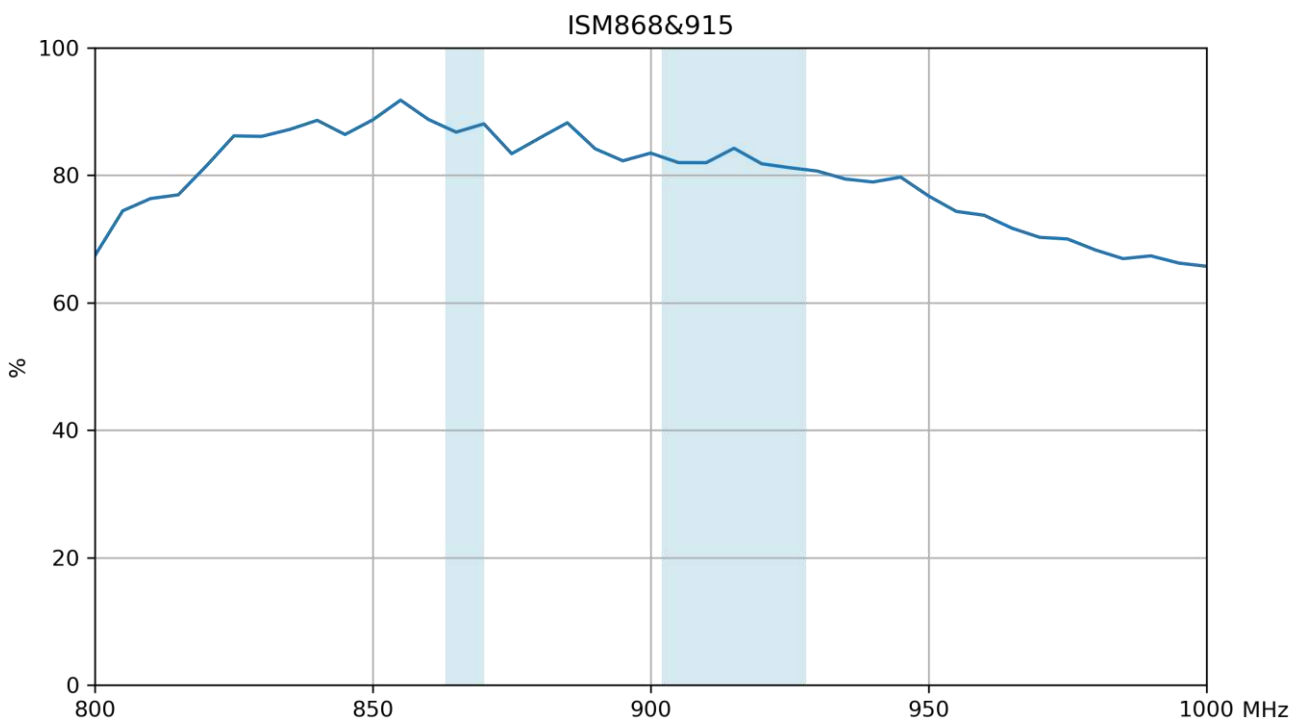
Electrical		
Frequency (MHz)	868	915
Peak Gain (dBi)		
Free Space	3.5	2.7
Average Gain (dB)		
Free Space	-0.6	-0.9
Efficiency (%)		
Free Space	87.4	82.2
Impedance	50Ω	
Polarization	Linear	
Radiation Pattern	Directional	
Input Power	10W	
Mechanical		
Dimensions	108 x 118 x 12mm	
Weight (g)	106g	
Material	Housing: UV Resistant ABS	
Connector	SMA Male	
Cable	127mm	
Environmental		
Temperature Range	-40°C to 85°C	
Humidity	Non-condensing 65°C 95% RH	

### 3. Antenna Characteristics

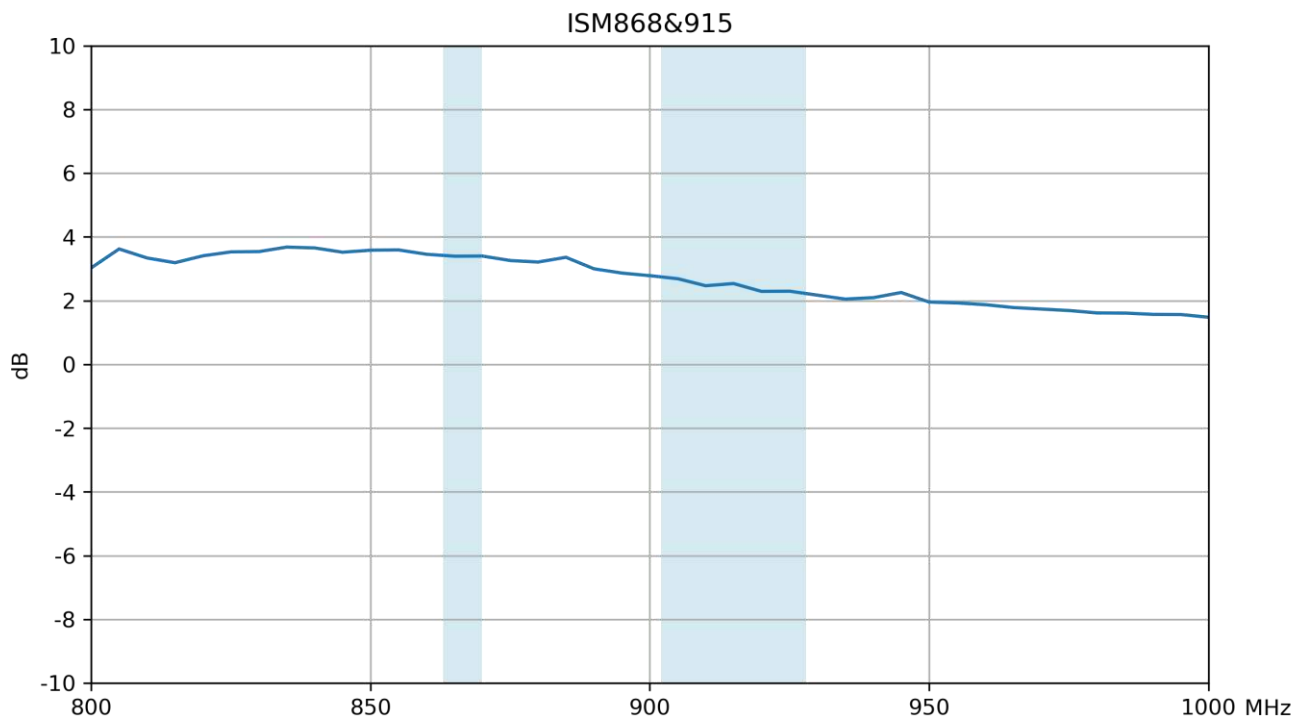
#### 3.1 Return Loss



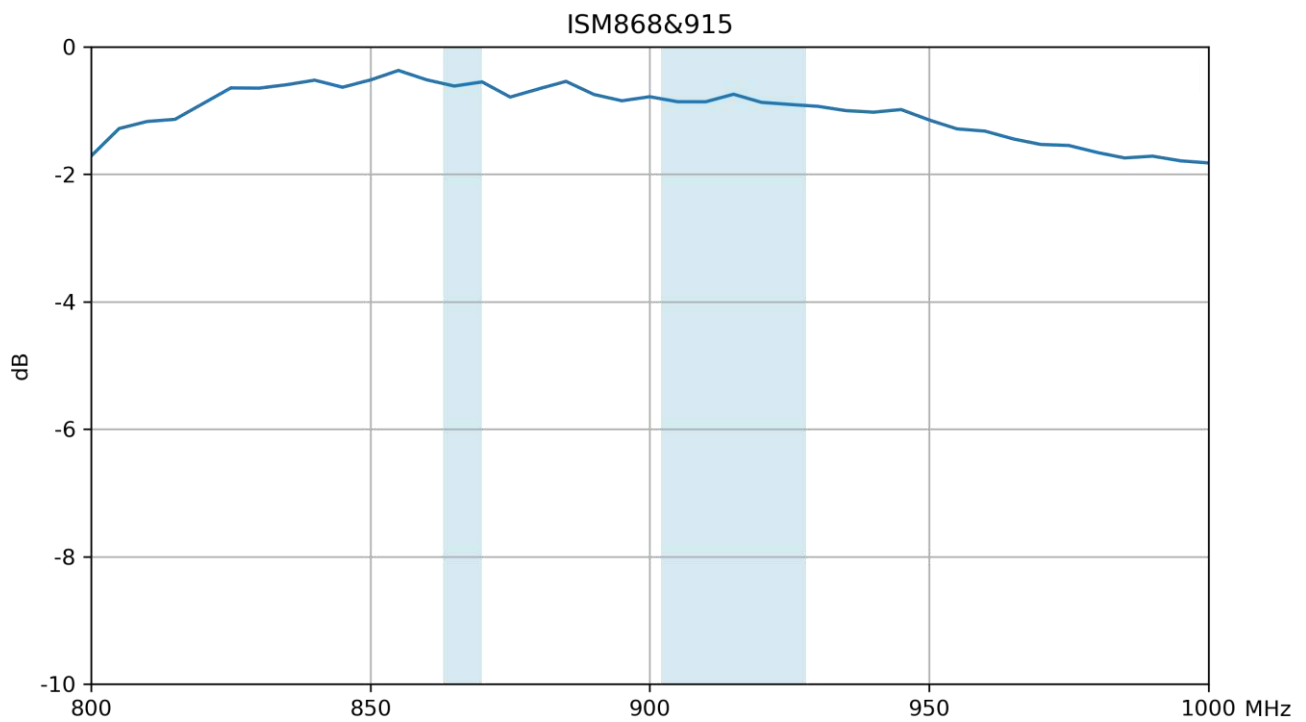
#### 3.2 Efficiency



### 3.3 Peak Gain

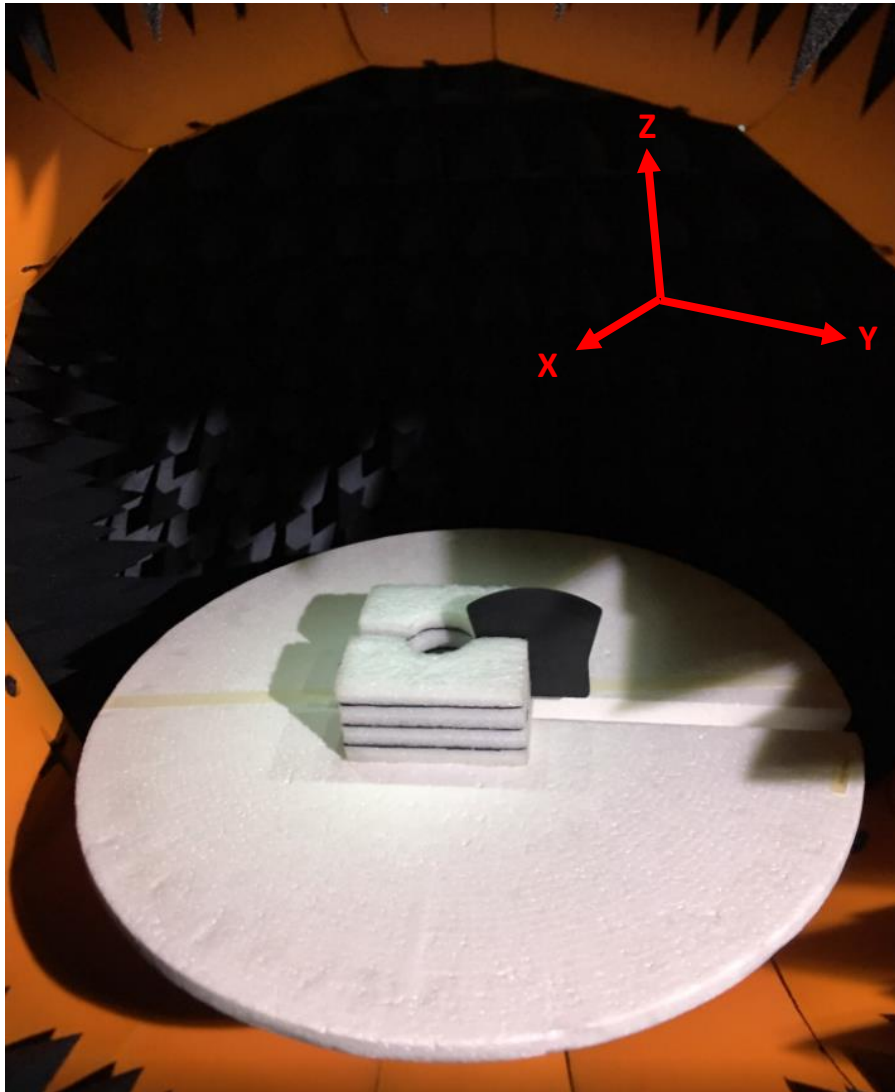


### 3.4 Average Gain



## 4. Radiation Patterns

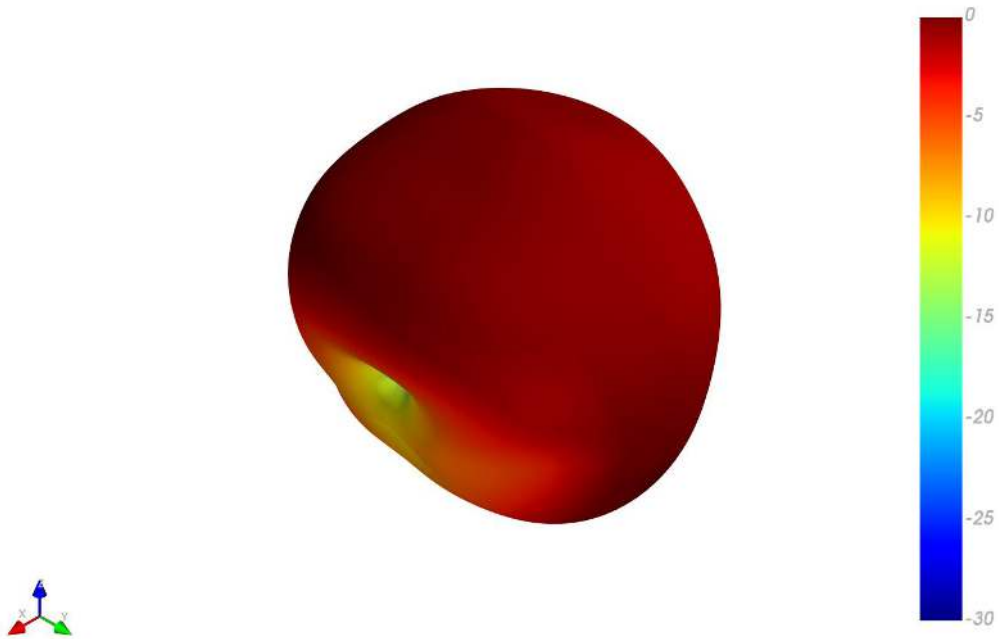
### 4.1 Test Setup



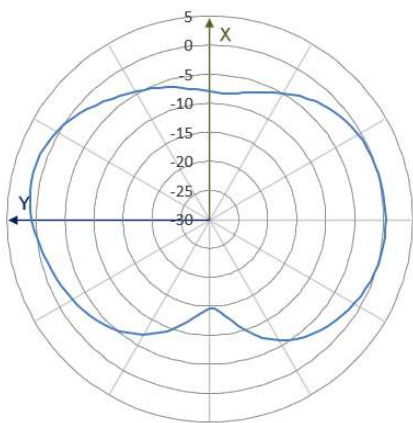
Free space

4.2 2D & 3D Radiation Patterns

868MHz

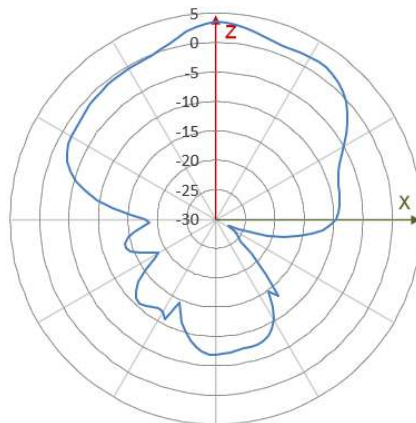


XY Plane



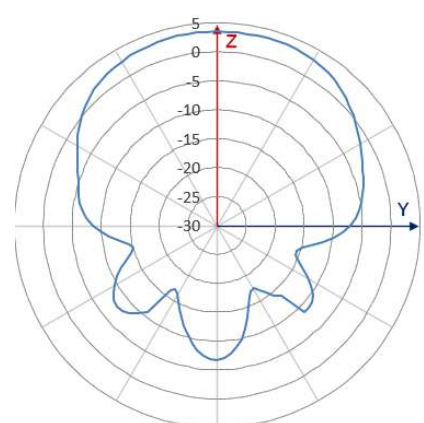
— 868MHz

XZ Plane



— 868MHz

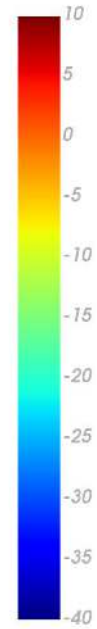
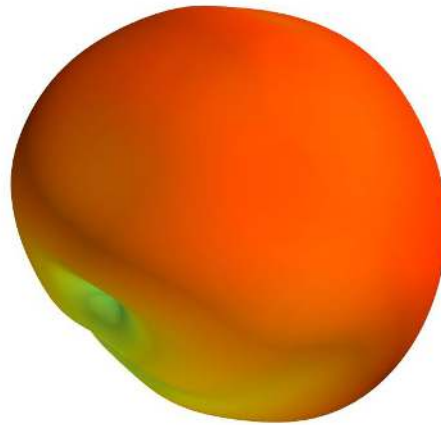
YZ Plane



— 868MHz



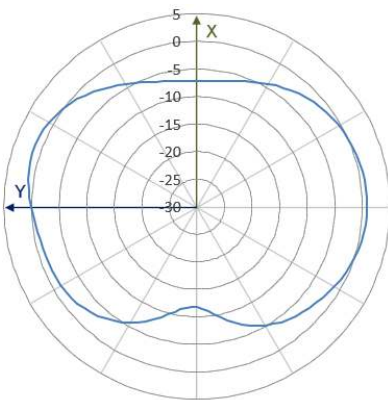
915MHz



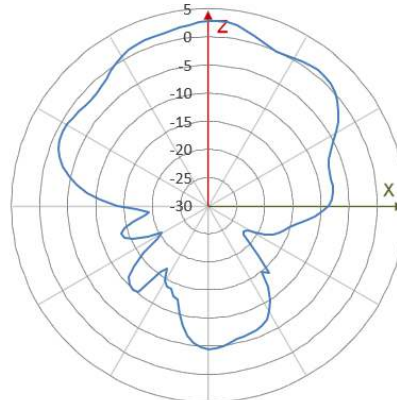
XY Plane

XZ Plane

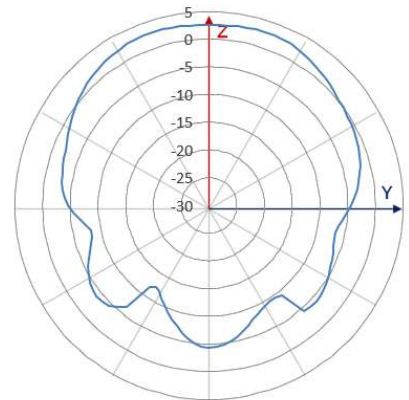
YZ Plane



— 915MHz



— 915MHz



— 915MHz

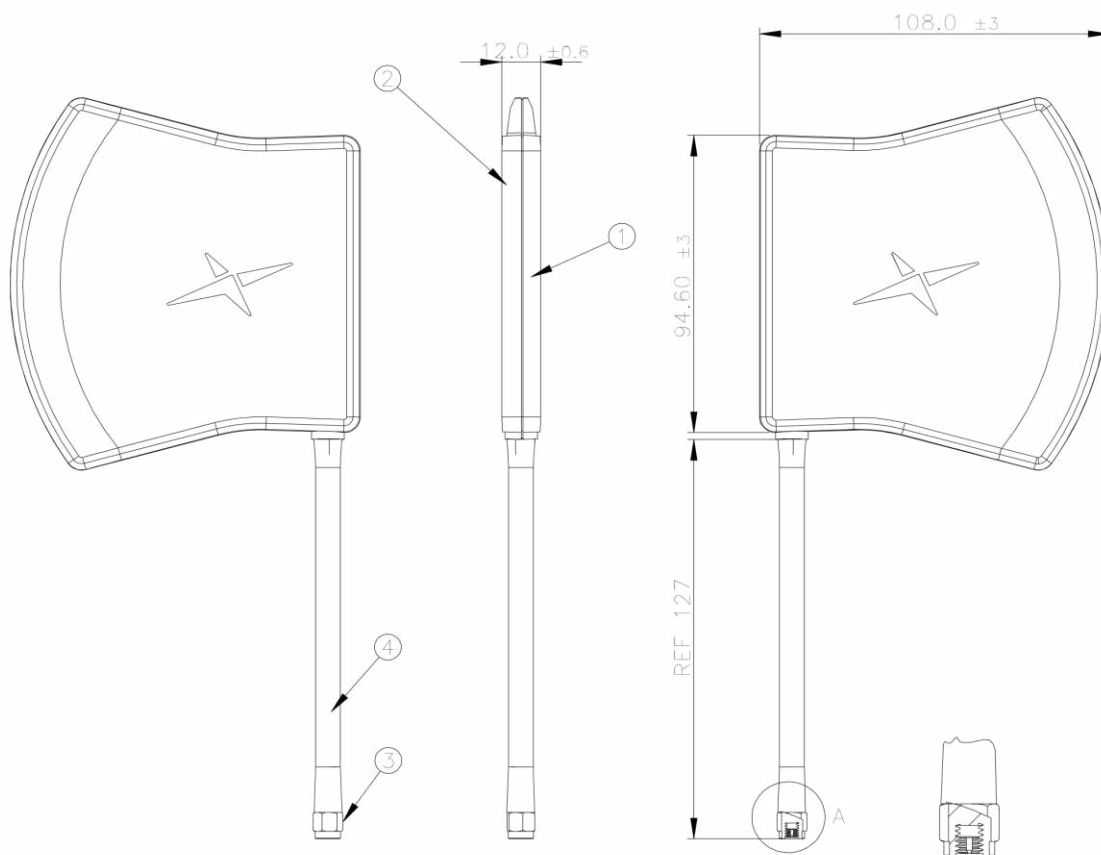
# 5. Mechanical Drawing (Units: mm)

ISO NO.: EDW-21-8-0455

STATE: Release

- NOTES:
- 1.All material must be RoHS compliant.
  - 2.Deburring: Less than 0.02mm.
  - 3.No gots, parting line and any other tooling marks on appearance of product.
  - 4.Once product have any crack/break/thread damage or any structural tooling issue, molding supplier need to correct the issue unconditionally.
  - 5.Use this drawing together with the corresponding 3D CAD database file to fully describe the part.
  - 6.The connector orientation has a fixed position to the antenna as per drawing.
  - 7.\* Critical Dimensions.

REV	ZONE	DESCRIPTION	ENG	APPROVED	DATE
D01	All	initial design	Aaron	Chozen	2021/7/14



Detail A  
Scale: 1 : 1

	Name	Material	Finish	QTY
1	Antenna left Side Housing	ABS+PC	Black	1
2	Antenna Right Side Housing	ABS+PC	Black	1
3	SMA(M)ST	Brass	Au Plated	1
4	Heat sink	PE	Black	1

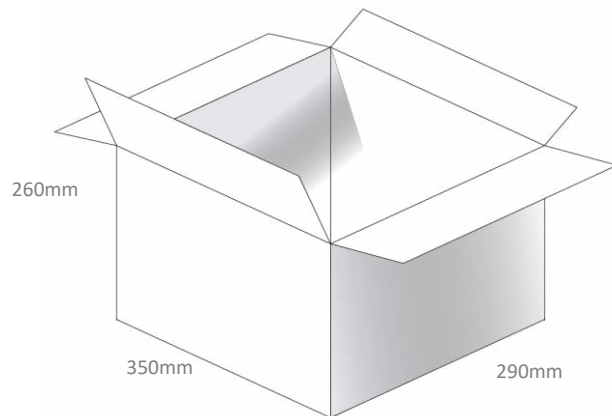
APPROVED BY: Chozen	<p>TW Design Centre This drawing and its inherent design concepts are property of Taoglas. Not to be copied or given to third parties without the written consent of Taoglas.</p>
CHECK BY: Aaron	
DRAWN BY: Aaron	
DATE: 2021/3/22	TITLE: Sighunter 868&915MHz directional antenna linear polarization (peak gain 5dBi) Terminal Hinged SMA(M)
UNLESS OTHERWISE SPECIFIED TOLERANCES ON: XY±0.3 X±0.3 Y±0.2 Z±0.1 XXX±0.08	PART NO: TS.89.4113
THIRD ANGLE PROJECTION	UNIT: mm SCALE: 1:2 PAGES: 1/1 REV: D01

## 6. Packaging

1pc TS.89.4113 per PE Bag  
Weight: 370g



100pcs TS.89.4113 per Carton  
Carton Dimensions: 430\*380\*280mm  
Weight: 10.2Kg



Changelog for the datasheet

**SPE-21-8-048 – TS.89.4113**

<b>Revision: A (Original First Release)</b>	
Date:	2021-07-15
Notes:	
Author:	Jack Conroy

**Previous Revisions**




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