



# TAOGLAS®



## Datasheet

### TI.85.2113 868MHz Terminal Mount Dipole Antenna

**Part No:**  
TI.85.2113

**Description:**

ISM 868MHz Terminal Dipole Antenna 2dBi SMA(M) Hinged

**Features:**

ISM 868MHz Band Operation  
High Efficiency up to 76%  
Hinged SMA (M) Connector  
Height: 198mm  
Diameter: 13mm  
RoHS & Reach Compliant

|    |                         |    |
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## 1. Introduction



The TI.85.2113 is a high performance 868MHz Terminal mount dipole antenna, it is 198mm tall and 13mm in diameter and can be mounted straight or right angled due to its hinged SMA(M) connector which comes as standard. This antenna performs very well in free space, making it an ideal solution in areas where there may be no ground plane.

Typical Applications include:

- Smart Metering
- Remote Monitoring
- Industrial IoT
- Connected Enterprise

The TI.85 is manufactured using TPEE which makes it very lightweight at just 22.5g. The swivel and hinge mechanism allows the antenna to be orientated in different directions which helps to avoid other antennas or objects. The antenna connector type can be customizable, please contact your regional Taoglas customer support team for installation guidelines or additional support to integrate and test this antenna's performance in your device.

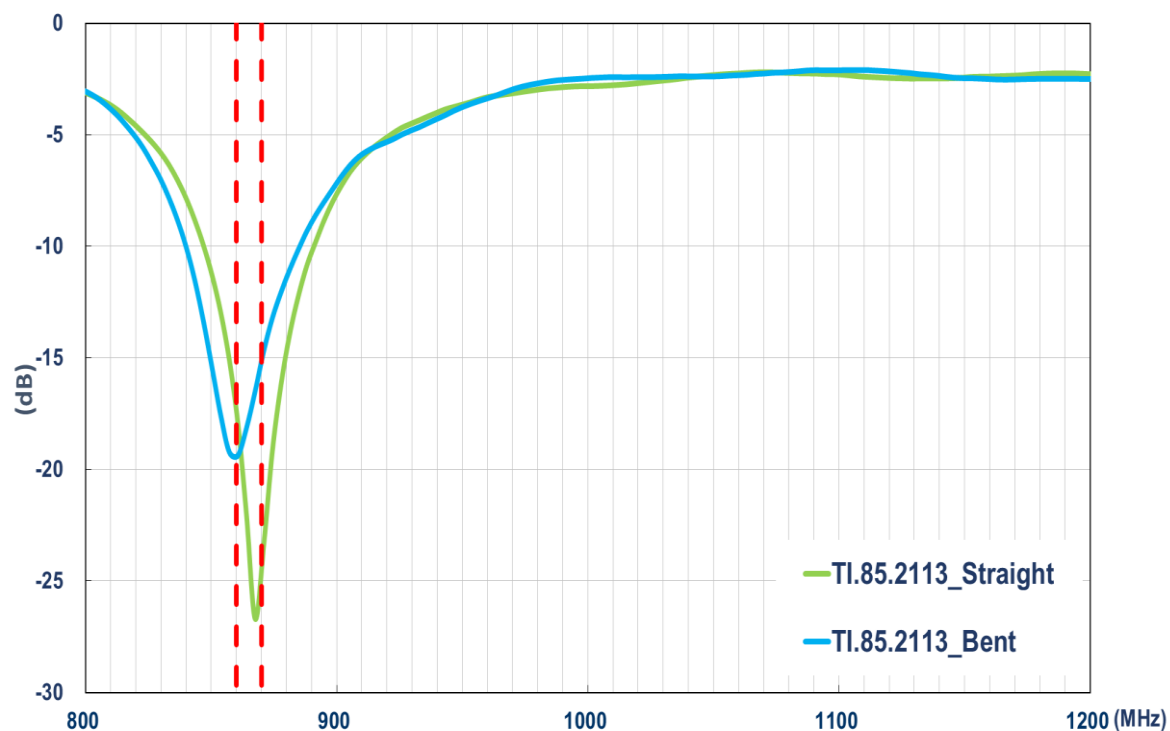
## 2. Specifications

| Electrical        |             |
|-------------------|-------------|
| Frequency (MHz)   | ISM 868     |
|                   | 860~870     |
| Efficiency (%)    |             |
| Straight          | 75.17       |
| Bent              | 76.72       |
| Average Gain (dB) |             |
| Straight          | -1.24       |
| Bent              | -1.15       |
| Peak Gain (dBi)   |             |
| Straight          | 1.31        |
| Bent              | 2.04        |
| Impedance         | 50 $\Omega$ |
| Polarization      | Linear      |
| Radiation Pattern | Omni        |
| Max. input power  | 1W          |

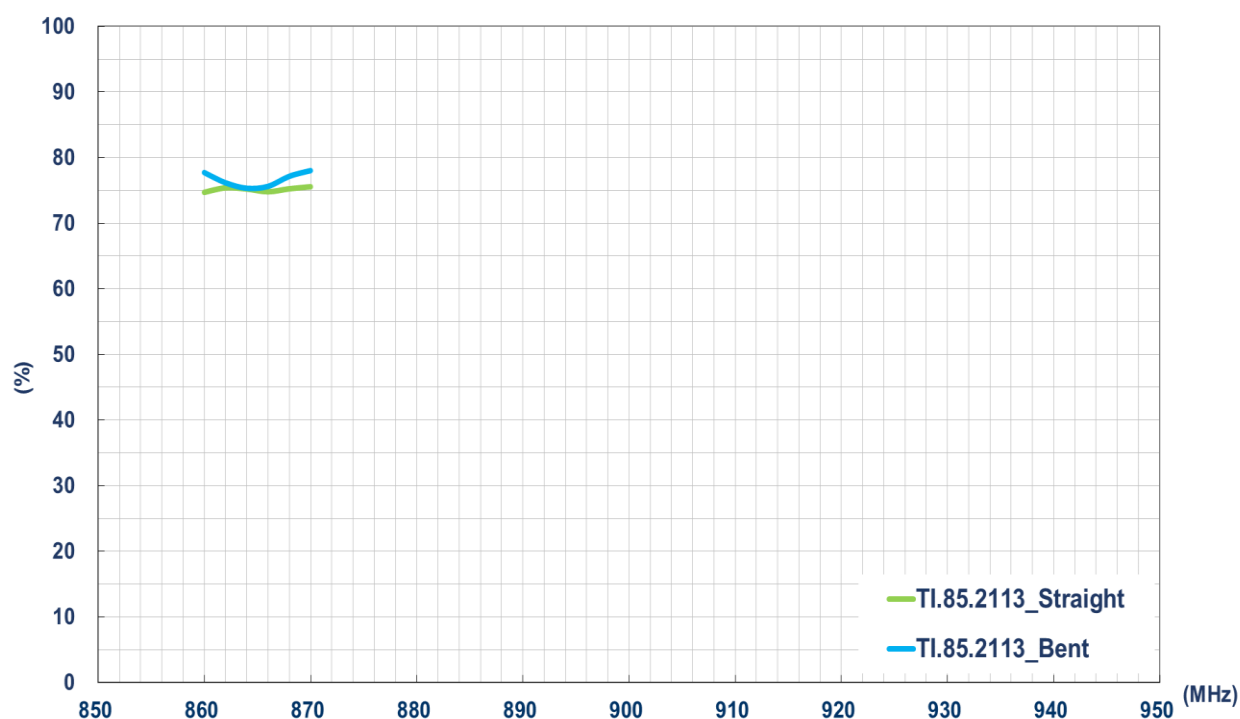
| Mechanical        |                            |
|-------------------|----------------------------|
| Height            | 198 $\pm$ 3.3 mm           |
| Planner Dimension | 198* $\phi$ 13 mm          |
| Casing            | TPEE                       |
| Connector         | SMA(M)                     |
| Weight            | 22.5 g                     |
|                   |                            |
| Temperature Range | -40°C to 85°C              |
| Humidity          | Non-condensing 65°C 95% RH |

## 3. Antenna Characteristics

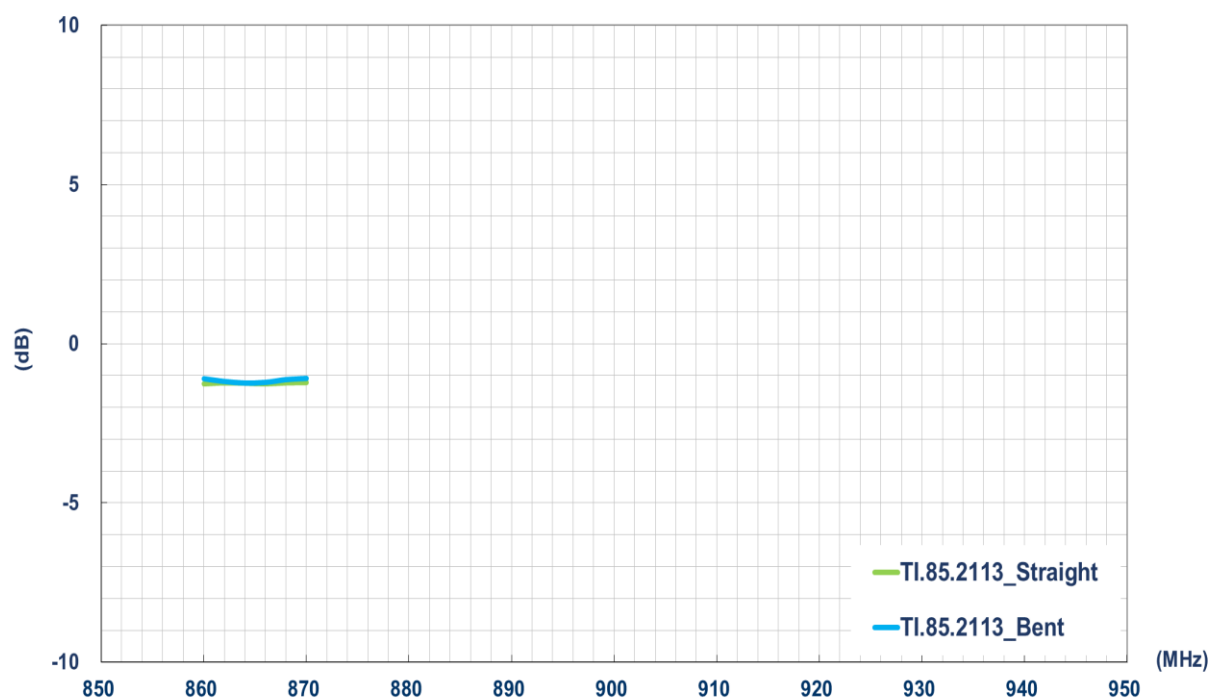
### 3.1 Return Loss



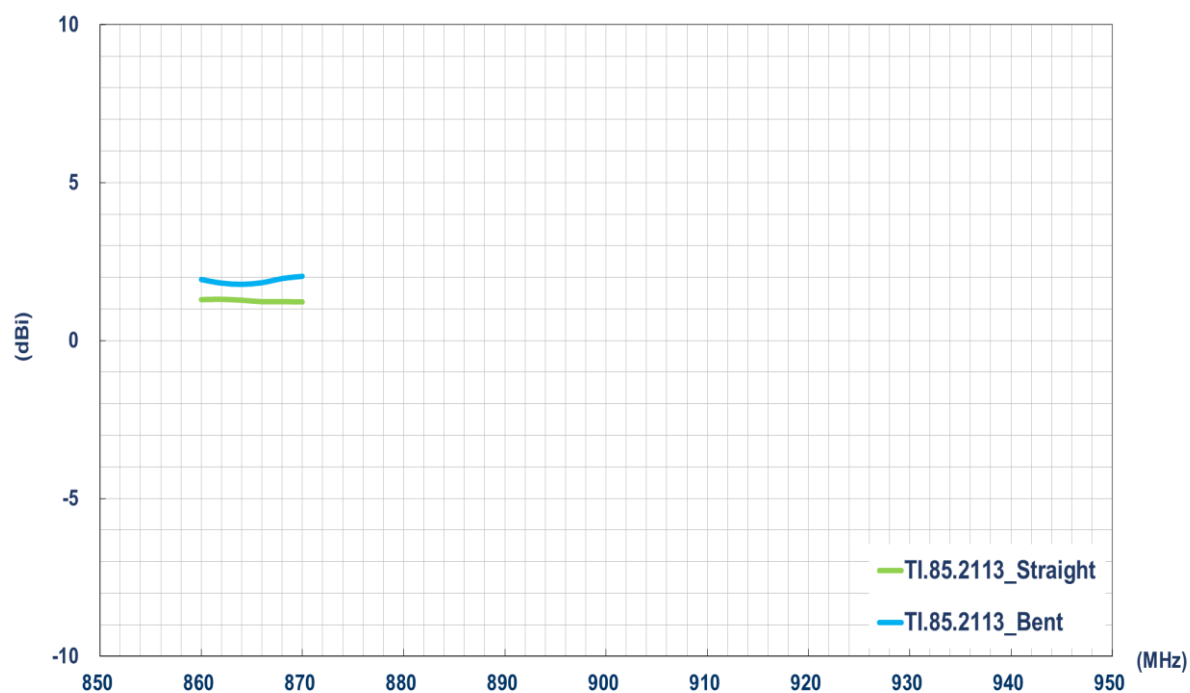
### 3.2 Efficiency



### 3.3 Average Gain



### 3.4 Peak Gain



## 4. Radiation Patterns

### 4.1 Test Setup

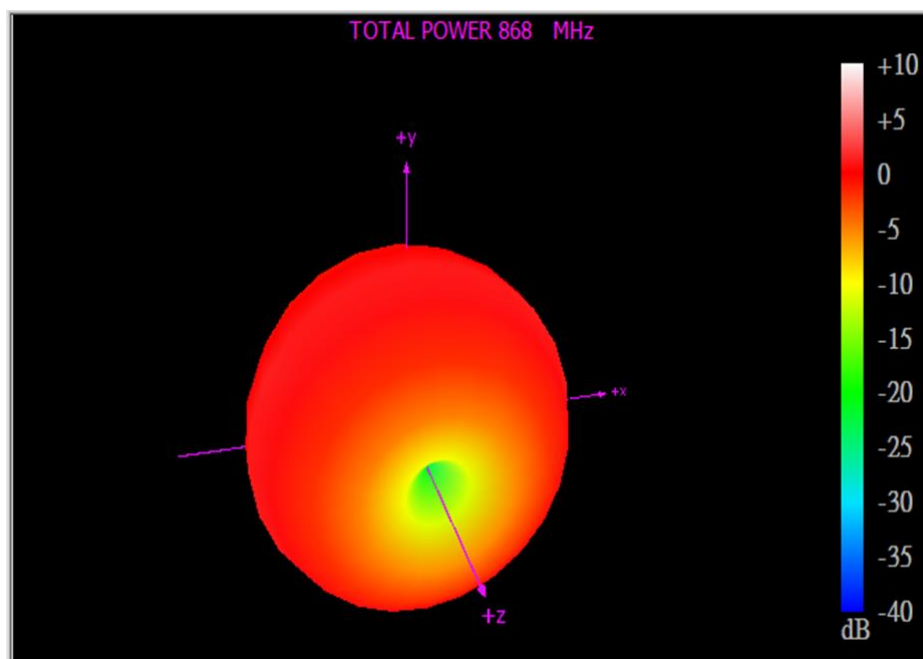


Free space - Straight

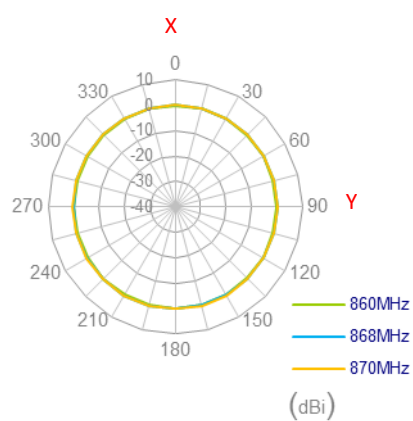


Free space - Bent

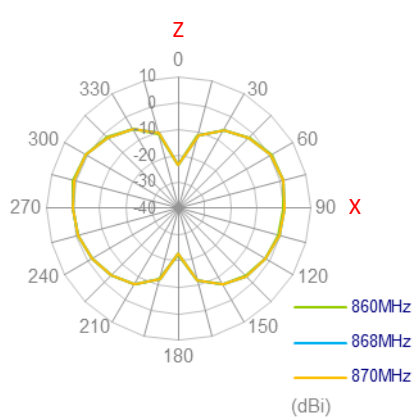
## 4.2 868MHz 3D and 2D Radiation Patterns - Straight



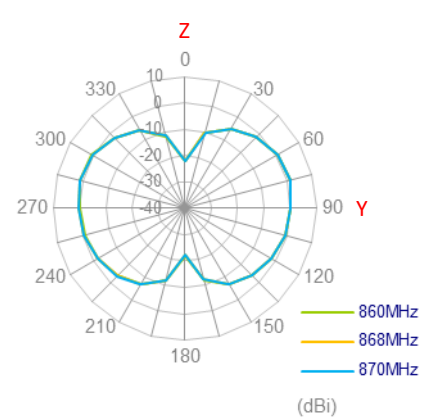
XY Plane



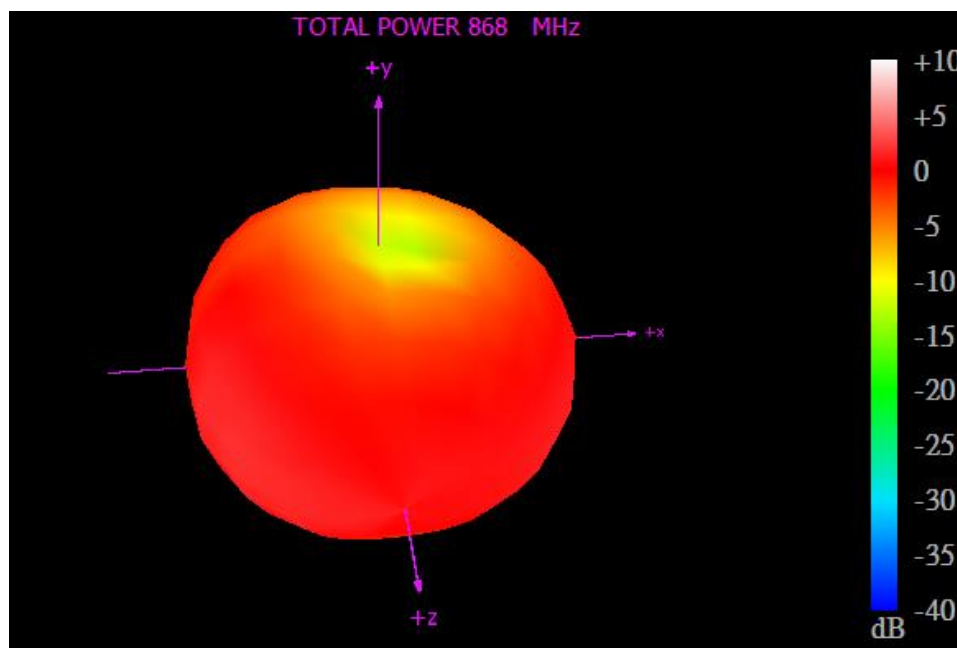
XZ Plane



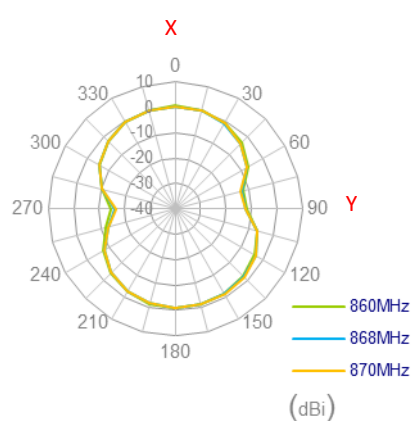
YZ Plane



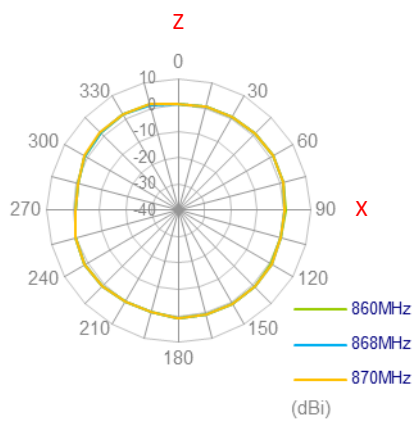
### 4.3 868MHz 3D and 2D Radiation Patterns - Bent



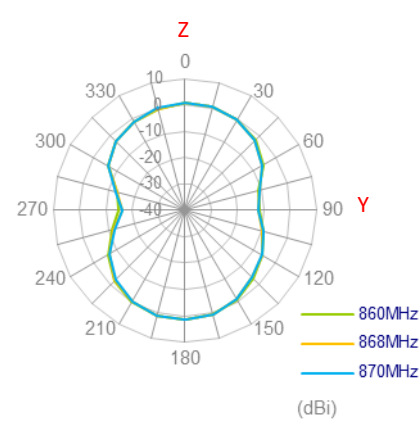
XY Plane



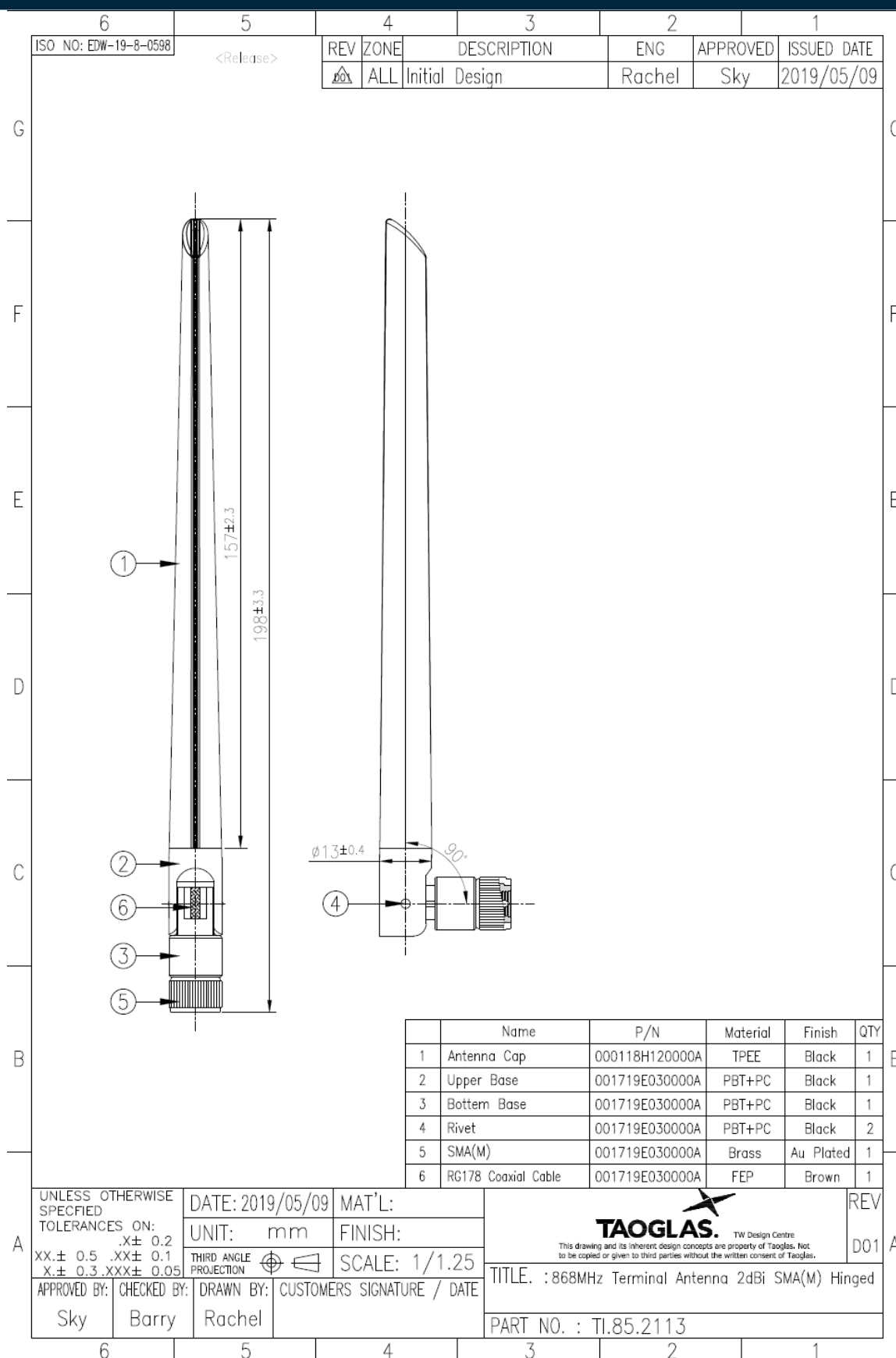
XZ Plane



YZ Plane

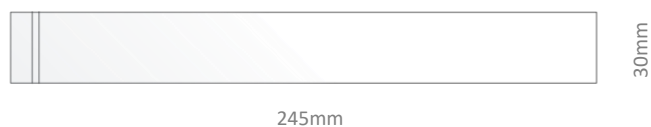


## 5. Mechanical Drawing (Units: mm)

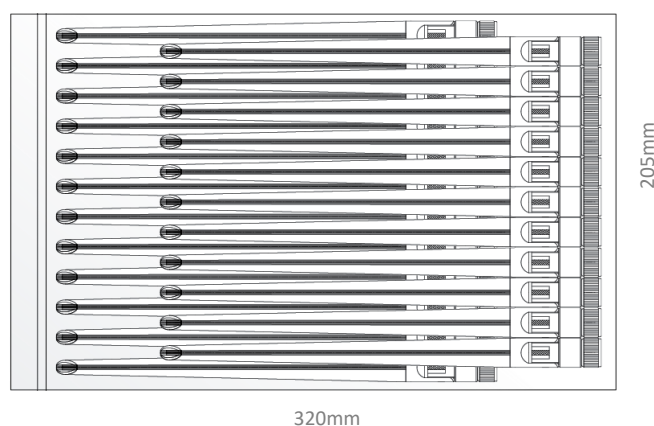


## 6. Packaging

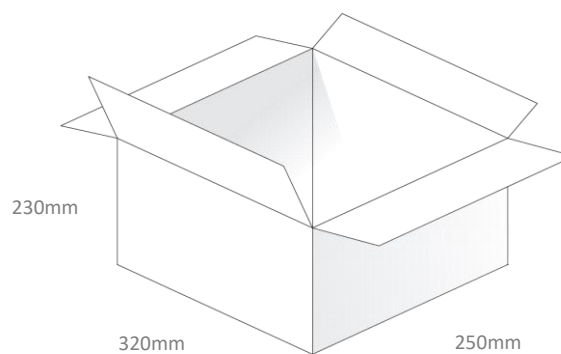
1pc TI.85.2113 per PE Bag  
Tray Dimension: 245\*30mm  
Weight: 22.5g



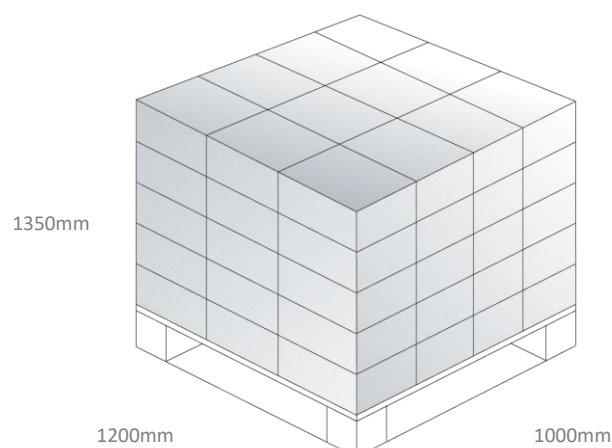
40pcs TI.85.2113 per Large PE Bag  
Bag Dimensions: 320\*205mm  
Weight: 0.9Kg



400pcs TI.85.2113 per Carton  
Dimensions: 320\*250\*230mm  
Weight: 10Kg



Pallet Dimensions:  
1200\*1000\*1350mm  
60 Cartons Per Pallet  
12 Cartons Per Layer, 5 Layers



Changelog for the datasheet

SPE-19-8-075 – TI.85.2113

| Revision: A (Original First Release) |             |
|--------------------------------------|-------------|
| Date:                                | 2019-06-12  |
| Notes:                               |             |
| Author:                              | Jack Conroy |

Previous Revisions

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