



Titan

AA.105.301621

### Specification

|                     |   |
|---------------------|---|
| <b>Part No.</b>     | AA.105.301621   |
| <b>Product Name</b> | Titan<br>GPS Antenna AA.105<br>3M RG174<br>Fakra Code C Blue SMB(F)   |
| <b>Feature</b>      | Magnetic Mount<br>Covert stylish design<br>Wide band input voltage<br>28db Gain<br>Gain is Customizable<br>IP-67 Waterproof |

# 1. Introduction

Our AA.105 Titan magnetic mount external antenna is ideal for robust, covert installations where durability

and small size is paramount. It is used in telematics and M2M applications, for example in

commercial vehicle installations for fleet management. It is fully waterproof to IP67 rating.

## 2. Electrical Specifications

### 2.1 Ceramic Patch Specification

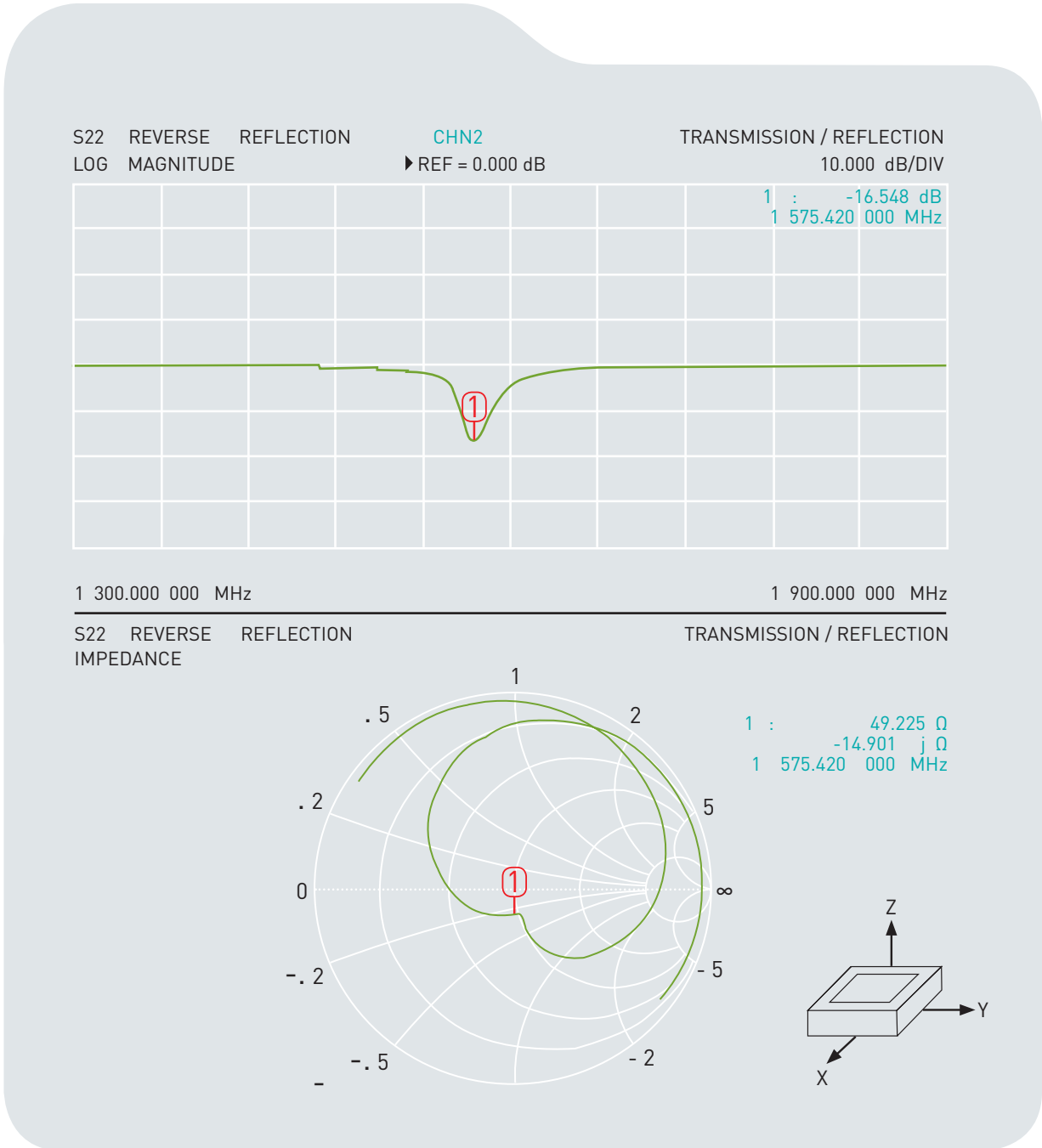
| Parameter         | Specification |
|-------------------|---------------|
| Outline Dimension | 25*25*4mm     |
| Ground Size       | 25*25*4mm     |
| Center Frequency  | 1575.42±3MHz  |
| Bandwidth         | 10MHz         |
| VSWR              | 1.92 Max      |
| Axial ratio       | 3dB Typ.      |
| Gain @ Zenith     | 2dBic Typ.    |
| Impedance         | 50Ω           |
| Polarization      | RHCP          |

### 2.2 LNA Specification

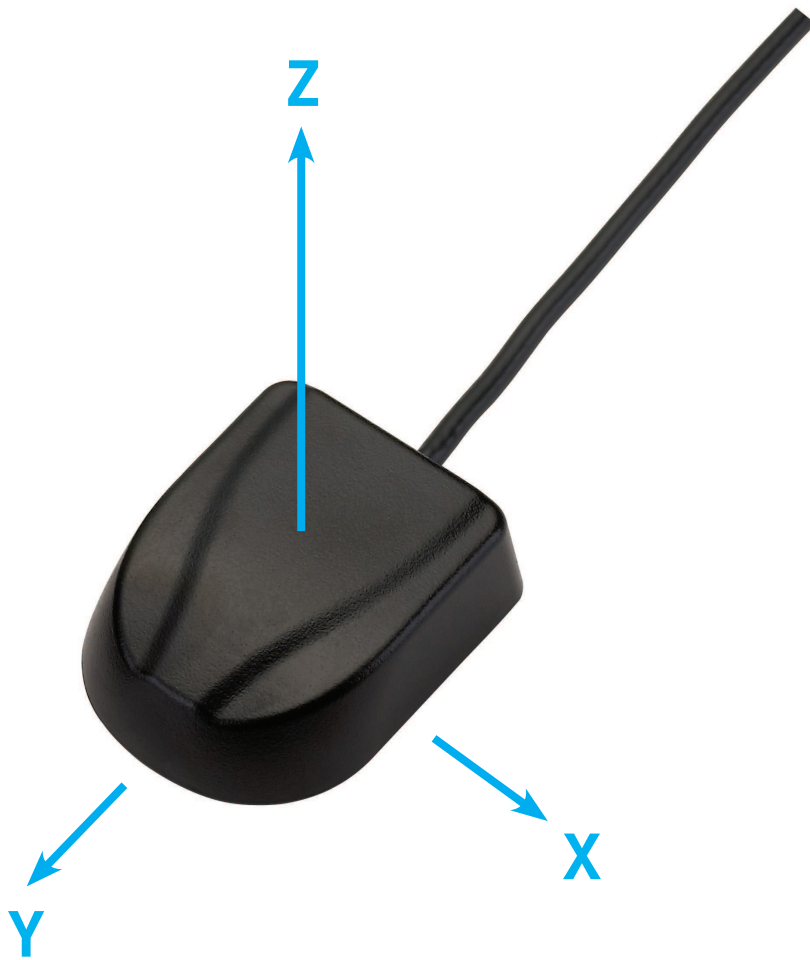
| Parameter          | Specification                                 |
|--------------------|---|
| Frequency          | 1575.42MHz                                    |
| Impedance          | 50Ω   |
| VSWR               | 1.92 Max.                                     |
| Gain               | 30dB Typ.                                     |
| Gain at Connector* | 28.4dB  |
| DC Power Input     | 2.7~5V  |
| Noise Figure       | 1.5dB Typ.                                    |
| Power Consumption  | 4.7mA @ 2.7V      6mA @ 3.3V      10.3mA @ 5V |
| Operating temp     | -40°C ~ +85°C                                 |
| Storage Temp       | -40°C ~ +90°C                                 |

\*Formula = Patch Antenna Average Gain + LNA typical gain – RG174 cable loss @1.2dB per meter = Gain at connector  
 Gain at the Connector - Patch Gain 2dB + LNA Gain 30dB – Cable loss of 1.2dB per metre  
 (@3m = 3.6dB) = 28.4dB approx.

### 3. Ceramic Antenna S11 (with housing)

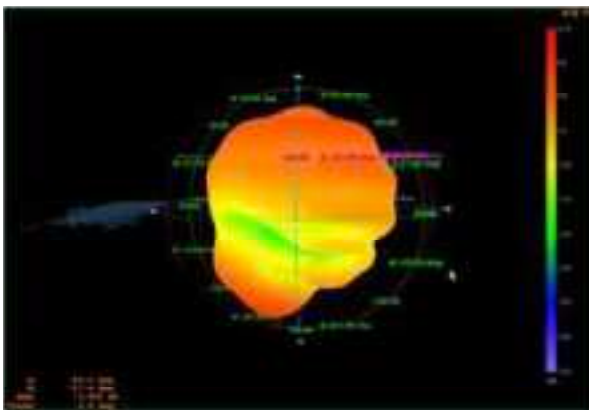


#### 4. Ceramic Antenna Radiation Pattern (with housing)

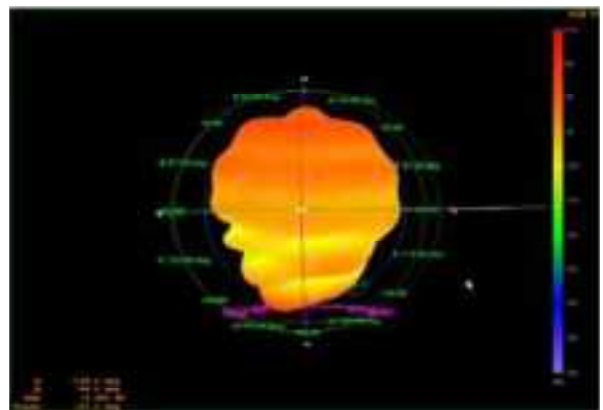


### 4.1 XZ Plane & YZ Plane

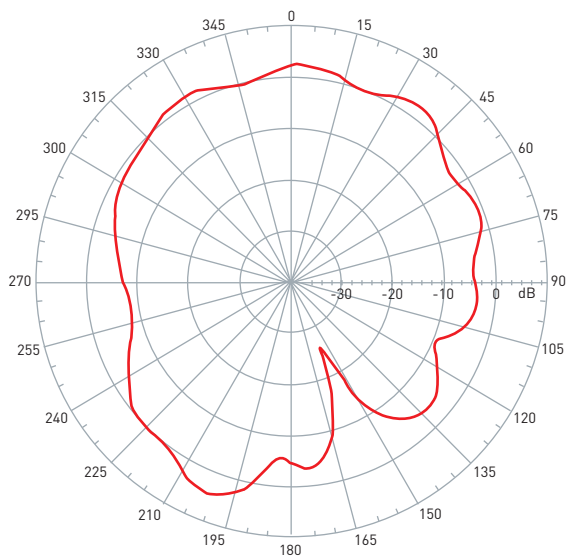
XZ Plane



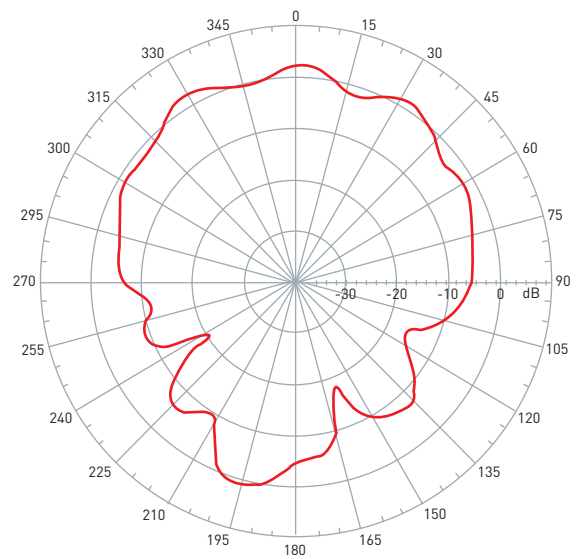
YZ Plane



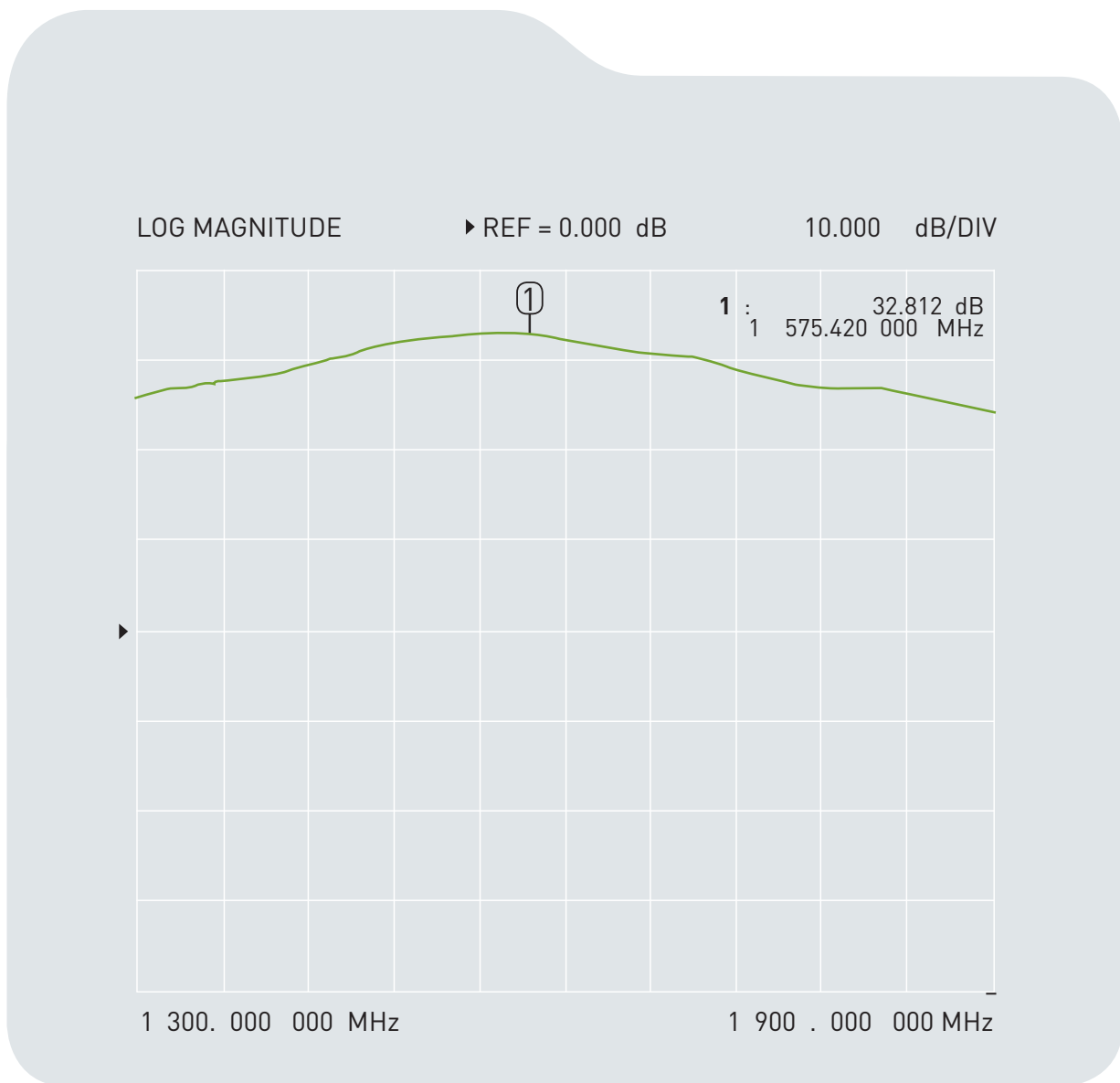
Far-field amplitude of goasial  
1583 06-5-8.nsi



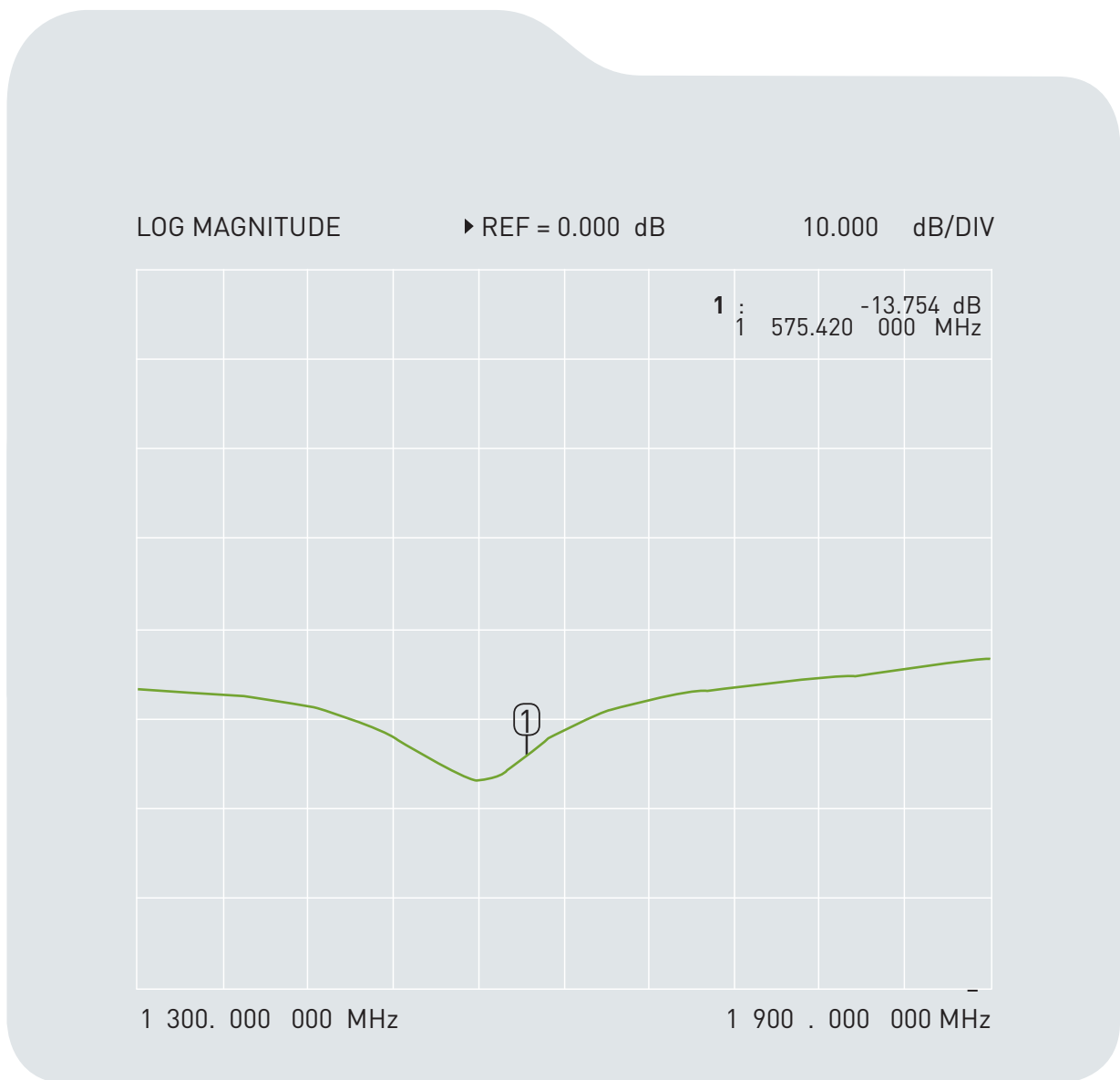
Far-field amplitude of goasial  
1583 06-5-8.nsi



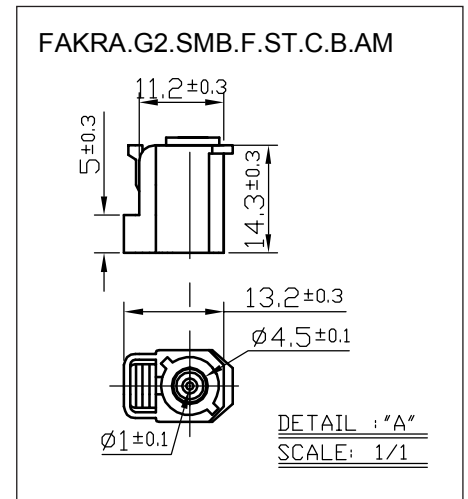
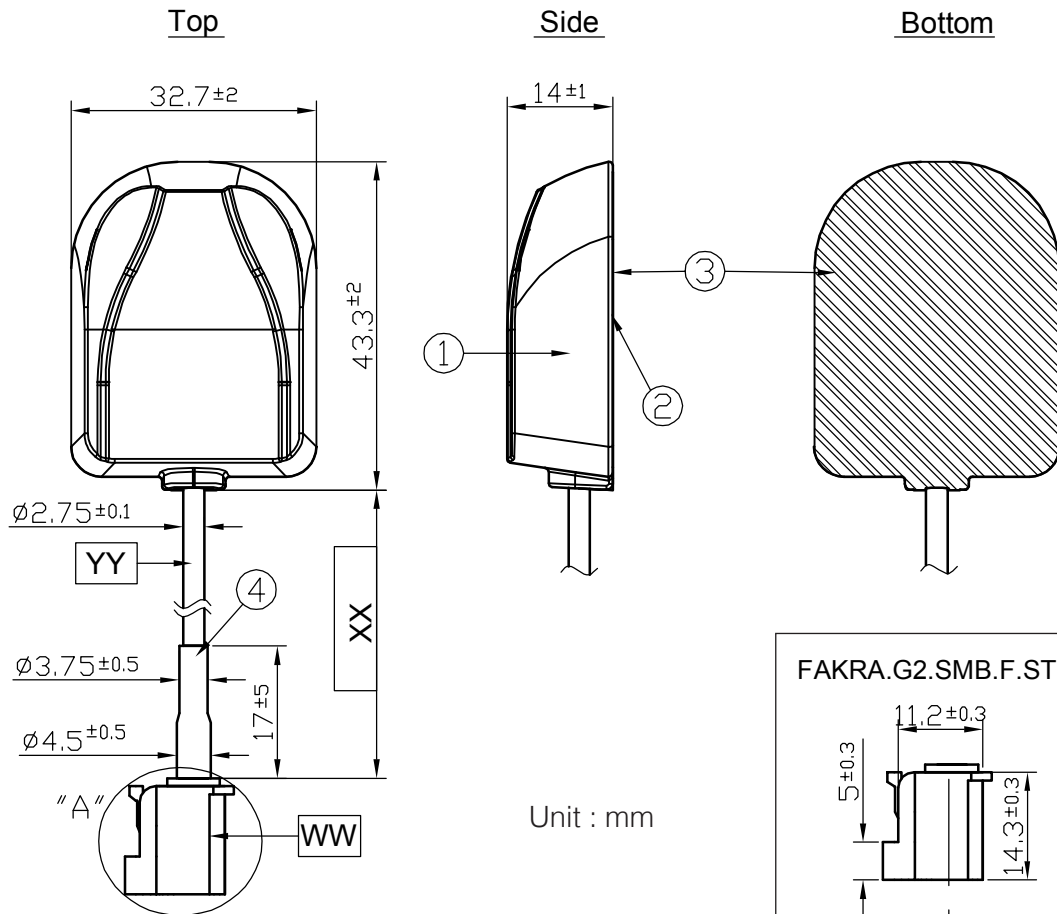
## 5. LNA gain



## 6. LNA S22



## 8. Drawing



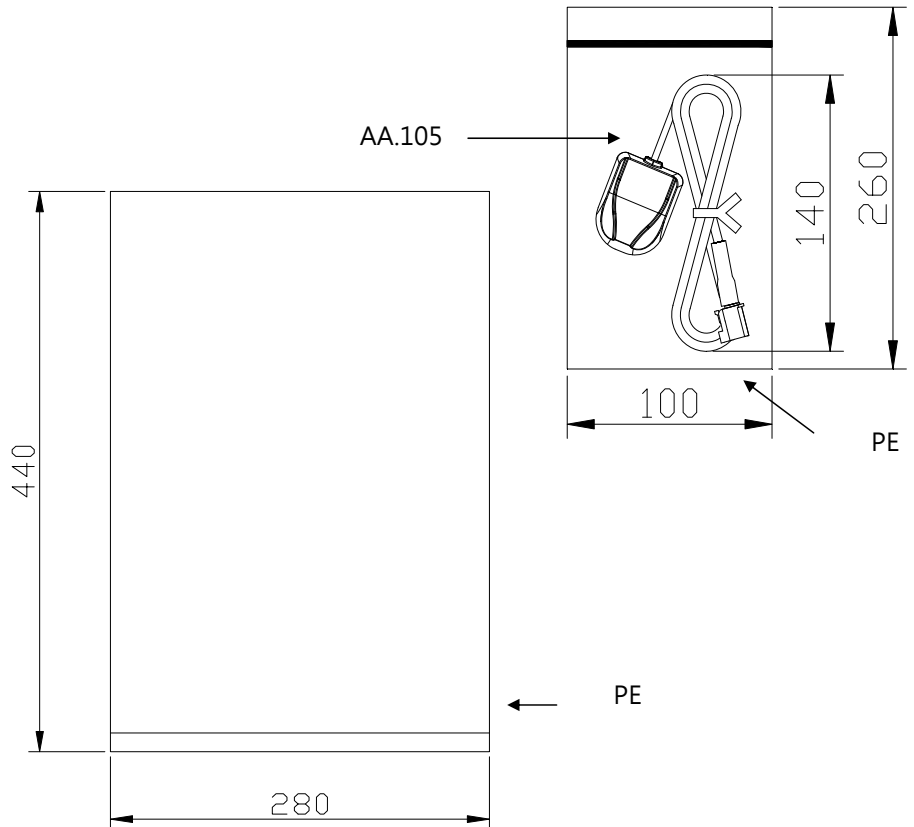
|   | Name                       | Material         | Finish | QTY |
|---|----------------------------|------------------|--------|-----|
| 1 | GPS Antenna Housing Top    | PC               | Black  | 1   |
| 2 | GPS Antenna Housing Bottom | PC               | Black  | 1   |
| 3 | Sticker                    | Matte Silver PET | Silver | 1   |
| 4 | Heat Shrink Tube           | PE               | Black  | 1   |

|    | Name           | Spec              | Finish | QTY |
|----|----------------|-------------------|--------|-----|
| WW | Connector Type | FAKRA Code C GEN2 | Blue   | 1   |
| XX | Cable Length   | $3000 \pm 30$ mm  | Black  | 1   |
| YY | Cable Type     | RG174             | Black  | 1   |

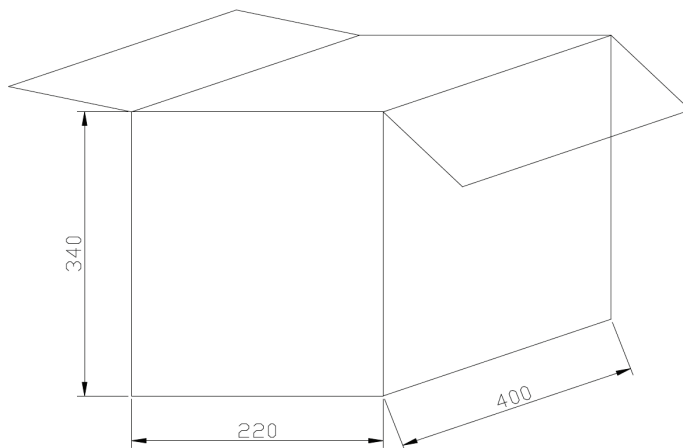


## 9. Packaging

1 pcs antenna per PE bag



Unit : mm



120 pieces per carton  
Carton Weight 9.87kg

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