



# 1164-1255, 1559-1610 MHz GNSS ACTIVE ANTENNA

**Part Number: 2108855-1**

## FEATURES & BENEFITS

- L1+G1 & L2+L5+E5b+G2 Multi bands for GNSS
- Active External Patch Antenna
- The following data is based on Dia.150mm ground size
- Different cable lengths and connector options available
- No matching circuits required

## RF SPECIFICATIONS

| Frequency Range (MHz)                                          | 1164 - 1255                              | 1559 - 1610                        |
|----------------------------------------------------------------|------------------------------------------|------------------------------------|
| VSWR                                                           | < 1.3:1                                  | < 1.4:1                            |
| System gain at Zenith @ 5V                                     | Typ. 22.4~31.3 dBic                      | Typ. 25.8~26.7 dBic                |
| Axial ratio at Zenith                                          | Typ.1.7 dB                               | Typ. 1.0 dB                        |
| Average Gain (Cable loss included)                             | 18.9 dBic                                | 19.6 dBic                          |
| Noise Figure                                                   | Typ. 1.9 dB @ 5V                         | Typ. 1.6 dB @ 5V                   |
| Group Delay @ Zenith Variation Across Single Constellation(ns) | 13.9                                     | 23.2                               |
| Phase Center Variation PCV (mm) including Active Circuitry     | 10.2 @1227.6 MHz<br>Max +/- 2.0 mm       | 7.3 @1575.42 MHz<br>Max +/- 2.0 mm |
| LNA (Voltage & Current)                                        | DC Voltage Range 3.0~5.0V & 15.0mA @5.0V |                                    |
| Feed Point Impedance                                           | 50 ohms                                  |                                    |
| Polarization                                                   | RHCP                                     |                                    |

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### MECHANICAL SPECIFICATIONS

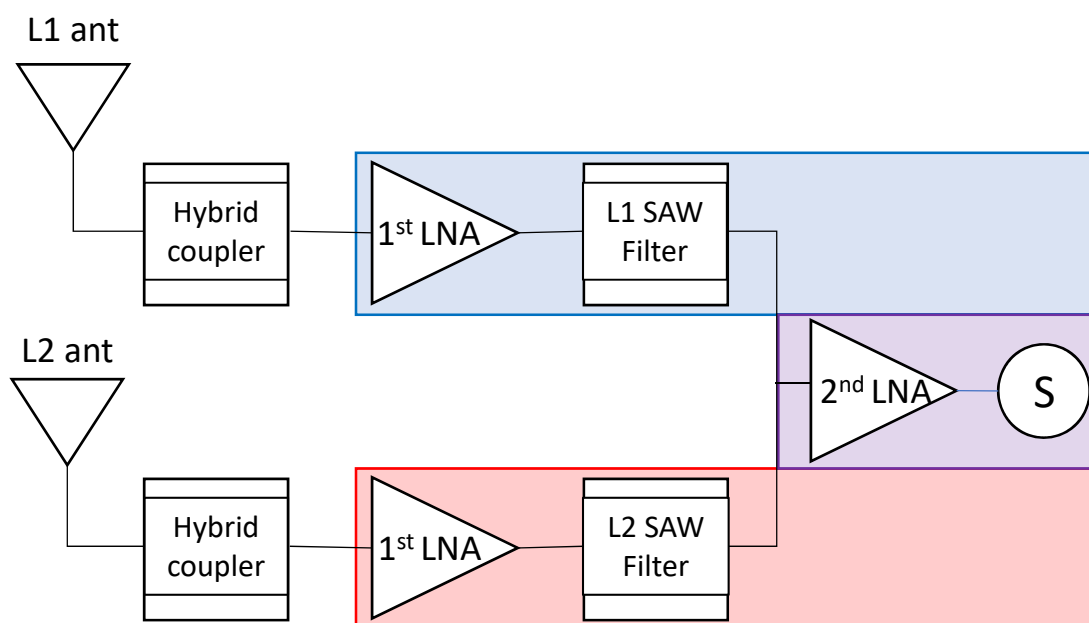
|                       |                                                                                |
|-----------------------|--------------------------------------------------------------------------------|
| Size                  | 82.0mm x 60.0 mm x 22.5mm                                                      |
| Weight                | < 170.0 g                                                                      |
| Mounting              | Magnetic                                                                       |
| Mating Connector      | SMA(Male)                                                                      |
| Cable                 | RG174 (Length : 5000±100mm)                                                    |
| Operating Temperature | -40 to +85°C                                                                   |
| Storage Temperature   | -40 to +85°C                                                                   |
| Hazardous Materials   | A certificate of conformance is available from the product page on TE website. |

### OUT OF BAND ATTENUATION

| Frequency (MHz)                     | 1459( $F_0-100$ ) | 1710( $F_0+100$ ) |
|-------------------------------------|-------------------|-------------------|
| Atten. (dB)                         | 32.96             | 30.80             |
| L1 & G1 $F_0 = 1559$ MHz & 1610 MHz |                   |                   |

| Frequency (MHz)                               | 1064( $F_0-100$ ) | 1355( $F_0+100$ ) |
|-----------------------------------------------|-------------------|-------------------|
| Atten. (dB)                                   | 21.70             | 44.11             |
| L2, L5, E5b, & G2 $F_0 = 1164$ MHz & 1255 MHz |                   |                   |



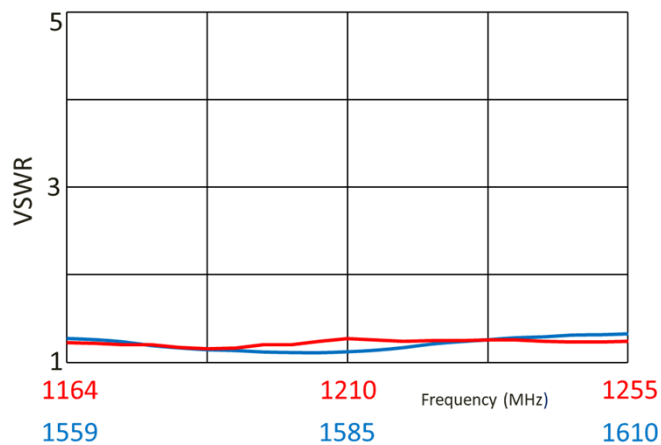
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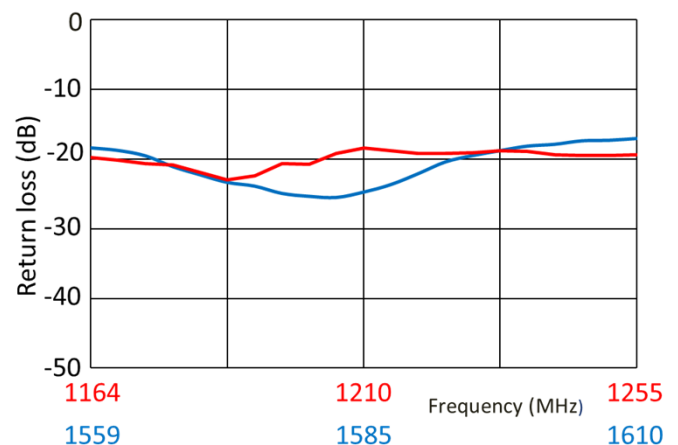
### RF DATA

(shown as 2108855-1 : Ground size :Diameter 150mm, DC 5V & Current 15.0mA.)

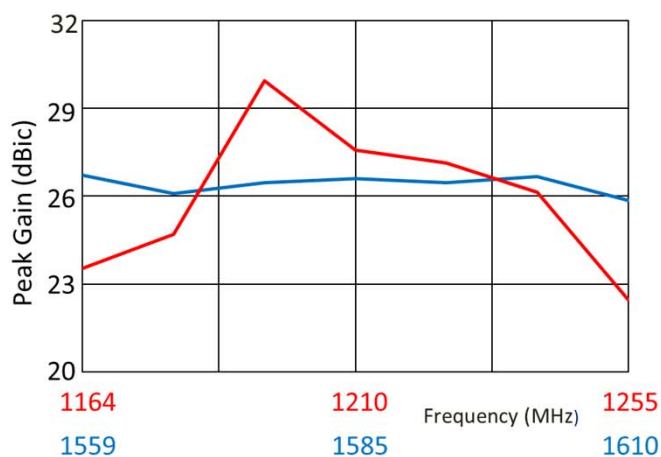
VSWR



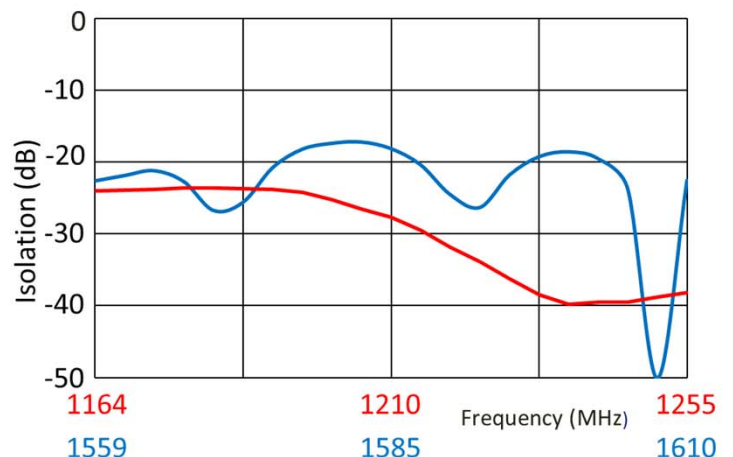
Return Loss



Peak Gain



Isolation



Antenna gain varies with cable length

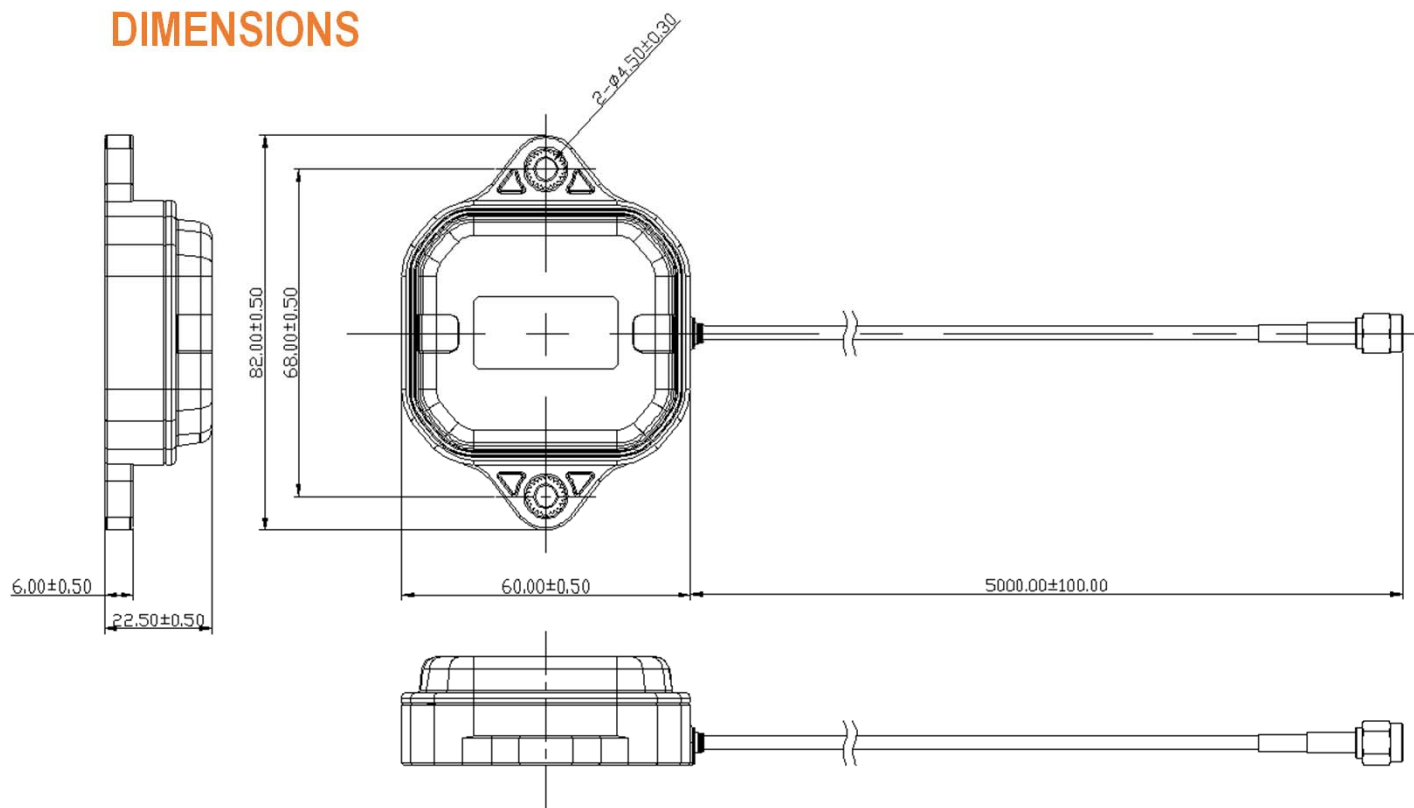
(shown as 2108855-1 : Ground size :Diameter 150mm, DC 5V & Current 15.0mA.)



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DIMENSIONS



Dimension: mm  
Diagrams is not to scale

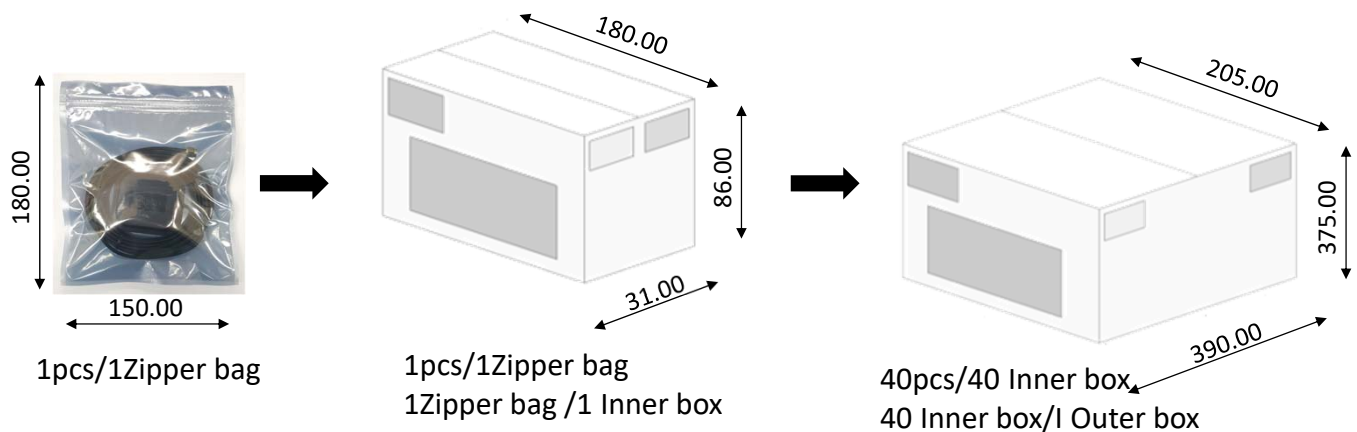
MATING COMPONENTS

|                   |                |                                                                                                                           |                                                                                                                                                                                                               |
|-------------------|----------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2108855-1         | SMA (Male)     | 5-1814400-2: SMA JACK, RIGHT ANGLE<br> | 2016682-2: SMA GEN1 (MHF type),1.13 cable, Length=100mm<br>2016682-4: SMA GEN1 (MHF type),1.13 cable, Length=200mm<br>   |
|                   |                | 5-1814832-2: SMA JACK, VERTICAL<br>    | 2016694-2: SMA GEN4 (MHF4 type),1.13 cable, Length=100mm<br>2016694-4: SMA GEN4 (MHF4 type),1.13 cable, Length=200mm<br> |
| PART NUMBER       | CONNECTOR TYPE | RF CONNECTOR                                                                                                              | SMA JACK TO MICRO COAX CABLE ASSEMBLIES                                                                                                                                                                       |
| MATING COMPONENTS |                |                                                                                                                           |                                                                                                                                                                                                               |

## 1164-1255, 1559-1610 MHz GNSS ACTIVE ANTENNA

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### PACKAGING



### TE TECHNICAL SUPPORT CENTER

|                   |                       |
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| Latin/S. America: | +54 (0) 11-4733-2200  |
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05/2021