



# 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

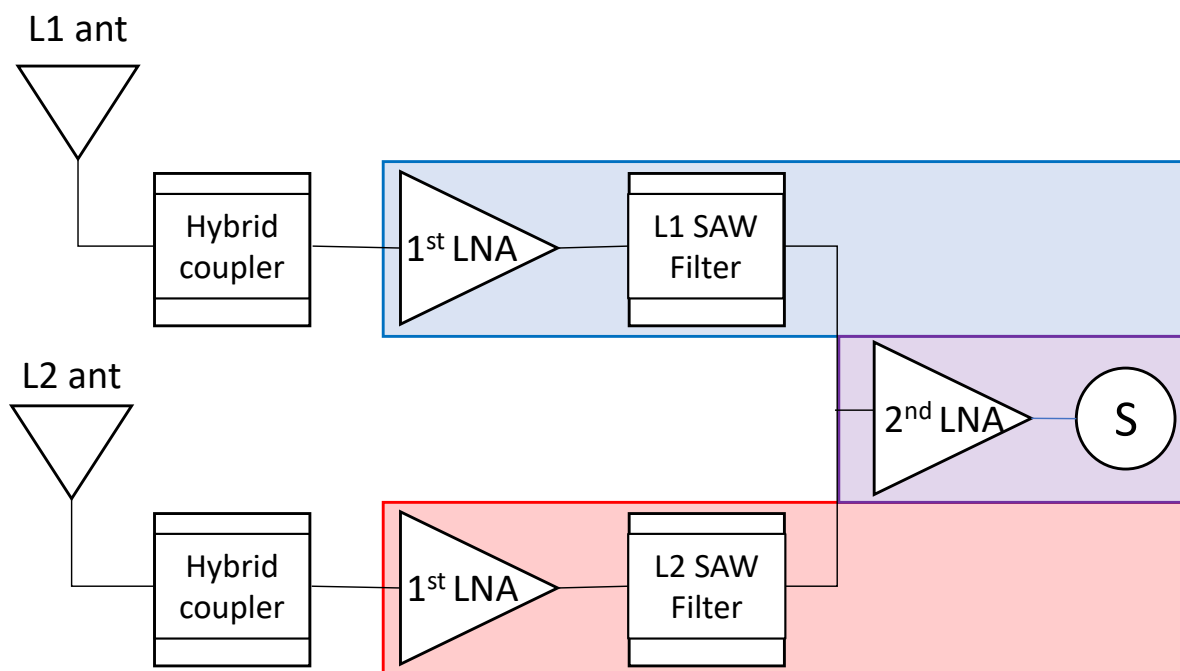
Frequency Range (MHz)	1164 - 1255	1559 - 1610
VSWR	< 1.3:1	< 1.4:1
System gain at Zenith @ 5V	Typ. 22.4~31.3 dBic	Typ. 25.8~26.7 dBic
Axial ratio at Zenith	Typ.1.7 dB	Typ. 1.0 dB
Average Gain (Cable loss included)	18.9 dBic	19.6 dBic
Noise Figure	Typ. 1.9 dB @ 5V	Typ. 1.6 dB @ 5V
Group Delay @ Zenith Variation Across Single Constellation(ns)	13.9	23.2
Phase Center Variation PCV (mm) including Active Circuitry	10.2 @1227.6 MHz Max +/- 2.0 mm	7.3 @1575.42 MHz 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	
Water Proof	IP67	

## 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

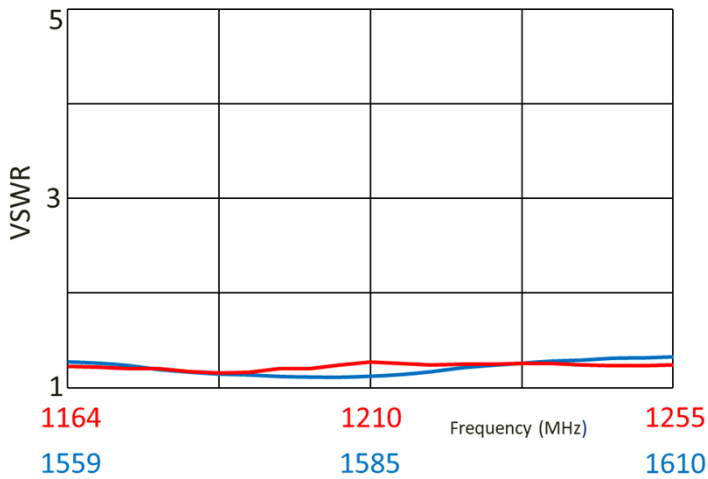
Frequency (MHz)	1459( $F_0-100$ )	1710( $F_0+100$ )
Atten. (dB)	32.96	30.80
L1 & G1 $F_0 = 1559$ MHz & 1610 MHz		
Frequency (MHz)	1064( $F_0-100$ )	1355( $F_0+100$ )
Atten. (dB)	21.70	44.11
L2, L5, E5b, & G2 $F_0 = 1164$ MHz & 1255 MHz		



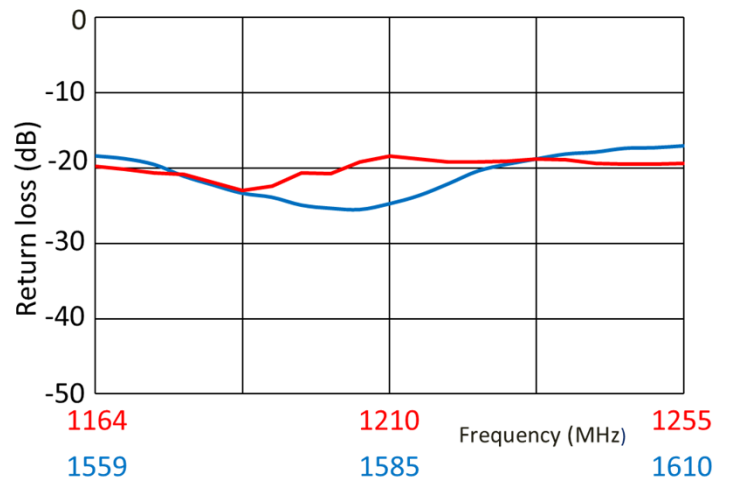
## RF DATA

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

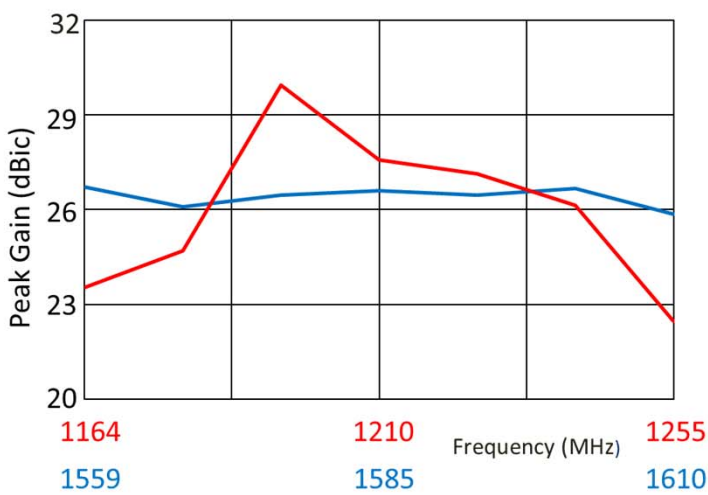
VSWR



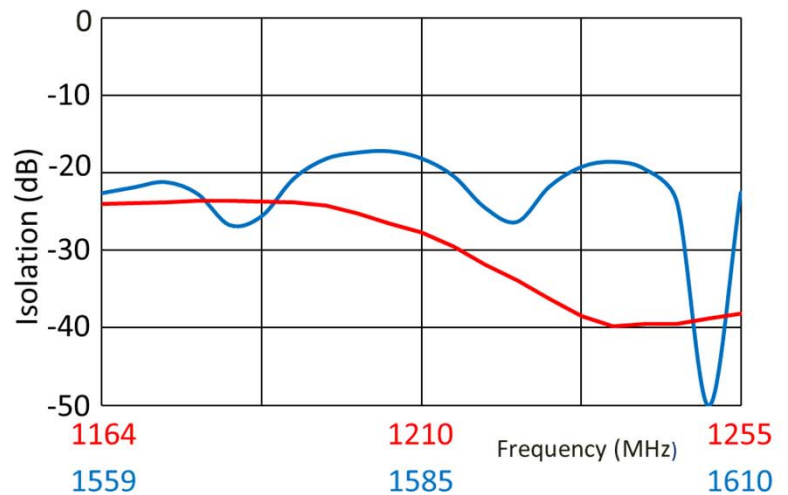
Return Loss



Peak Gain



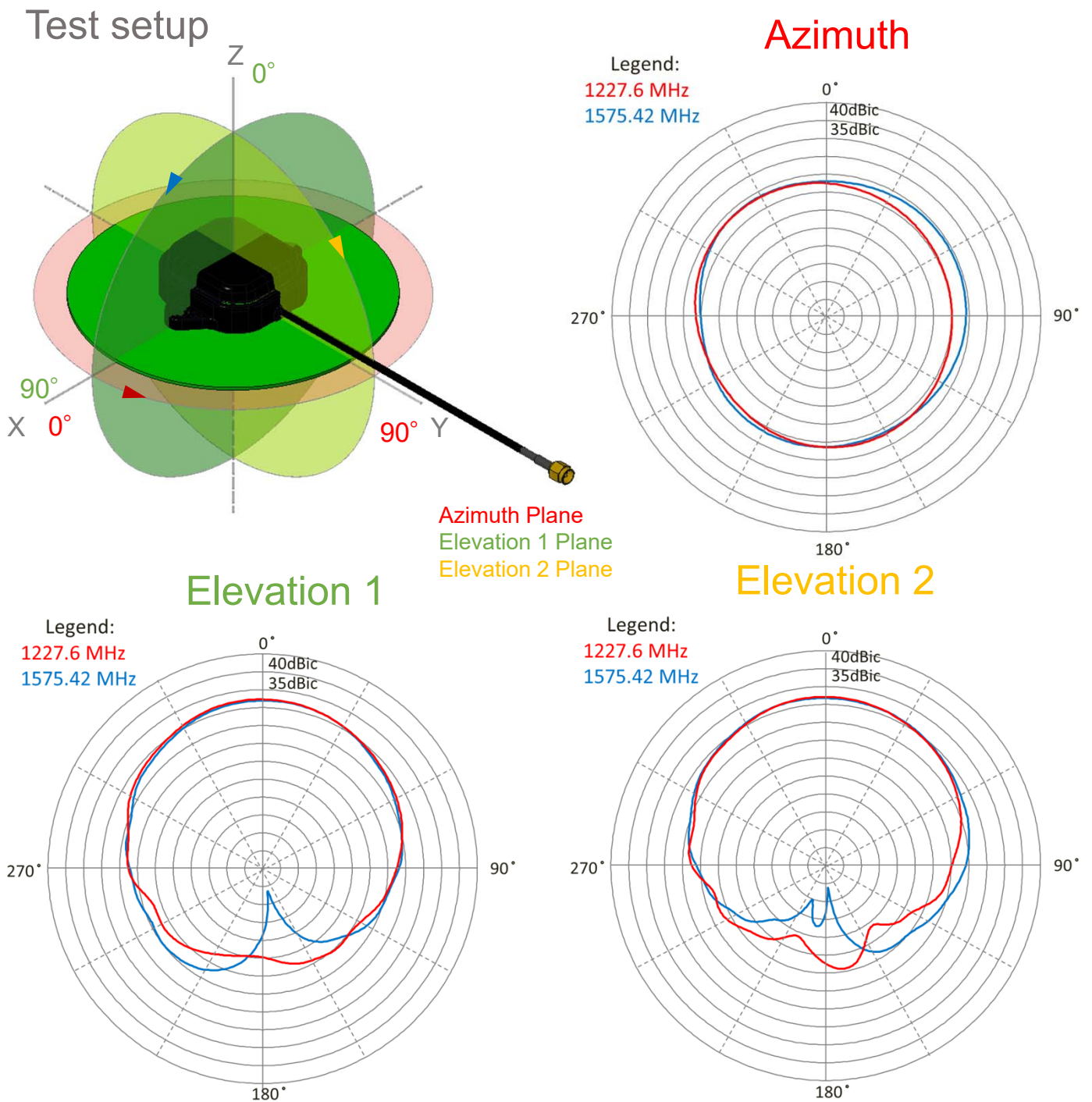
Isolation



Antenna gain varies with cable length

## RADIATION PATTERN

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

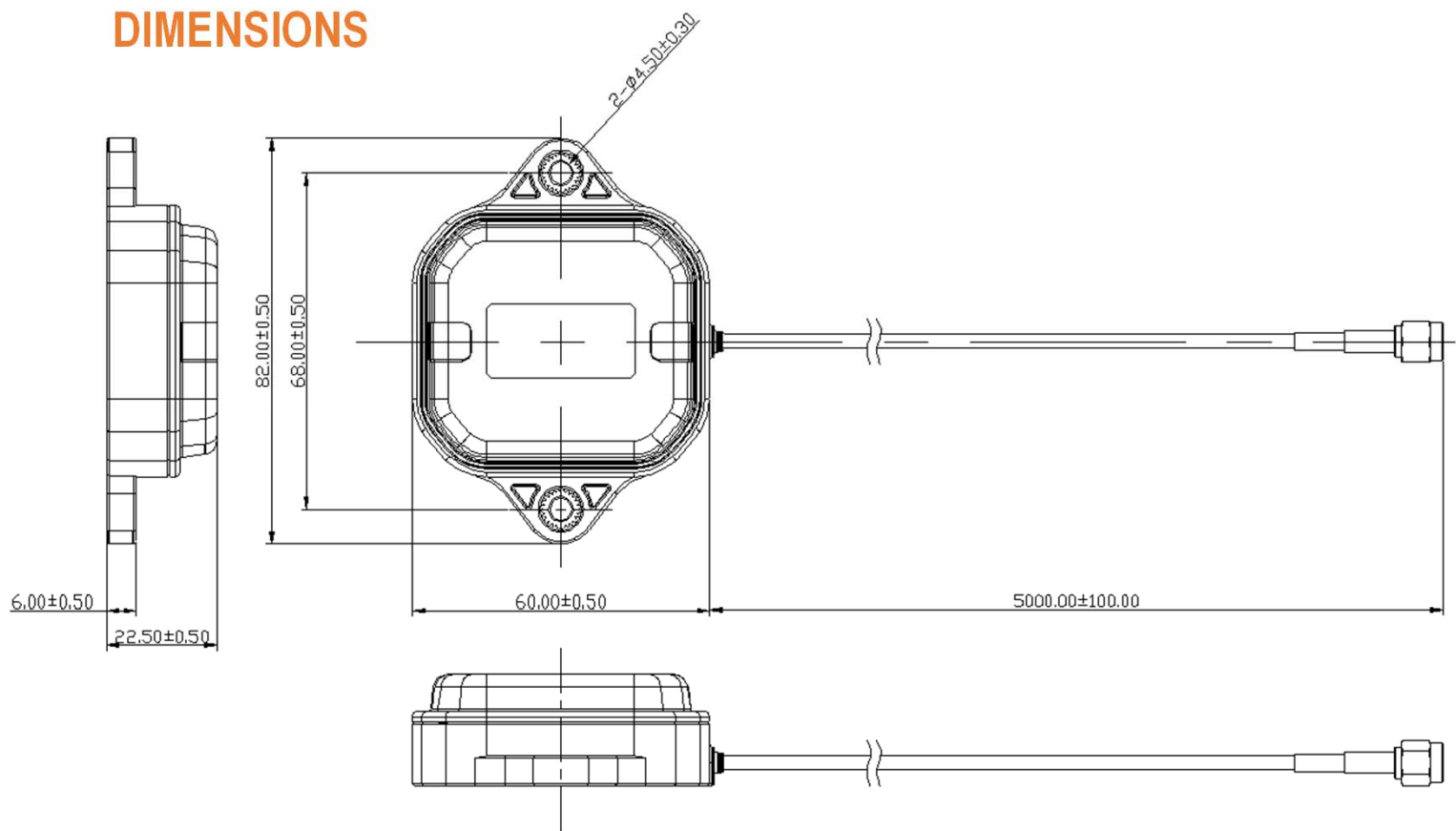


Antenna gain varies with cable length

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Standard Antenna Solutions

## DIMENSIONS

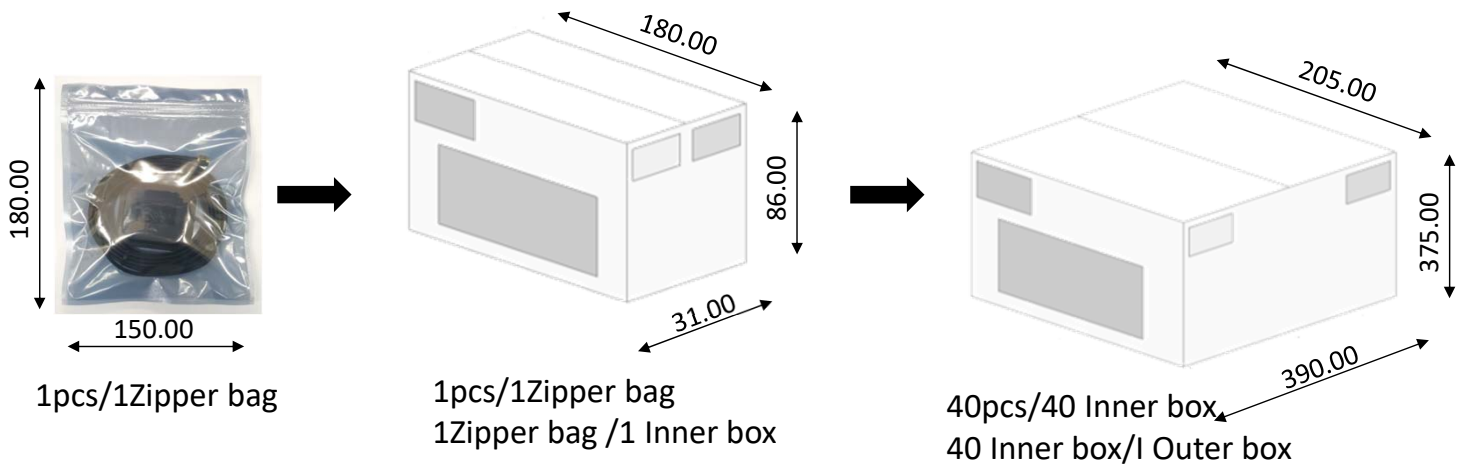


**Dimension: mm**  
**Diagrams is not to scale**

## MATING COMPONENTS

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

## PACKAGING



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