

1194-1255, 1559-1610 MHz GNSS ACTIVE ANTENNA

Part Number: 2108853-1

FEATURES & BENEFITS

- L1+G1 & L2+E5b+G2 Multi bands for GNSS
- Active 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)	1194 - 1255	1559 - 1610
VSWR	< 1.3:1	< 1.2:1
System Gain at Zenith @ 5V	Typ. 23.2~32.7 dBic	Typ. 30.7~33.5 dBic
Axial Ratio at Zenith	Typ.1.6 dB	Typ. 1.0 dB
Average Gain (Cable loss included)	21.6 dBic	25.0 dBic
Noise Figure	Typ. 3.0 dB @ 5V	Typ. 2.4 dB @ 5V
Group Delay @ Zenith Variation Across Single Constellation(ns)	10.8	29.6
Phase Center Variation PCV (mm) including Active Circuitry	0.7 @1227.6 MHz Max +/- 2.0 mm	0.6 @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	

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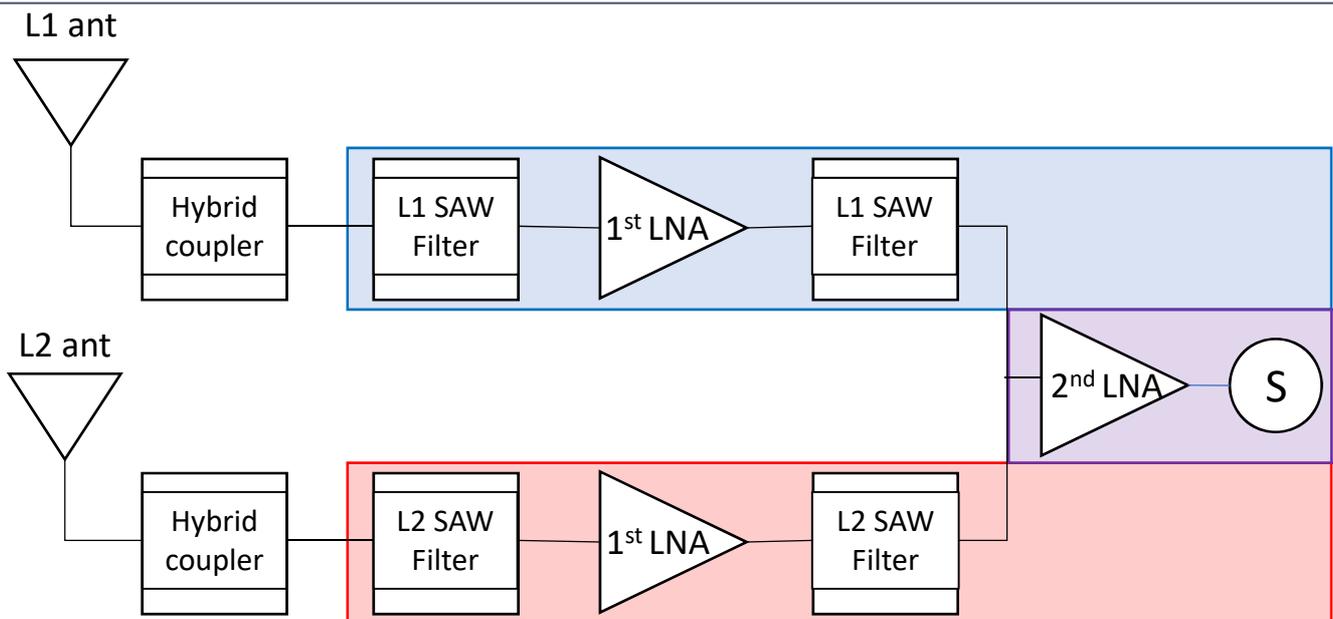
Standard Antenna Solutions

MECHANICAL SPECIFICATIONS

Size	43.0 mm x 43.0 mm x 13.0 mm
Weight	< 45.0 g
Mounting	Adhesive Tape
Mating Connector	MHF I-type receptacle (TE PN 2337019-1)
Cable	Coaxial Cable: 1.13mm Dia. (Length : 100±3mm)
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)	698	960	1459(F ₀ -100)	1710(F ₀ +100)	2170	2690	
Atten. (dB)	88.60	84.17	66.19	74.69	77.22	82.21	
L1 & G1 F ₀ = 1559 MHz & 1610 MHz							
Frequency (MHz)	698	960	1094(F ₀ -100)	1355(F ₀ +100)	1710	2170	2690
Atten. (dB)	65.56	49.80	50.54	79.71	46.54	78.53	82.52
L2, E5b, & G2 F ₀ = 1194 MHz & 1255 MHz							



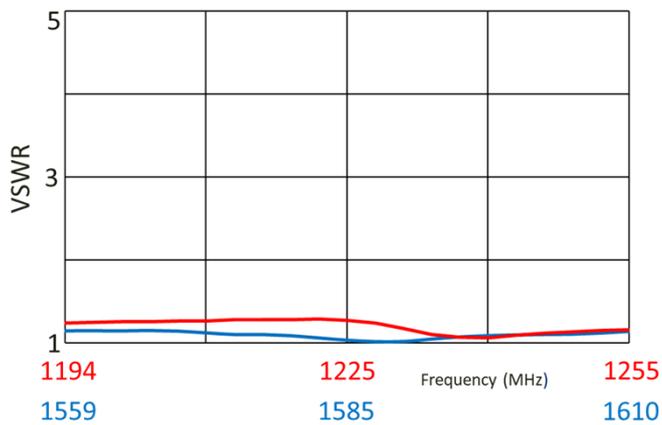
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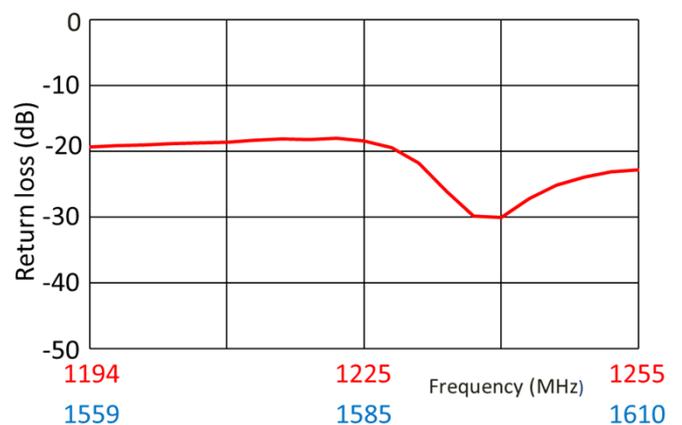
RF DATA

(shown as 2108853-1 : Ground size :Diameter 150mm, DC 5V & Current 15.0mA.)

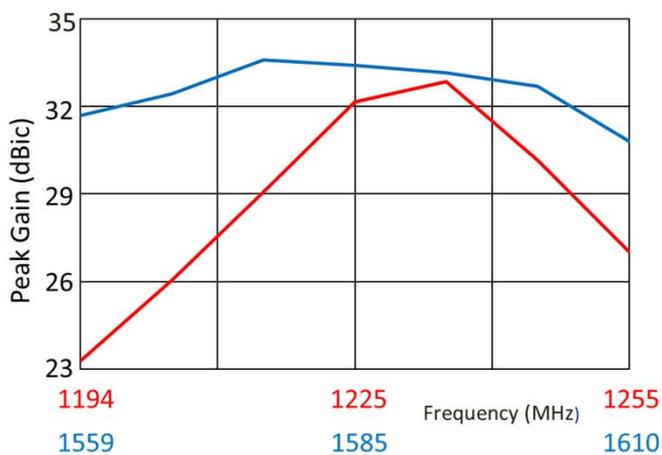
VSWR



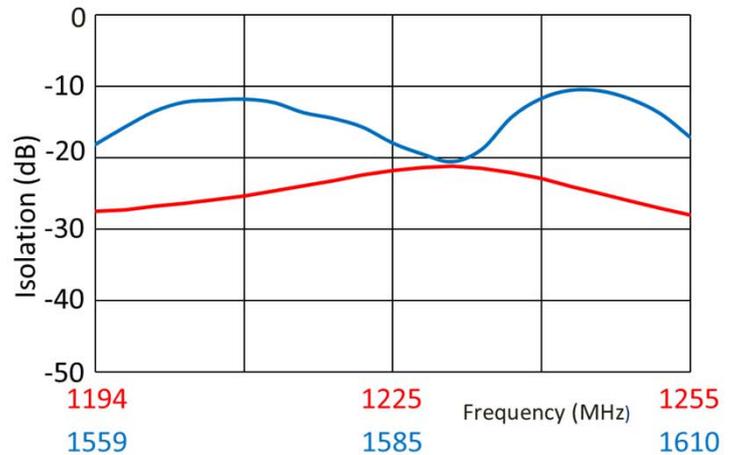
Return Loss



Peak Gain



Isolation

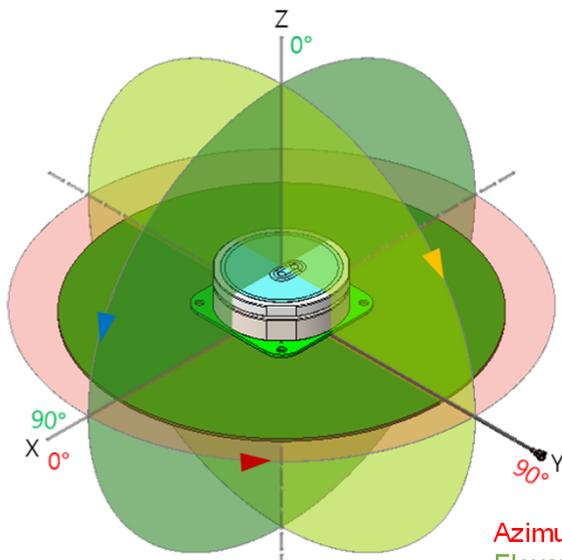


Antenna gain varies with cable length

RADIATION PATTERN

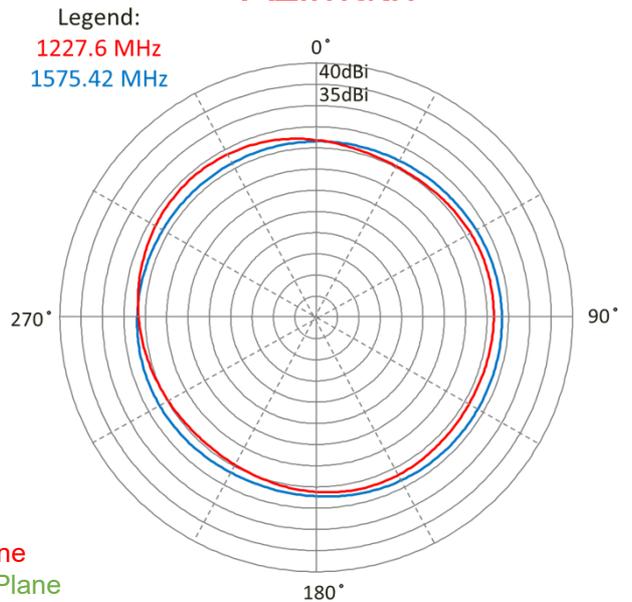
(shown as 2108853-1 : Ground size :Diameter 150mm, DC 5V & Current 15.0mA.)

Test setup

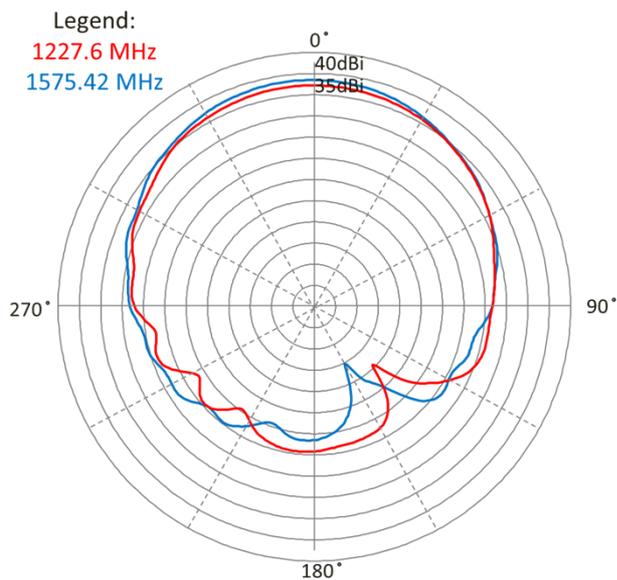


Azimuth Plane
Elevation 1 Plane
Elevation 2 Plane

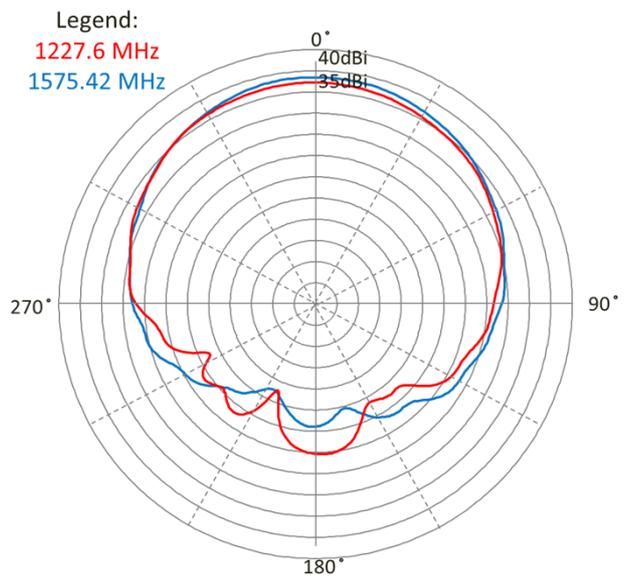
Azimuth



Elevation 1



Elevation 2

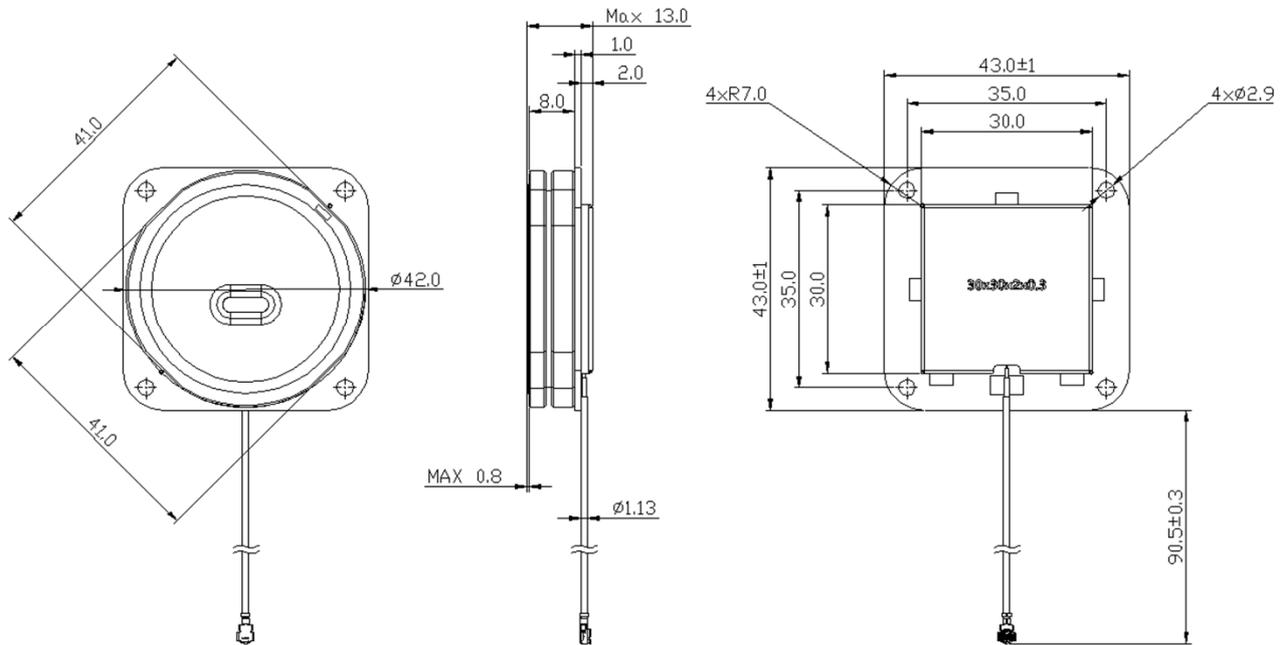


Antenna gain varies with cable length

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DIMENSIONS



Dimension: mm
Diagrams is not to scale

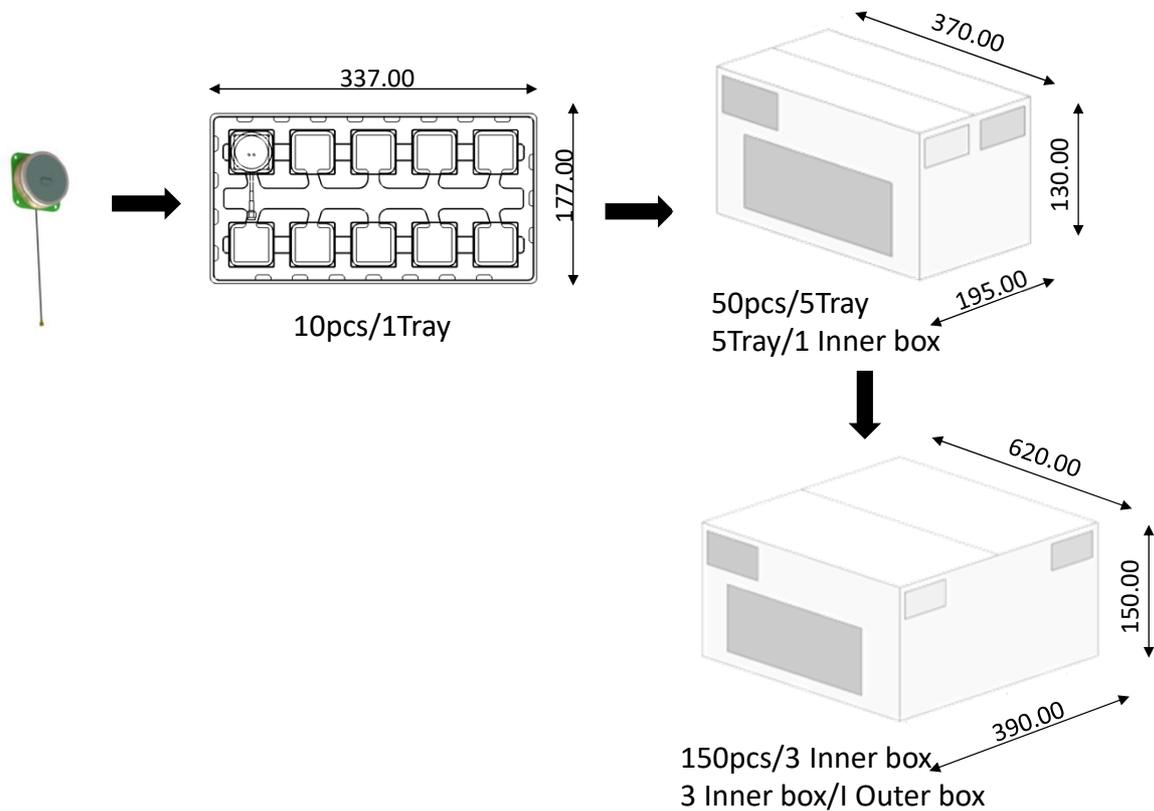
MATING COMPONENTS

2108853-1	100.0	3.937	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
PART NUMBER	MM	INCH	CONNECTOR TYPE (ON CABLE)	PART NUMBER	IMAGE
	CABLE LENGTH(A)			MATING COMPONENTS	

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PACKAGING



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