

Series: GNSS Active Antenna

TECHNICAL DATA SHEET

Description: 28dBi GNSS Mag Mount Antenna,

Coax Feed

PART NUMBER: GNSSMMSMA



Features:

- Frequency 1559-1606 MHz
- Antenna Gain 1/2.4/3.5 dBic
- Polarization RHCP
- LNA Gain 28dB
- Current consumption 9mA
- Cable RG-174 with SMA Male
- RoHS Compliant

Applications:

- GPS, Glonass, Beidou
- Navigation
- Location Based Services
- Fleet management
- Asset tracking
- Indoor/Outdoor IP67

All dimensions are in mm / inches

Issue: 1914

In the effort to improve our products, we reserve the right to make changes judged to be necessary. $\texttt{CONFIDENTIAL} \ \texttt{AND} \ \texttt{PROPRIETARY} \ \texttt{INFORMATION}$

This document contains confidential and proprietary information of Pulse Electronics, Inc. (Pulse) and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse is strictly forbidden. For more information:

Pulse Worldwide Headquarters 15255 Innovation Drive #100 San Diego, CA 92128 USA Tel:1-858-674-8100 Pulse/Larsen Antennas 18110 SE 34th St Bldg 2 Suite 250 Vancouver, WA 98683 USA Tel: 1-360-944-7551 Europe Headquarters Pulse GmbH & Do, KG Zeppelinstrasse 15 Herrenberg, Germany Tel: 49 7032 7806 0 Pulse (Suzhou) Wireless Products Co, Inc. 99 Huo Ju Road(#29 Bldg,4th Phase Suzhou New District Jiangsu Province, Suzhou 215009 PR China Tel: 86 512 6807 9998



Description: 28dBi GNSS Mag Mount Antenna,

Coax Feed

Series: GNSS Active Antenna PART NUMBER: GNSSMMSMA

ELECTRICAL SPECIFICATIONS

Antenna Type Patch

Frequency 1559-1563/1574-1577/1598-1606MHz

Nominal Impedance 50 Ω

VSWR of Antenna 2.5/2/2 Max

Radiation Pattern Omni

 Antenna Gain
 1/2.4/3.5 dBic

 Efficiency
 55%/65%/85%

Polarization RHCP

VSWR of LNA 2 Max

LNA Gain 28 dB Min
DC Power Input of LNA 3~5 Vdc

Noise Figure 1.1 dB Typ.

Power consumption(@3.3V) 9 mA Typ.

MECHANICAL SPECIFICATIONS

Overall Length 35.2 x 44 x 14.5 mm

Weight 68.39 g

Antenna Color / Material Black/PC+ABS

Connector type SMA Male

Cable type RG-174

Cable length 3000 mm

Mounting Method Magnet

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature -40 ~ +85° C

Storage Temperature $-40 \sim +85^{\circ}$ C

Ingress Protection IP67

RoHS Compliant Yes

Issue: 1914

ROHS



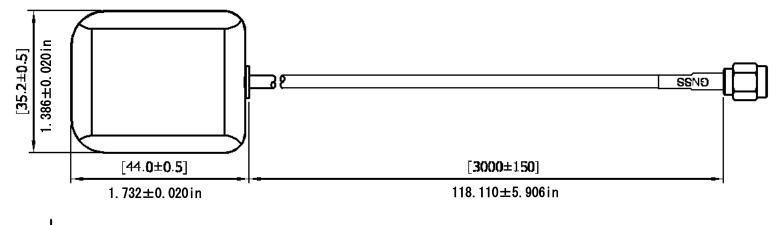
Description: 28dBi GNSS Mag Mount Antenna,

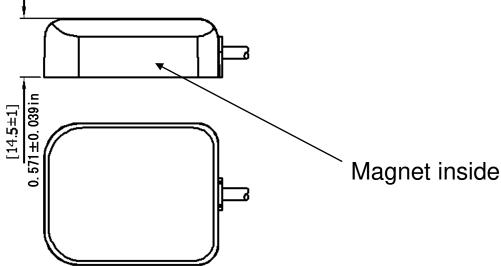
Coax Feed

Series: GNSS Active Antenna

PART NUMBER: GNSSMMSMA

MECHANICAL DRAWING







Description: 28dBi GNSS Mag Mount Antenna,

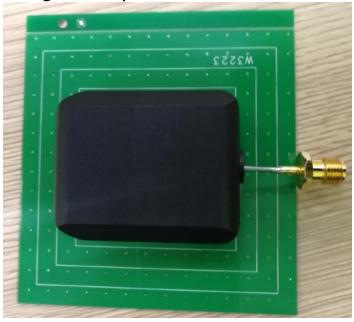
Coax Feed

Series: GNSS Active Antenna

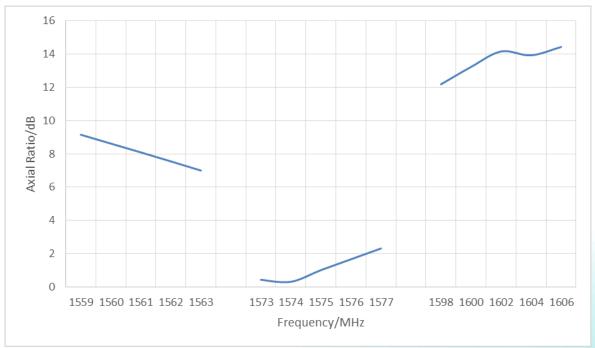
PART NUMBER: GNSSMMSMA

TEST SETUP OF ANTENNA

Test with 70*70mm ground plane.



Axial Ratio vs Frequency



Issue: 1914



Description: 28dBi GNSS Mag Mount Antenna,

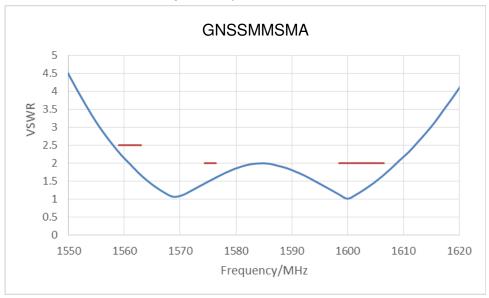
Coax Feed

Series: GNSS Active Antenna

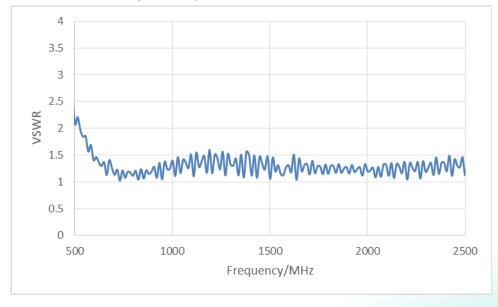
PART NUMBER: GNSSMMSMA

CHARTS

VSWR of Antenna vs Frequency



VSWR of LNA vs Frequency





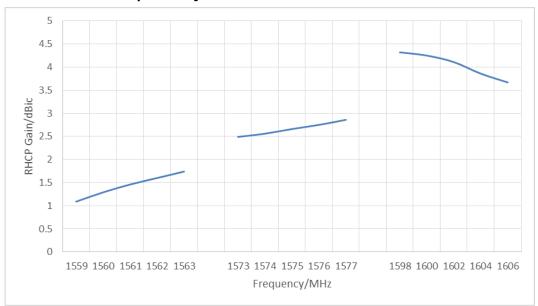
Description: 28dBi GNSS Mag Mount Antenna,

Coax Feed

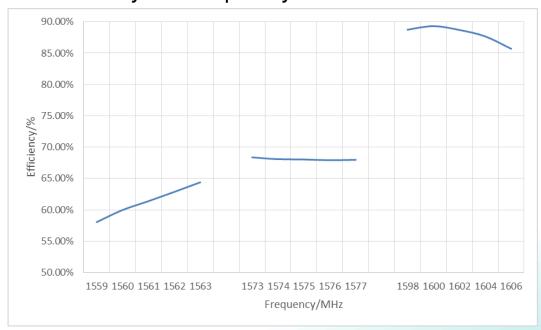
Series: GNSS Active Antenna PART NUMBER: GNSSMMSMA

CHARTS

RHCP Gain vs Frequency



Radiation Efficiency vs Frequency



Issue: 1914



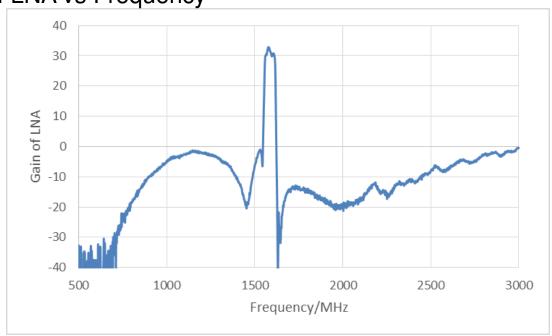
Description: 28dBi GNSS Mag Mount Antenna,

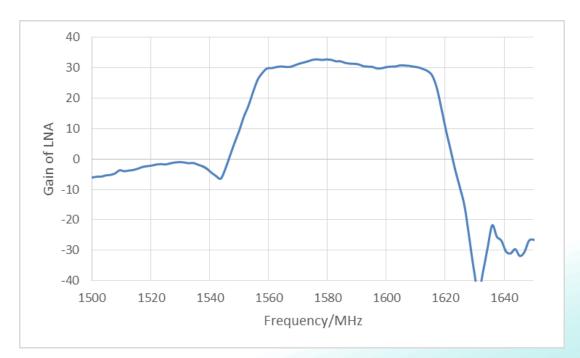
Coax Feed

Series: GNSS Active Antenna PART NUMBER: GNSSMMSMA

CHARTS

Gain of LNA vs Frequency











Description: 28dBi GNSS Mag Mount Antenna,

Coax Feed

Series: GNSS Active Antenna

PART NUMBER: GNSSMMSMA

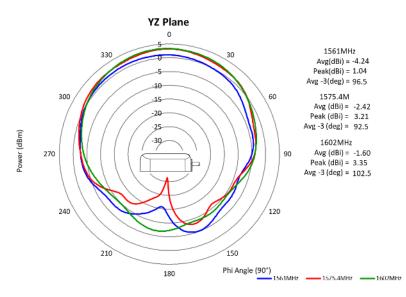
CHARTS

Radiation Pattern of BD,GPS and GLONASS

Horizontal Plane (Theta=45°)

XY Plane 1561MHz Avg(dBi) = -0.70Peak(dBi) = 0.80 Avg - 3(deg) = 359.5300 1575.4M Avg (dBi) = 1.01 Peak (dBi) = 1.90 -20 Avg -3 (deg) = 359.5 -3Q 1602MHz 270 Avg (dBi) = 1.10 Peak (dBi) = 1.52 Avg - 3 (deg) = 359.5Theta Angle (45°) 1561MHz -1575.4MHz ----1602MHz

Elevation Plane (Phi=90°)





Description: 28dBi GNSS Mag Mount Antenna,

Coax Feed

Series: GNSS Active Antenna PART NUMBER: GNSSMMSMA

PACKAGING

1 PCS / PE Bag 80 PCS / Carton

