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Laird CONNECTIVITY

GNS1559MPF

Asset Tracking External Antenna Mini GNSS



The Laird Connectivity GNS1559MPF or Mini GNSS is a rugged, high performance, and cost-effective solution for most GNSS or asset tracking applications. The small form factor makes it easy to install on or in vehicles or buildings where global navigation is required. It is designed to withstand impact as well as water and dust intrusion (IP67 rated). The antenna can be configured with different cable types, in varying lengths and with various connector types.

Laird Connectivity has a full line of high performance, cost effective GPS/GNSS antennas for any telematics or GPS/GNSS application.

FEATURES AND BENEFITS

- High performance in a small form factor
- IP67 rated for use in highly demanding environments and operating conditions
- Rugged impact resistant housing
- Various connector options

APPLICATIONS

- Fleet and logistics management
- General automotive aftermarket
- Highway construction
- Land Surveying and management
- Asset visibility and tracking
- Warehouse management

ELECTRICAL SPECIFICATIONS

Antenna Model	GNS1559MPF		
Band	BEIDOU	GPS	GLONASS
Frequency of Operation, MHz	1559.052 - 1563.144	1574.42 - 1576.42	1598.0625 - 1605.89
Peak Gain, Passive * (dBic)	4.6	2.6	4.4
Peak Gain, Active ** (dBic)	30.7	31.9	31.5
Average Efficiency %	70	55.0	59
VSWR **, Average	1.5	1.9	1.5
VSWR **, Max	2.1	2.4	1.8
Nominal Impedance (Ohms)	50		
Polarization	RHCP		
Input Max Power (dBm)	-10		
LNA Noise Figure @ room temperature, Max (dB)	≤ 2.5 @ 1575 MHz		
DC Voltage (Vdc)	2.5 - 7.0		
Current Consumption, Max @ room temp mA)	8.5 ± 3 @ 3.0V		
Out-of-band Signal Rejection Min @ room temp (dBc)	80 (@ 698- 960 MHz) 80 (@ 1428- 1511 MHz) 50 @ (1627- 1638 MHz) 80 @ (1710- 2700 MHz) 70 (@ 4900- 5800 MHz)		

Note:
** Passive GNSS is measured on 30.5 cm (1 ft) metal ground plane & 50 mm 0.16 ft) RG174 cable.*
*** Antenna is measured on 30.5 cm (1 ft) metal ground plane & 1m (3.28 ft) RG174 cable.*
Antenna specification is subjected to change according to the ground plane size & cable length.

MECHANICAL SPECIFICATIONS

Dimensions – diameter x height – mm (inches)	48.4 x 14.9 (1.90 x 0.59)
Weight, kg (lbs)	0.08 kg (0.18 lbs)
Mounting Method	P-mount
Radome Material	PC, UL94-V0

ENVIRONMENTAL SPECIFICATIONS

Operating Environment	Indoor/Outdoor
Operating Temperature – °C (°F)	-35 to +75°C (-31 to +167°F)
Storage Temperature – °C (°F)	-40 to +85°C (-40 to +185°F)
Ingress Protection Rating	IP67
Material Substance Compliance	RoHS

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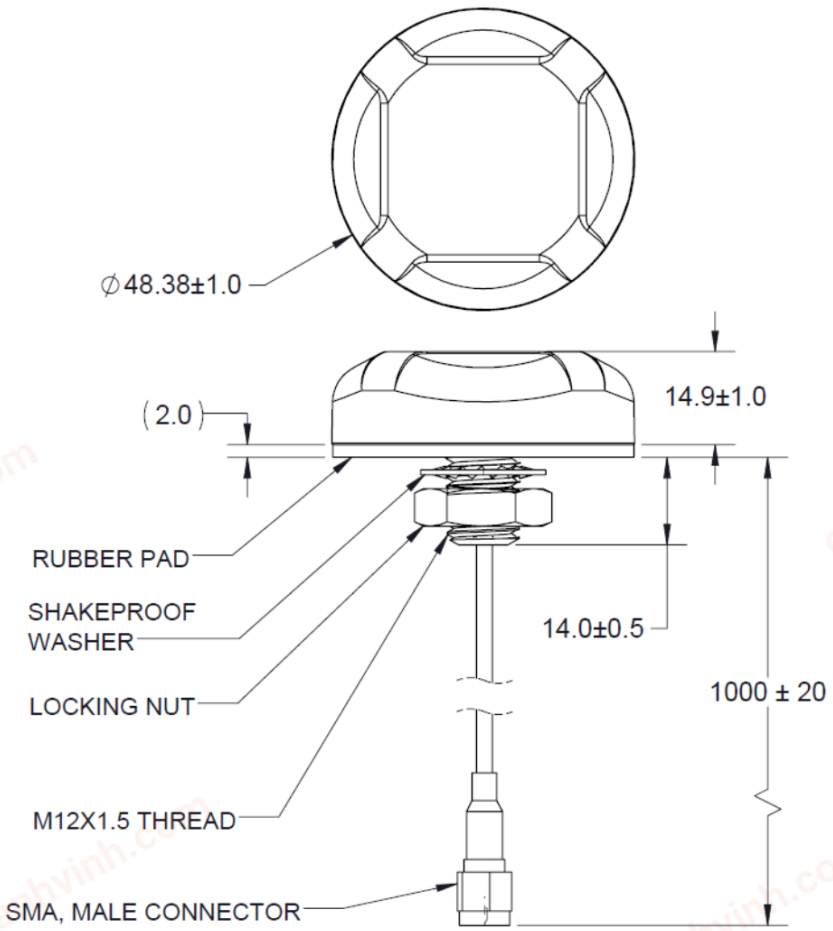
CONFIGURATION

PART NUMBER	CABLE LENGTH	CABLE TYPE	CONNECTOR	COLOR
GNS1559MPF-100SMAM	100 cm (3.28 ft.)	RG174	SMA- male	Black

PACKAGING INFORMATION

PACKAGED DIMENSIONS	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	27	1296	1620
Height- mm (in.)	295 (11.6)	1350 (53.15)	1650 (64.96)
Length- mm (in.)	260 (10.2)	1200 (47.24)	1200 (47.24)
Width- mm (in.)	260 (10.2)	800 (31.5)	800 (31.5)
Shipping Weight- kg (lb.)	3.3 (7.3)	173 (381)	213 (470)

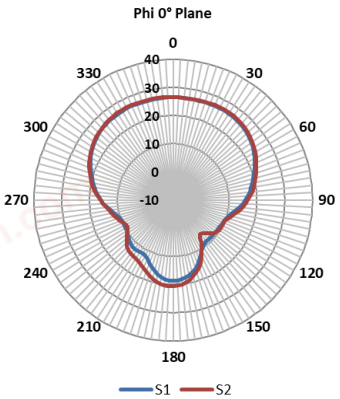
MECHANICAL DRAWING

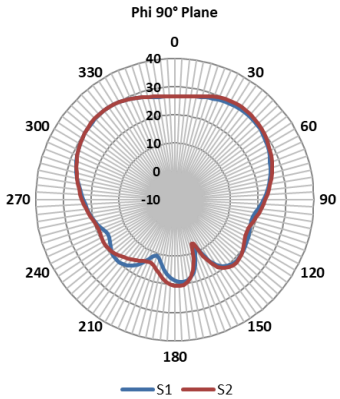


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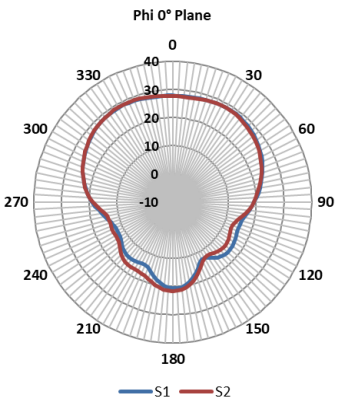
RADIATION PATTERNS

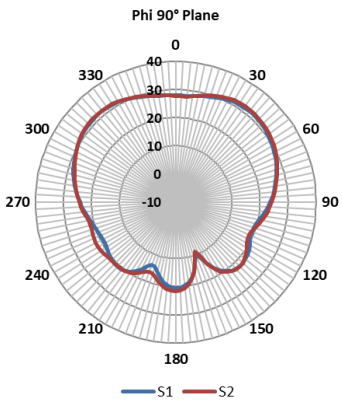
1561.098 MHz



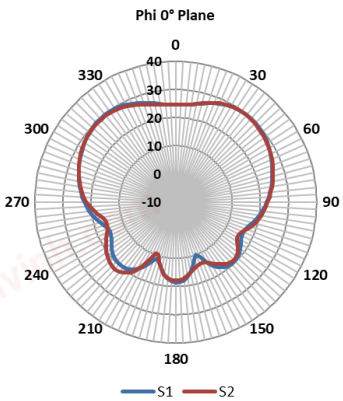


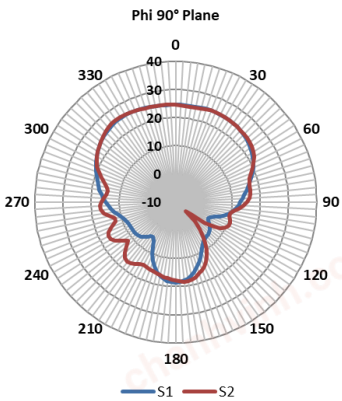
1575.42 MHz





1605.89 MHz





RoHS

Laird Connectivity warrants to the original end user customer of its products that its products are free from defects in material and workmanship. Subject to conditions and limitations Laird Connectivity will, at its option, either repair or replace any part of its products that prove defective because of improper workmanship or materials. This limited warranty is in force for the useful lifetime of the original end product into which the Laird Connectivity product is installed. Useful lifetime of the original end product may vary but is not to exceed five (5) years from the original date of the end product purchase.

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