

PCTEL® GNSS Antennas - 8117D

8117D GNSS-TRACKING ANTENNA



GNSS-Tracking Antenna for GPS L1 and GLONASS L1

The 8117D GPS L1/GLONASS antenna from PCTEL® is a high-performance antenna with a wide voltage range, which is ideal for telematics platforms suitable for use in vehicle-mounted applications. With a broadband patch, this antenna was designed for operation on both GPS L1 and GLONASS L1 frequencies. With the help of internal magnet or screw holes, the antenna can be mounted almost anywhere in the vehicle, which allows a great flexibility. The 8117D antenna has a low-noise amplifier with 28 dB gain and a SAW filter.

- GNSS-tracking antenna for GPS L1 and GLONASS L1
- GNSS-antenna for telematic applications in vehicles
- Mounting via integrated magnetic base or screw holes
- Wide voltage range from 2.7 to 5 VDC
- Low-noise amplifier with 28 dB gain and SAW filter

MODELLE	DESCRIPTION	ANTENNA CONNECTOR	ANTENNA CABLE
8117D	GPS/GLONASS L2 antenna for tracking applications in vehicles or moving objects	SMA (m)	3 m (RF174)

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PRODUCT FEATURES



GNSS support

Supports GPS satellite systems.



Frequency range

1568 - 1618 MHz



Antenna gain

@ 3.3 VDC: 28 dB ± 1.5 dB (typical) / @ 5 VDC: 30 dB ± 1.5 dB (typical)

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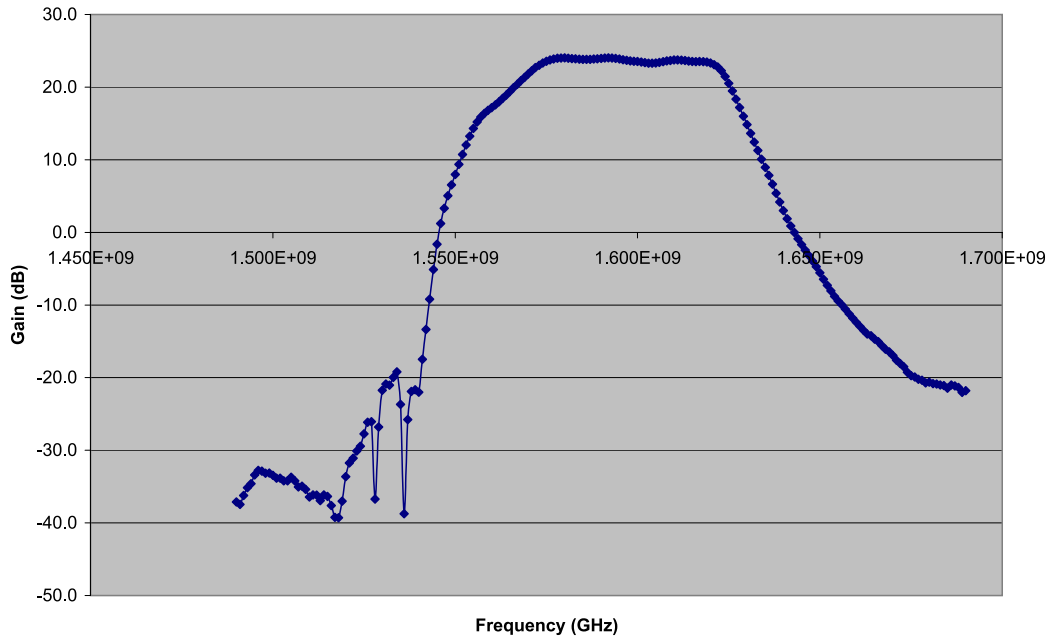
SPECIFICATIONS

8117D	
Antenna elements	1 x GPS L1 or GLONASS L1
Frequency range	1568-1618 MHz
Antenna gain	@ 3.3 VDC: 28 dB ± 1.5 dB (typical) @ 5 VDC: 30 dB ± 1.5 dB (typical)
Antenna cable	3 m (RF174)
Antenna connector	SMA(m)
Compatible with	GPS L1 and GLONASS L1

GENERAL INFORMATION	
Antenna type	GNSS-Antenna
Construction type	Tracking-Antenna
Application area	Indoor/Outdoor
Radiation characteristic	Omnidirectional
Integrated Antenna elements	1 x GPS L1 or GLONASS L1
Groundplane needed?	Yes
ELECTRICAL CHARACTERISTICS	
Impedance	50 Ohm
Polarization	Right side circular
GNSS CHARACTERISTICS	
Frequencies	1568-1618 MHz
Amplifier gain	@ 3.3 VDC: 28 dB ± 1.5 dB (typical) @ 5 VDC: 30 dB ± 1.5 dB (typical)
Output VSWR	<2.0:1
Noise figure (typical)	1.5 dB
Power supply	2.5-5 VDC
Power consumption	<20mA @ 3.3v <35mA @ 5.0v
External frequency suppression	@ 1535 MHz: > 45 dB @ 1540 MHz: > 30 dB @ 1545 MHz: > 20 dB @ 1670 MHz: > 40 dB @ 1650 MHz: > 30 dB @ 1640 MHz: > 20 dB
Nominal gain	3 dBic @ 90° -2 dBic @ 20°
PHYSICAL CHARACTERISTICS	
Material	ASA
Dimensions	52.1 x 59.2 x 13.6 mm (W x H x D)
Mounting options	Magnetic foot mounting or Screw mounting
Operating temperature range	-40 - +85°C

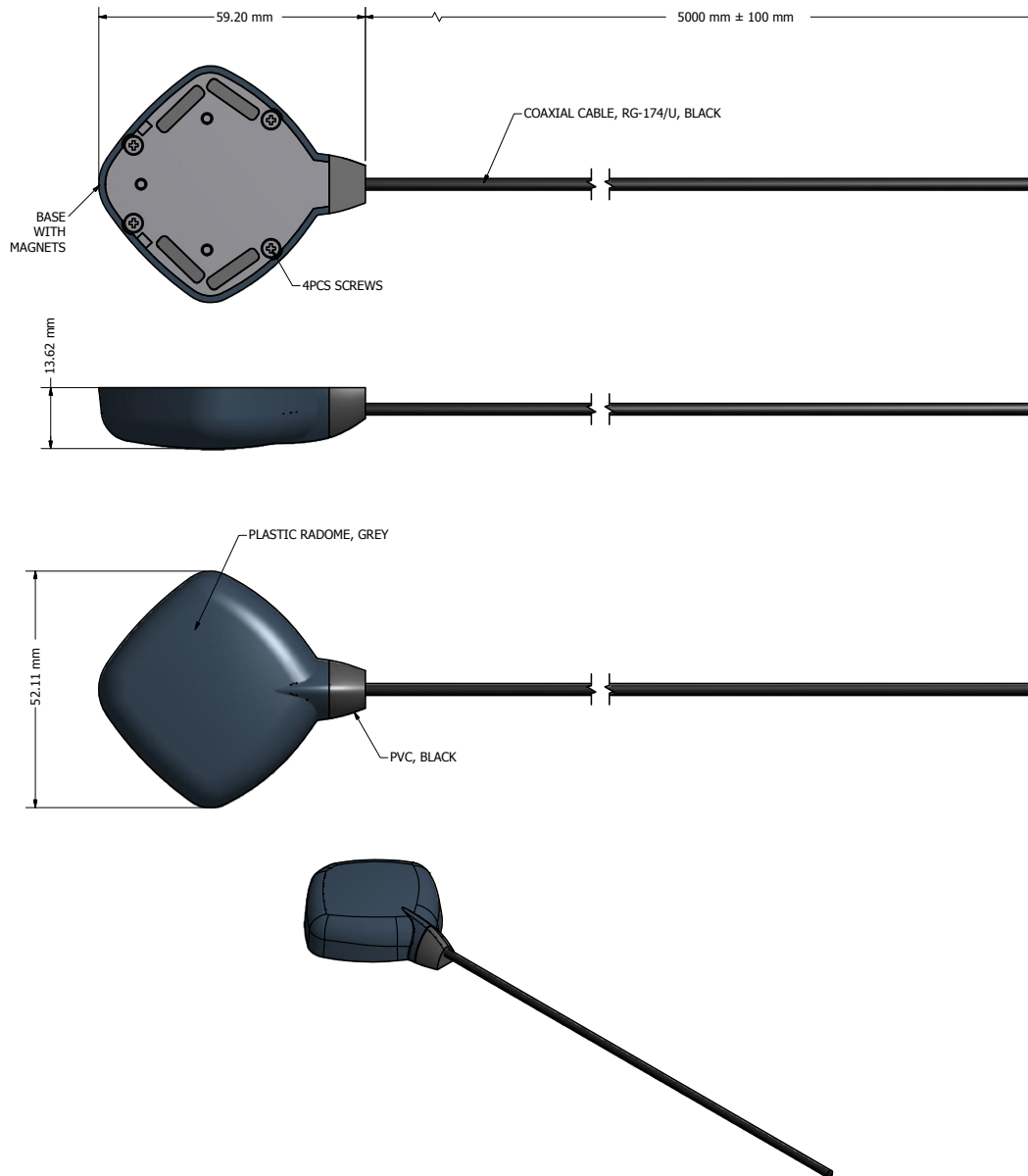
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OUT-OF-BAND REJECTION CHART



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PRODUCT DIMENSIONS (MM)



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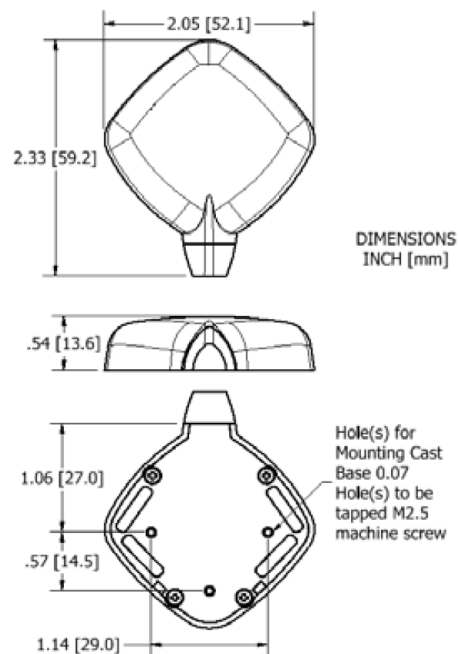
MOUNTING

Mechanical installation guidelines for PCTEL's Magnet Mount GPS & GNSS Antennas series.

PCTEL's Magnet Mount Antenna series can be mounted using the internal magnets or screw holes as shown in the accompanying diagram

For maximum GPS performance, the following guidelines are recommended:

- Place the antenna on a metal ground plane at least 4" in diameter
- Ensure no adjacent metal objects above the ground plane
- Place the antenna horizontally with a clear view of the sky
- Excessive voltage may damage the internal amplifier causing reduced sensitivity
- do not exceed the recommended maximum antenna voltage.



ACCESSORIES ANTENNA CABLE



Antenna cable - Configurator

With the Welotec cable configurator it is easy, to find the right coax cable for your needs. Choose your desired cable from a large selection on cable types and combine it with the suitable connection.

Available connections:

SMA, RP-SMA, TNC, RP-TNC, BNC, N

Available cable types:

RG174, RF195, Aircell 5, RG58, RG223, H155 PE, Aircell 7