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Wi-Sys Communications Inc.

WS3978-HR High Gain “No Interference” Permanent Mount GPS Antenna with dual SAW High Rejection Filter

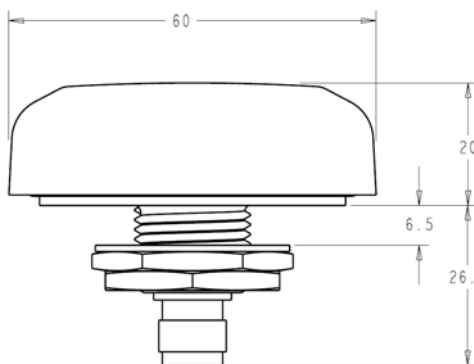
Applications:

- ◆ Anti-jamming / Mission Critical GPS
- ◆ Fixed Timing & Positioning Applications
- ◆ WiMAX / Fixed Wireless Broadband
- ◆ Security and Military Applications
- ◆ Fleet Management & Telematics
- ◆ Marine Vessel Installations

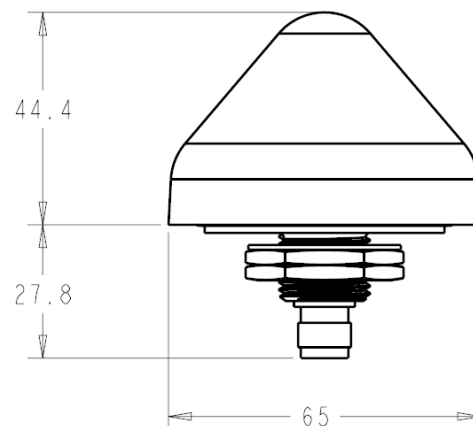


The WS3978-HR High Gain “No Interference” Permanent Mount GPS Antenna provides 40 dBs of gain and very high out-of-band rejection performance. It features a perfectly tuned custom ceramic patch element for maximum signal reception, ESD circuit protection, a 3 stage LNA circuit and a dual SAW very high rejection out-of-band filter, enabling the WS3978-HR to provide most reliable and clear GPS signal reception while minimizing loss-of-lock, even in high RF fields. Available in an all-plastic, non-corrosive low profile package for vehicle mount or with a cone-shaped radome cover for fixed installations, the WS3978-HR high gain, high rejection permanent mount GPS antenna is the optimum choice for applications with high RF fields requiring long cable runs.

WS3978-HR dimensions (mm)



WS3978-HR-DH dimensions (mm)



Features:

- ◆ Weather proof, all-plastic, non-corrosive enclosure
- ◆ Very high rejection Dual SAW filter
- ◆ High gain LNA, 40dB (typ.)
- ◆ 15KV ESD circuit protection
- ◆ 3/4 inch thru-hole or bracket mount
- ◆ Voltage range 2.7 to 5.5 V

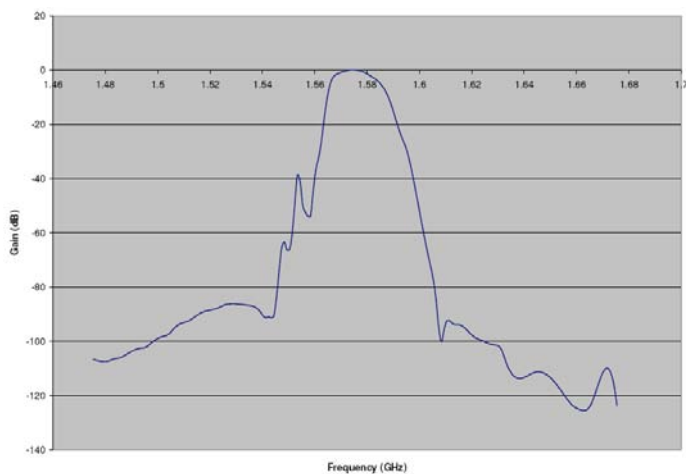


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WS3978-HR High Gain, High Rejection Permanent Mount GPS Antenna

Out-of-band Filter Rejection



Ordering information:

WS3978-HR: High gain, very high rejection, all plastic low profile housing with TNC connector

WS3978-HR-DH: High gain, very high rejection all plastic housing with cone-shaped radome cover and TNC connector

Technical Specifications

Environmental Specifications

- ◆ Operating temp: -40c to +85c (-45c to +85c storage)
- ◆ Weather Proof: IP67

Mechanical

- ◆ Dimensions:
WS3978-HR: 60 mm dia. x 21 mm H
- ◆ WS3978-HR-DH: 65mm dia. x 44.4mm H
- ◆ Weight: 50g
- ◆ Housing: GE Lexan EXL9330, Colour BK1334 (other colours available)
- ◆ Mounting: 3/4" thru-hole or bracket mount
- ◆ Connector: TNC Female connector (flying-cable option also available)
- ◆ Shock: Vertical axis 50G, Other axes 30G
- ◆ Vibration: 3 axis, sweep = 15 min
10 -200 Hz log sweep: 3G

Antenna Response

- ◆ Frequency: 1575.42 MHz
- ◆ Gain: @ 90° 3 dBic
@ 20° -2.0 dBic
- ◆ Polarization: Right Hand Circular
- ◆ Axial ratio: @ 90° 4 dB
@ 20° 6 dB

Electrical

- ◆ Voltage: 2.7 to 5.5 VDC
- ◆ Current: 15mA
- ◆ ESD circuit protection: 15KV

LNA Specifications

- ◆ Frequency: 1572.5 – 1578 MHz
- ◆ Output Impedance: 50 Ohm
- ◆ VSWR: 1.5:1 max (at connector)
- ◆ Gain: 40 dB (typical)
- ◆ Noise figure: 3.1 dB (typical)

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