



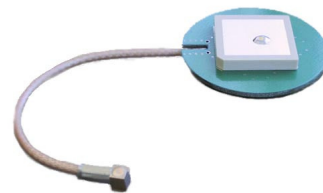
a time and place...
for everything

Wi-Sys Communications Inc.

WS3967-P – Encapsulatable GPS Antenna for Marine & Submarine Applications.

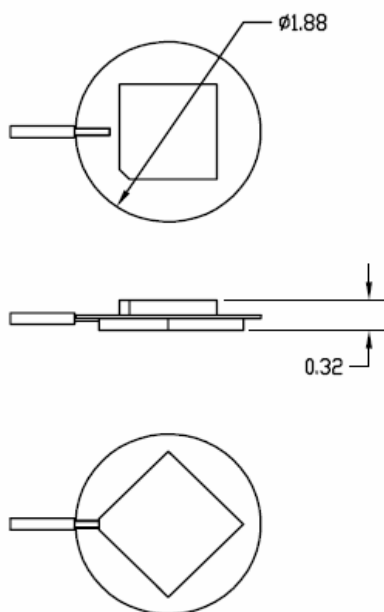
Applications:

- ◆ Marine & Submarine Vessel Telematics
- ◆ Wildlife & Marine Animal Tracking
- ◆ GPS enabled Buoys and Un-manned Marine Vessels
- ◆ Deep Sea and Off-shore Industry
- ◆ Navy Radios and Systems
- ◆ Weather Monitoring Systems



The WS3967-P Encapsulatable GPS antenna is especially designed for embedding in potting compound. It features a custom de-tuned ceramic patch element to compensate for the potting compound's detuning effect, as well as ESD circuit protection, a two stage low noise amplifier and a SAW filter, enabling the WS3967-P to provide great out-of-band signal rejection performance, consistent and clear signal while minimizing loss-of-lock. It also comes with a perforated RF shield for complete compound permeation and a 1.88" mini-ground plane for a sharper radiation pattern. The WS3967-P is the embedded GPS antenna of choice for marine, submarine and extreme weather technology OEMs.

WS3967-P



Features:

- ◆ Ideal for potted applications
- ◆ Detuned ceramic patch element
- ◆ Perforated RF Can
- ◆ ESD circuit protection
- ◆ Two stage LNA
- ◆ SAW filter
- ◆ 2.7 to 5 V operation
- ◆ Optional cable types and lengths available
- ◆ Wide range of connector types available
- ◆ Low price



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WS3967-P Encapsulatable GPS Antenna

Designed for easy encapsulation in potting compound, the WS3967-P antenna integrates a two-stage low-noise amplifier to ensure a reliable and clear signal for the GPS receiver even in most difficult conditions, as well as a SAW filter for even greater performance for telematics applications where out-of-band signal rejection is required.

The Wi-Sys Embedded Antenna Family

WS1357: 13 x 13mm, High Gain Embedded GPS Antenna

WS1857: 18 x 18mm, High Gain Embedded GPS Antenna

WS3930-ULD: Cellular Covert Antenna

WS3940-ULD: Active GPS + Cellular Combined Covert Antenna

WS3950/WS3960: High Gain, Low Noise Embedded Antenna

WS3954/WS3964: Low Current Embedded GPS Antenna

WS3957/WS3967: Low Price Filtered Embedded GPS Antenna

WS4051/WS3961*: High Gain, Low Noise Embedded Antenna with Built-in MCX Connector

WS4055/WS4065*: Low Current Embedded GPS Antenna with Built-in MCX Connector

WS4057/WS4067: Low Price Filtered Embedded GPS Antenna with Built-in MCX Connector

*High Rejection Pre-filter option available

Technical Specifications

Environmental Specifications

- ◆ Operating temp: -40c to +85c (-45c to +80c storage)
- ◆ Humidity: 95% max (non condensing)

Mechanical

- ◆ **WS3967-P:** 47.8 mm diameter x 8.1mm (1.88" diameter x 0.32")
- ◆ 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 + 25 MHz (approx.) prior to potting
- ◆ Gain: @ 90° 3 dBic, @ 20° -2.0 dBic
- ◆ Polarization: Right Hand Circular
- ◆ Axial ratio: @ 90° 4 dB, @ 20° 6 dB

Electrical

- ◆ Voltage: 2.7 – 5 VDC
- ◆ Current: 15 mA @ 5V, 9 mA @ 3.3V
- ◆ Connector: Right Angle MCX
Other connector types available
- ◆ Cable: Shikoku Coax Cable p/n 1.5QEHV(TA)
- ◆ Cable length: 15 cm (6"), other lengths available

LNA Specifications

- ◆ Frequency: 1572.5 – 1578 MHz
- ◆ Output Impedance: 50 Ohm
- ◆ VSWR: 1.5:1 max (at connector)
- ◆ Gain: @ 3.3VDC: 28 dB (typical)
@ 5VDC: 30 dB (typical)
- ◆ Noise figure: 1.5 dB (typical)
- ◆ Out-of-band rejection: +/- 15 MHz: 5dB
+/- 20 MHz: 10 dB
+/- 30 MHz: 32 dB
+/- 40 MHz: 40 dB

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