



a time and place...  
for everything

# Wi-Sys Communications Inc.

## WS3911-HR “No Interference” GPS Antenna with Dual SAW High Rejection Filter

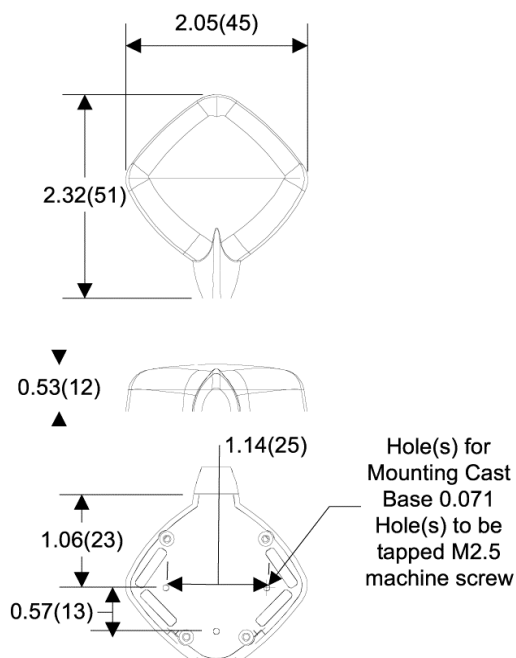
### Applications:

- ◆ Anti-jam / Mission Critical GPS
- ◆ Military Radios and Vehicles
- ◆ Law Enforcement / Public Safety
- ◆ Avionics
- ◆ Fleet Management & Telematics
- ◆ Asset Tracking



The WS3911-HR “No Interference” GPS Antenna with Dual SAW High Rejection Filter has the industry’s best out-of-band filter performance. The WS3911-HR features ESD circuit protection, a patented two-stage low noise amplifier and a dual SAW high rejection filter. It also features a custom designed ceramic patch element that minimizes detuning effects caused by adjacent objects. The WS3911-HR provides the most consistent, clear GPS signal reception while minimizing loss-of-lock in high-RF fields. Housed in a weatherproof magnetic or screw mount enclosure, the WS3911-HP GPS antenna is ideal for most demanding vehicle mounted GPS applications.

### WS3911-HR Dimensions



### Features:

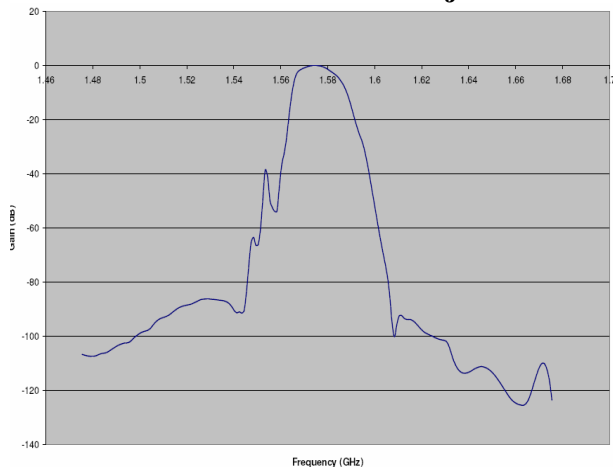
- ◆ Very high rejection dual SAW filter
- ◆ Patented high performance dual LNA
- ◆ High gain: 25.5 dB @ 5 V (typ.)
- ◆ Low current: 7.5 mA @ 3.3 V (typ.)
- ◆ 3.1 dB low noise figure
- ◆ 15KV ESD circuit protection
- ◆ Wide voltage input range (2.7 - 5 VDC)
- ◆ Weather proof housing



a time and place...  
for everything

## Wi-Sys Communications Inc. WS3911-HR “No Interference” GPS Antenna

### Out-of-band Filter Rejection



### Other Wi-Sys Magnet-mount Antenna

**WS3910:** Low noise, filtered GPS antenna

**WS3914:** Low current, filtered GPS antenna

**WS3915-HR** Low current, dual filter  
high rejection GPS antenna

**WS3917:** Low cost, active, filtered GPS antenna

**WS3942:** Active, filtered GPS + Cellular  
combined antenna

**WS3948:** Active, filtered GPS + 2.4 GHz  
combined antenna

## Technical Specifications

### Environmental Specifications

- ◆ -40c to +80c operating (-45c to +80c storage)
- ◆ IP67 / Weather proof

### Mechanical

- ◆ 45mm x 51mm x 12mm
- ◆ 120g (4.2 oz)
- ◆ Attachment methods: Magnetic (5 lb lift-off force) or permanent (pre-threaded for 3 x M2.5 screws)
- ◆ 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 – 5 VDC
- ◆ Current: 7.5 mA @ 3.3VDC, 11.5 mA @ 5VDC
- ◆ ESD circuit protection: 15K Volts
- ◆ Cable: 1.5 DS-QEHV Shikoku Cable Co. Ltd.
- ◆ Cable length: 3 metres (standard),  
other lengths optional
- ◆ Cable loss: 1.3 dB/m typical
- ◆ Connector: SMA (standard),  
other connectors optional

### LNA Specifications

- ◆ Frequency: 1572.5 – 1578 MHz
- ◆ Output Impedance: 50 Ohm
- ◆ VSWR: 1.5:1 max (at connector)
- ◆ Gain: 25 dB @ 3.3VDC: (typical)  
25.5 dB @ 5VDC: (typical)
- ◆ Noise figure: 3.1 dB

### Wi-Sys Communications Inc.

31B Richardson Side Road  
Ottawa, ON K2K 0A1 Canada  
Tel 613.254.7386 Fax 613.254.7388  
sales@wi-sys.com www.wi-sys.com

