a time and place...
for everything

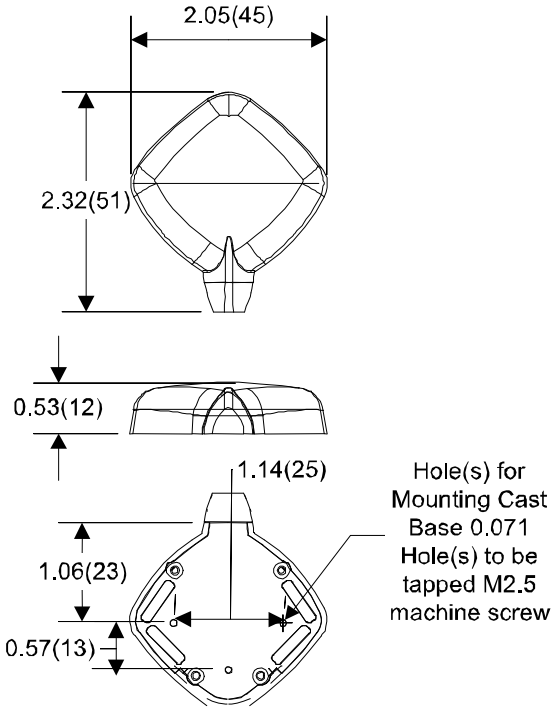
Wi-Sys Communications Inc.

WS3914 Low Current GPS Antenna

Applications:

- Automotive Navigation
- Fleet Management & Telematics
- Marine Navigation
- Asset Tracking
- Military Radio and Vehicle
- Law Enforcement

The WS3914 GPS antenna uses the same advanced circuitry as our high performance WS3910 antenna, redesigned to operate on only 2 mA of current – setting a new standard for the industry. Performance is not sacrificed; the antenna still features a custom designed ceramic patch element along with a patented low noise amplifier and SAW filter, enabling the WS3914 to provide a consistent, clear signal while minimizing loss-of-lock. The WS3914 antenna is ideal for portable applications where low power operation is a necessity.



Features:

- Extremely low current: 2 mA @ 2.7 VDC
- Very low noise figure: 1 dB
- Excellent out-of-band signal rejection
- High performance patented LNA
- Wide range of connector types available
- Wide voltage input range (2.5 – 3.3 VDC)

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WS3914 GPS Antenna

Designed for low power use while maintaining GPS performance, the WS3914 antenna's advanced circuitry integrates a SAW filter and low-noise amplifier to ensure a reliable and clear signal for the GPS receiver even in difficult conditions. The antenna design and industry leading low current draw makes the WS3914 antenna ideal for portable or telematics applications using MONITOR, STANDBY or SLEEP modes.

The Wi-Sys Antenna Family

WS3910: High gain, low noise GPS antenna

WS3916: Low cost GPS antenna

WS3917: Low cost filtered GPS antenna

WS3940: Active GPS + Cellular Combined Glass mount/covert antenna

WS3942: Active GPS + Cellular Combined Magnetic mount antenna

WS3950/WS3960: High gain, low noise Embedded antenna

WS3954/WS3964: low current Embedded GPS antenna

WS3957/WS3967: low price filtered Embedded GPS antenna

WS3977: Through-hole Mount GPS Antenna

Technical Specifications

Environmental Specifications

- -40c to +80c operating (-45c to +80c storage)
- Humidity: 95% max (non condensing)

Mechanical

- 45mm x 51mm x 12mm (2.05" x 2.32" x 0.53")
- 120g (4.2 oz)
- Attachment methods: Magnetic (5 lb lift-off force) or permanent (pre-threaded for 3x 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: 2.5 – 3.3 VDC
- Current: 2.0 mA @ 2.7VDC (typical)
- Cable: 1.5 DS-QEHV Shikoku Cable Co. Ltd.
- Cable loss: 1.3 dB/m typical
- Cable Length: 3 meter standard, other lengths optional
- Connector: SMA standard
  SMB, SMC, MCX, BNC, TNC optional

LNA Specifications

- Frequency: 1572.5 – 1578 MHz
- Output Impedance: 50 Ohm
- VSWR: 1.5:1 max (at connector)
- Gain: @ 3.3VDC: 18 dB (typical)
- Noise figure: 1 dB
- Out-of-band rejection: + 15 MHz: 10 dB/- 15 MHz: 30 dB
  + 20 MHz: 20 dB/- 20 MHz: 30 dB
  + 40 MHz: 40 dB/- 40 MHz: 40 dB

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