

# 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.

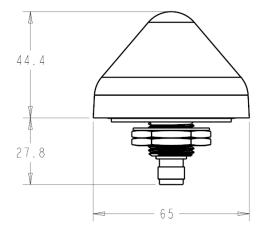
### WS3978-HR dimensions (mm)

# 60

### **Features:**

- Weather proof, all-plastic, non-corrosive enclosure
- Very high rejection Dual SAW filter
- ♦ High gain LNA, 40dB (typ.)

# WS3978-HR-DH dimensions (mm)



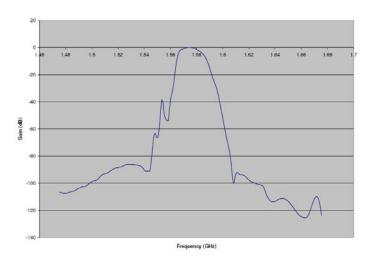
- ♦ 15KV ESD circuit protection
- 3/4 inch thru-hole or bracket mount
- Voltage range 2.7 to 5.5 V



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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**

 $\bullet$  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: ¾" 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)

# Wi-Sys Communications Inc.

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