# 1.575 GHz GPS Ceramic Patch Antenna

Pulse Part Number W3213







Pulse is please to announce the W3213 GPS patch antenna to compliment our growing range of tracking antenna products. This small  $0.5 \times .05$  inch (13 x 13 mm) ceramic patch antenna is 0.16 inches (4 mm) high and has a pinthrough mount. Double sided tape is on the underside of the antenna for adhesion to the customer board.

Operating at 1.575 GHz, L1 GPS band, the W3213 patch provides circularly polarized radiation patterns to connect to satellite systems. Performance in this specification sheet is based on a ground plan of 1.2 x 1.2 inches (30 x 30 mm) delivering a gain of -1.5 dBic at Zenith and 10 degrees with 3dB axial ratio at Zenith. Increasing the size of the ground plane can significantly boost the actual application. Contact Pulse for applications support to get the best performance from your Navigation systems. Solutions for Glonass bands and surface mount patch antennas are also available on request.

#### Features

- Small footprint
- Right Hand Circular Polarization
- GPS L1 Band 1.575 GHz
- RoHS Compliant Product

#### **Applications**

- Vehicle navigation and location
- Personal hand held tracking systems
- Healthcare and medical devices
- Small portable tracking equipment

### GPS L1 Band Patch Antenna

Typical performance (measured on 1.2 x 1.2 inch [30 x 30 mm] FR-4 ground plane)

Item	Typical Performance	Unit
Center Frequency	1575.42	MHz
Polarization	Right Hand Circular	-
RHCP Gain @ Zenith	-1.5	dBic
RHCP Gain @ 10º Elevation	-1.5	dBic
Axial Ratio @ Zenith	3	dB
VSWR	1.6 Max	—
Impedance	50	Ω

San Diego, CA 858 674 8100

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Vancouver, WA 360 944 7551 E

Europe 49 7032 7806 0

Asia 86 755 33966678

North Asia 886 3 4356768

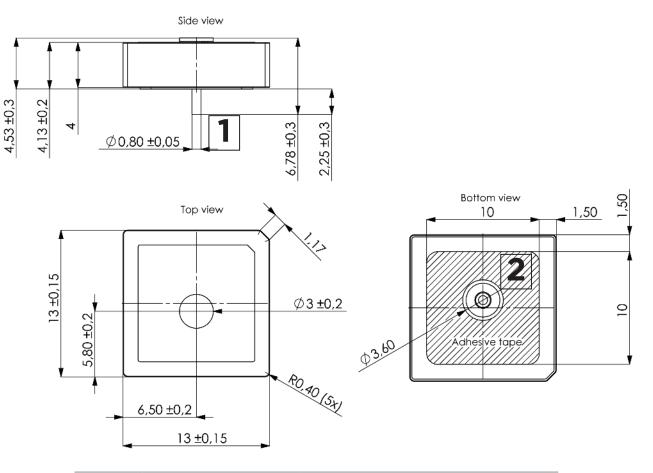
China 86 512 6807 9998

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No.	ltem	Description	
1	Feed Pin	Silver plated brass	
2	Adhesive	0.13 mm thick double sided tape	
Notes:			
<ul> <li>Feed pin manual soldering conditions:</li> <li>300° C max soldering iron temperature, 5 seconds max</li> <li>Typical lead free solders are applicable</li> </ul>			
Electrode silver metallization may tarnish if antenna is stored/used in corro- sive environment, especially where chloride, sulphur or sulfide, alkali or acid salts exist in the air. Corrosive gases may cause oxidation of electrodes and reduce solderability.			

**NOTE**: Antennas are delivered in trays (80 antennas per tray), 10 trays per shipping box (800 antennas per shipping box).



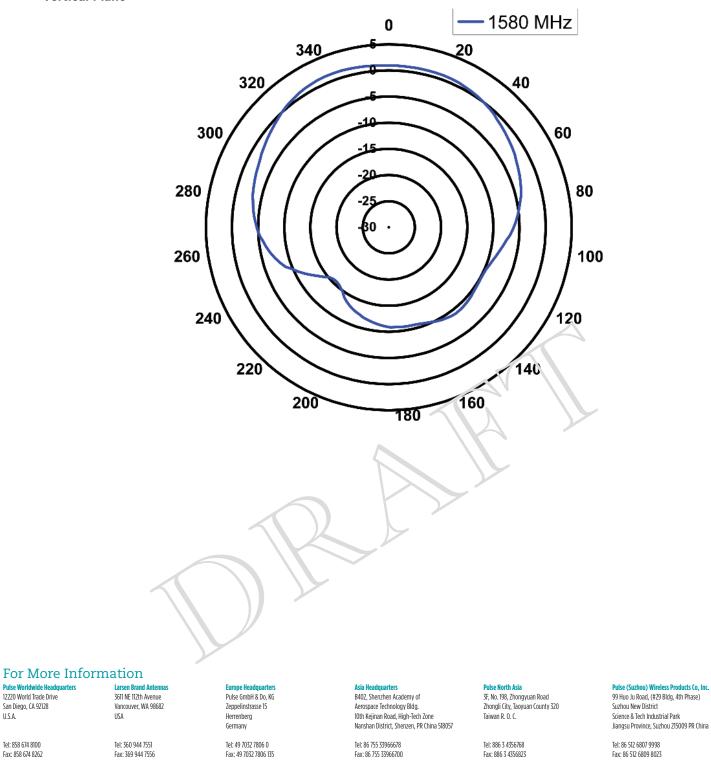
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### **Radiation Patterns**

#### **Vertical Plane**



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