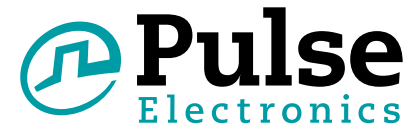
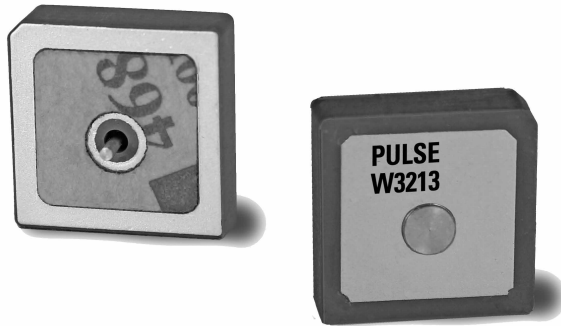


# 1.575 GHz GPS Ceramic Patch Antenna

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 x .05 inch (13 x 13 mm) ceramic patch antenna is 0.16 inches (4 mm) high and has a pin-through 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

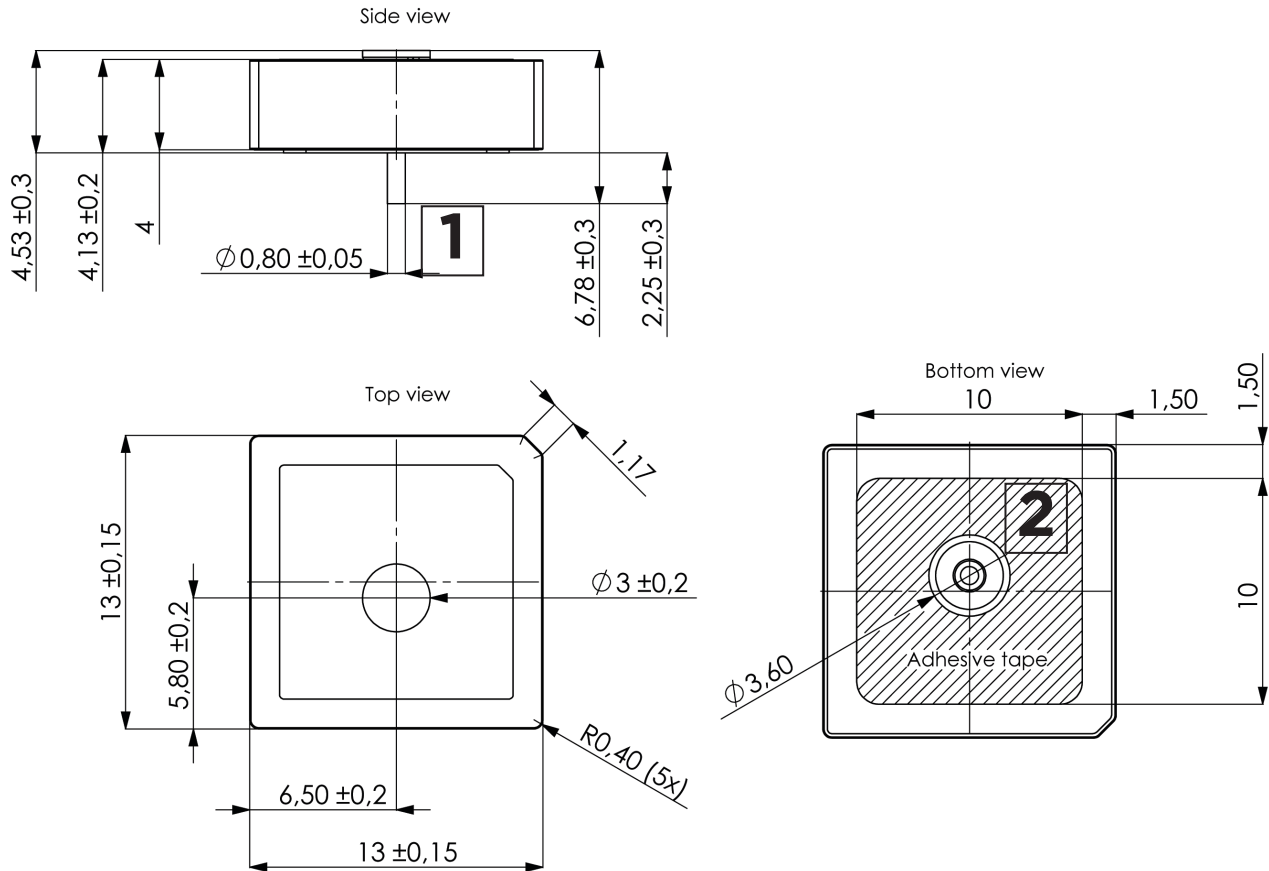
Typical performance (measured on 1.2 x 1.2 inch [30 x 30 mm] FR-4 ground plane)

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

# 1.575 GHz GPS Ceramic Patch Antenna

Pulse Part Number W3213

## Mechanical Specifications



| No. | Item     | Description                     |
|-----|----------|---------------------------------|
| 1   | Feed Pin | Silver plated brass             |
| 2   | Adhesive | 0.13 mm thick double sided tape |

**Notes:**

Feed pin manual soldering conditions:

- 300° C max soldering iron temperature, 5 seconds max
- Typical lead free solders are applicable

Electrode silver metallization may tarnish if antenna is stored/used in corrosive 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.

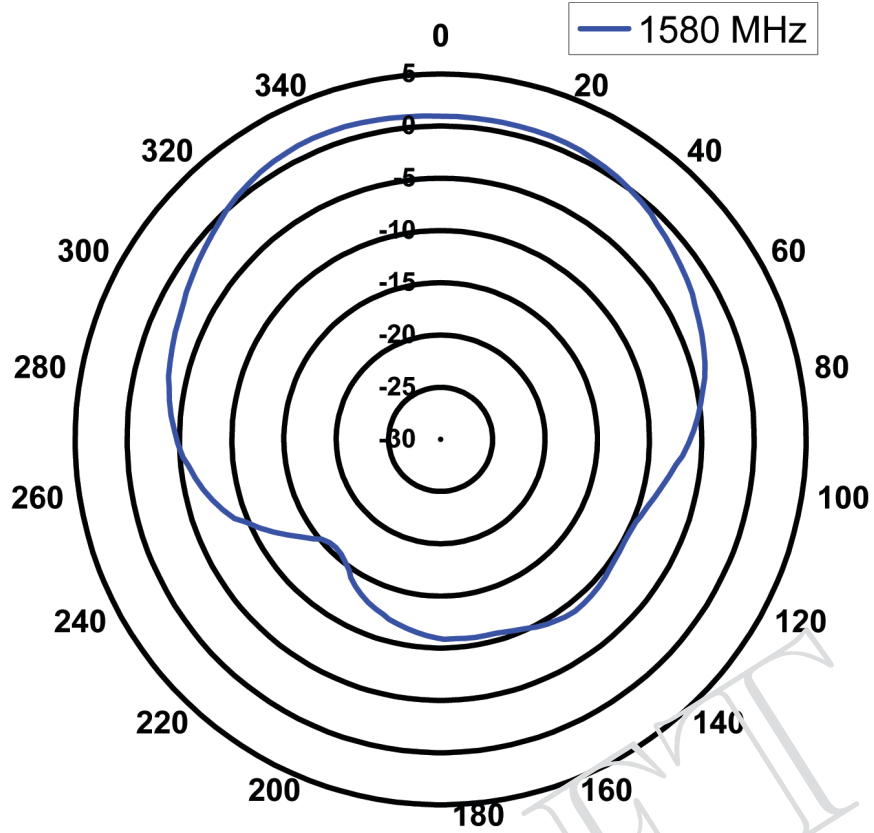
**NOTE:** Antennas are delivered in trays (80 antennas per tray), 10 trays per shipping box (800 antennas per shipping box).

# 1.575 GHz GPS Ceramic Patch Antenna

Pulse Part Number W3213

## Radiation Patterns

### Vertical Plane



## For More Information

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