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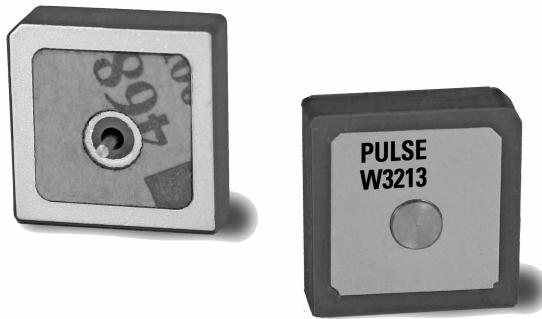
[Pulse Electronics Corporation](#)
[W3213](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

1.575 GHz GPS Ceramic Patch Antenna

Pulse Part Number W3213



Pulse is pleased 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 dBi 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

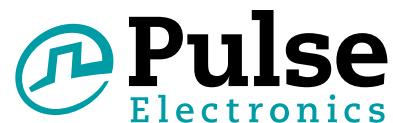
GPS L1 Band Patch Antenna

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

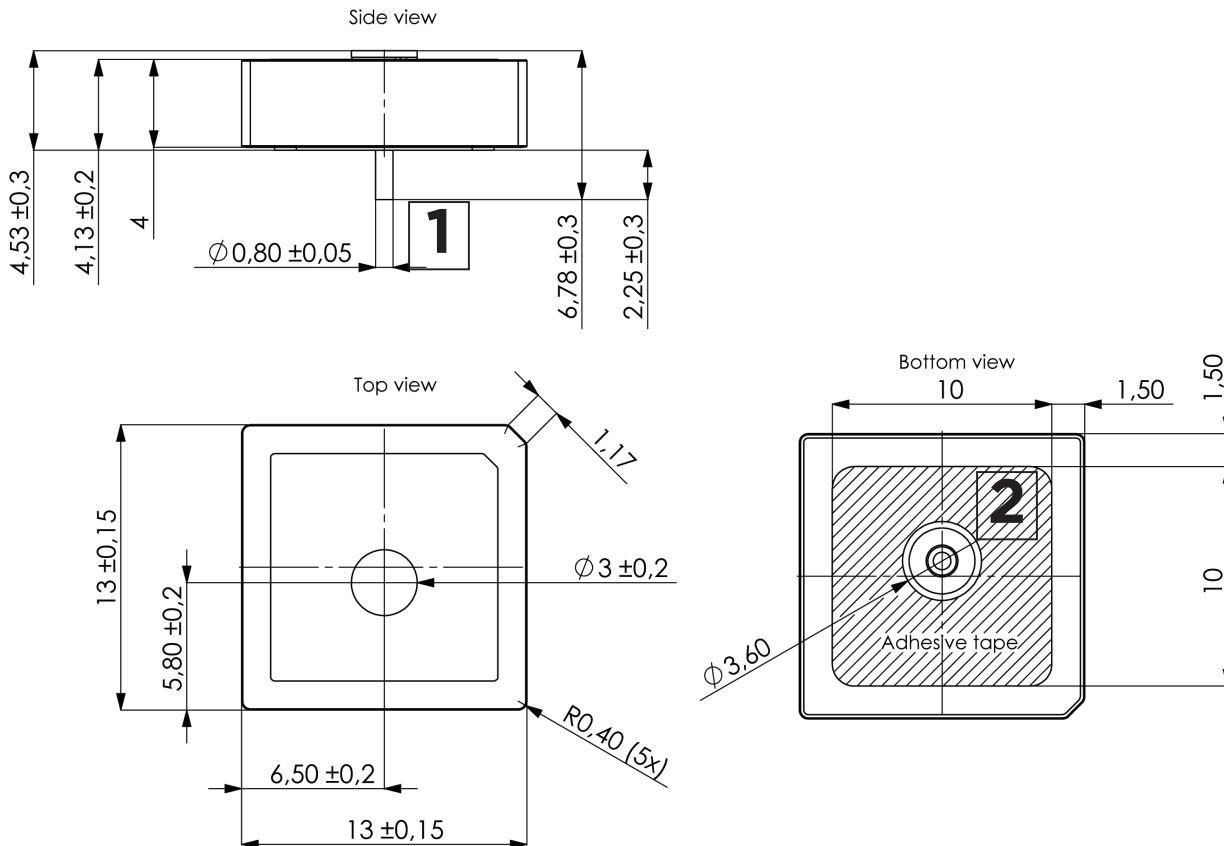
Item	Typical Performance	Unit
Center Frequency	1575.42	MHz
Polarization	Right Hand Circular	—
RHCP Gain @ Zenith	-1.5	dBi
RHCP Gain @ 10° Elevation	-1.5	dBi
Axial Ratio @ Zenith	3	dB
VSWR	1.6 Max	—
Impedance	50	Ω

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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.

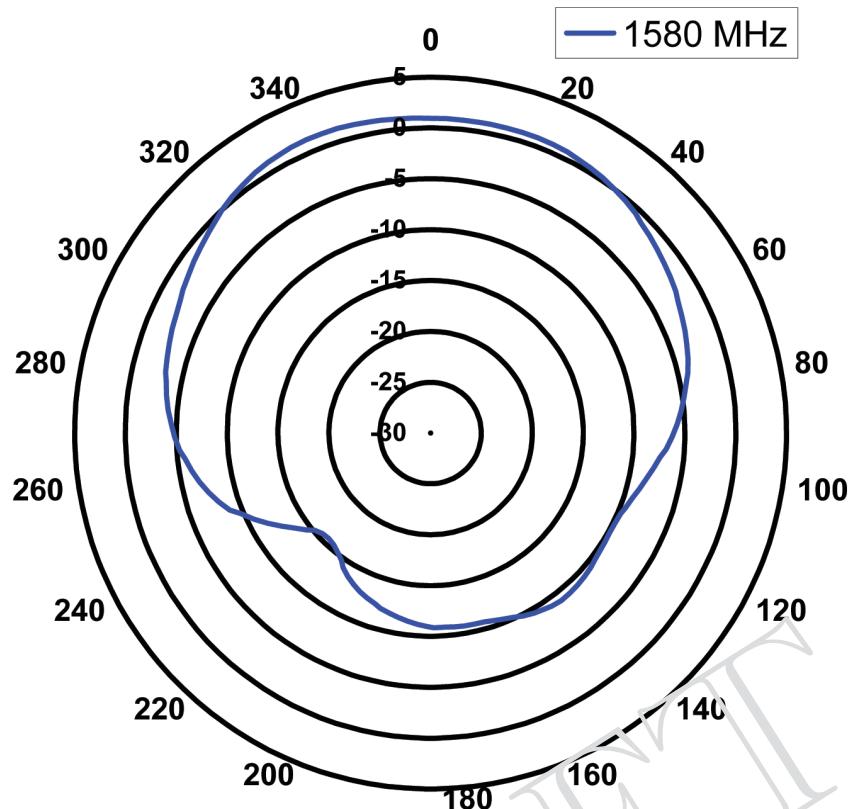
NOTE: Antennas are delivered in trays (80 antennas per tray), 10 trays per shipping box (800 antennas per shipping box).

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Radiation Patterns

Vertical Plane



For More Information

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