

1.575GHz GPS Ceramic Chip Antenna

Pulse Part Number CW3011



Features

- Omnidirectional radiation
- Low profile
- Compact size WxLxH (3.2 x 1.6 x 1.1 mm)
- Low weight (33 mg)
- Lead free materials
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packing
- RoHS Compliant Product

Applications

- GPS L1 band
- 1.575 GHz

Electrical specifications @ +25 °C

Note: Electrical characteristics depend on test board (GP) size and antenna positioning on GP and Ground Clearance area size.

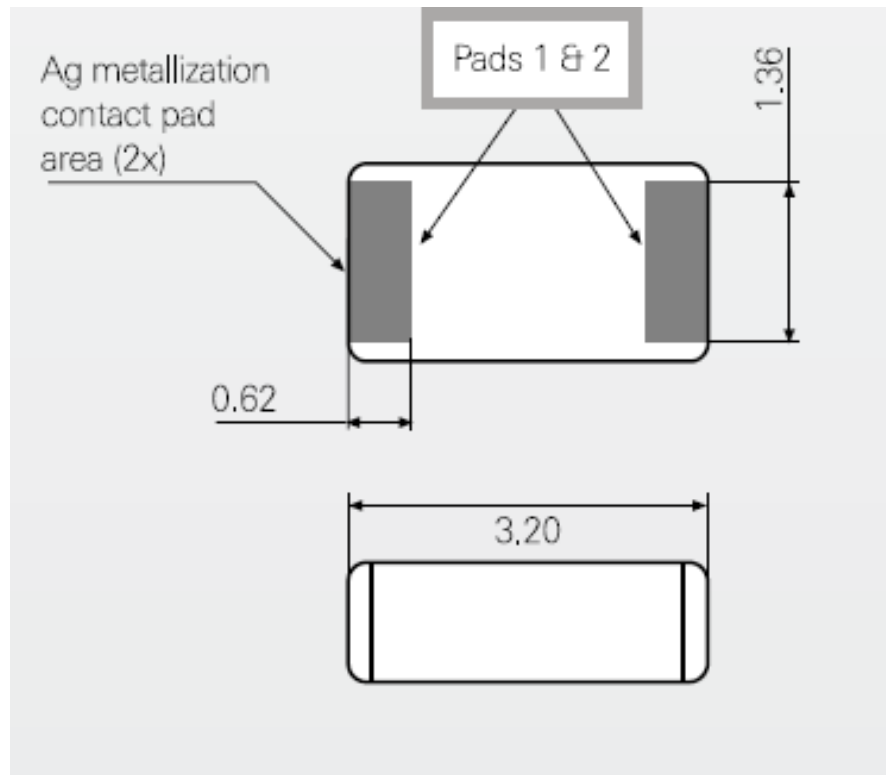
Typical performance (testboard size 80x37 mm, PWB ground clearance area 4 x 4.25 mm)

Frequency Range [MHz]	Max Gain [dBi]	RHCP Gain [dBic]	Return loss min. [dB]	Efficiency [%]/[dB]	Impedance [Ω]	Operating Temperature [$^{\circ}$ C]
1575.42 +/- 10	3.4 (peak) 3.0 (band edges)	0.85 (peak) 0.5 (band edges)	-12	85 / -0.7(peak) 80 / -1.0(band edges)	50	-40 to +85

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Terminal Configuration and antenna dimensions



Antenna Features

No.	Terminal Name	Terminal Dimensions
1	Feed / GND	0.62 x 1.36 mm
2	Feed / GND	0.62 x 1.36 mm

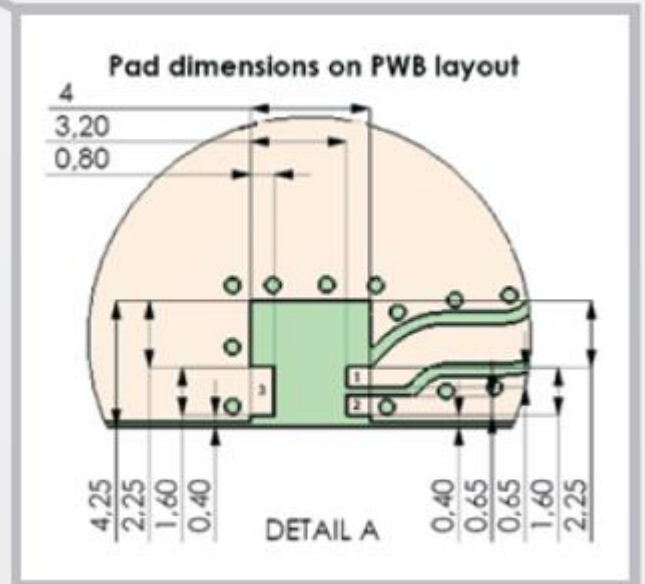
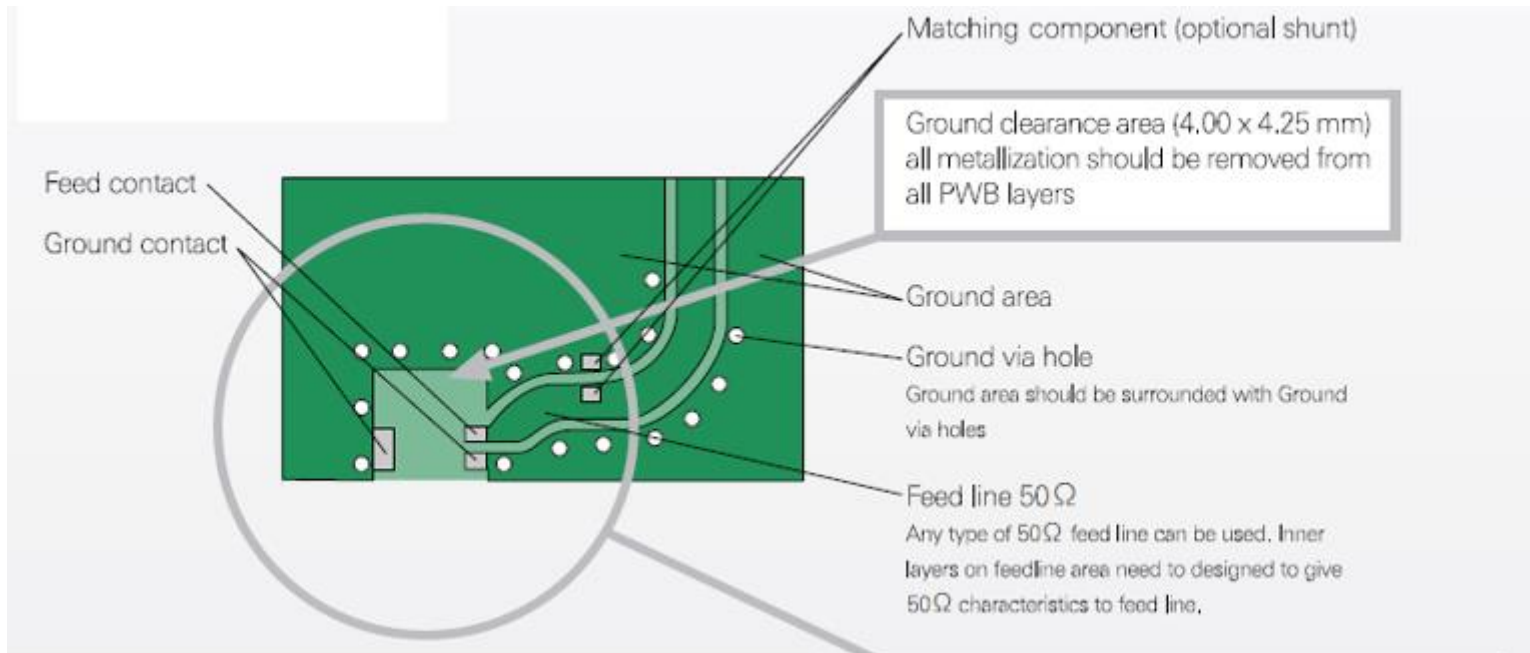
Antenna is symmetrical. Either of terminals 1 or 2 can be Feed / GND

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PWB Layout



PWB Features

No.	Terminal name	Terminal Dimensions
1	Feed	0.8 x 0.65 mm
2	GND	0.8 x 0.65 mm
3	GND	0.8 x 1.60 mm

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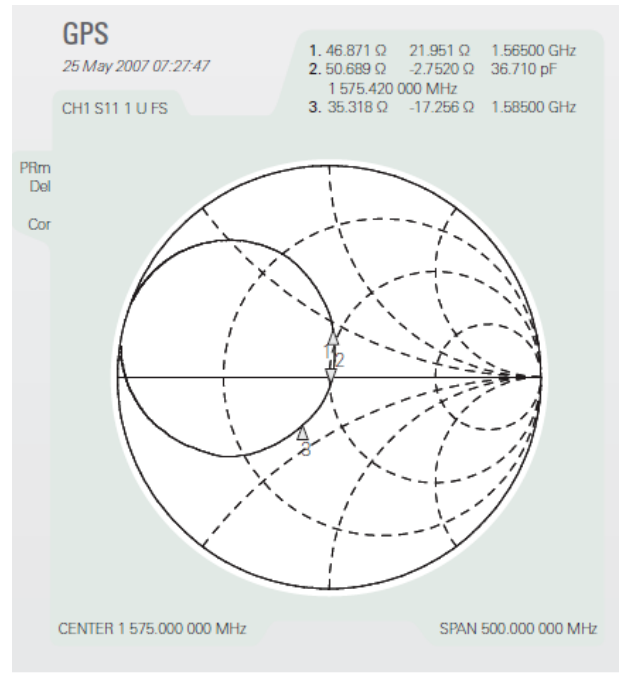
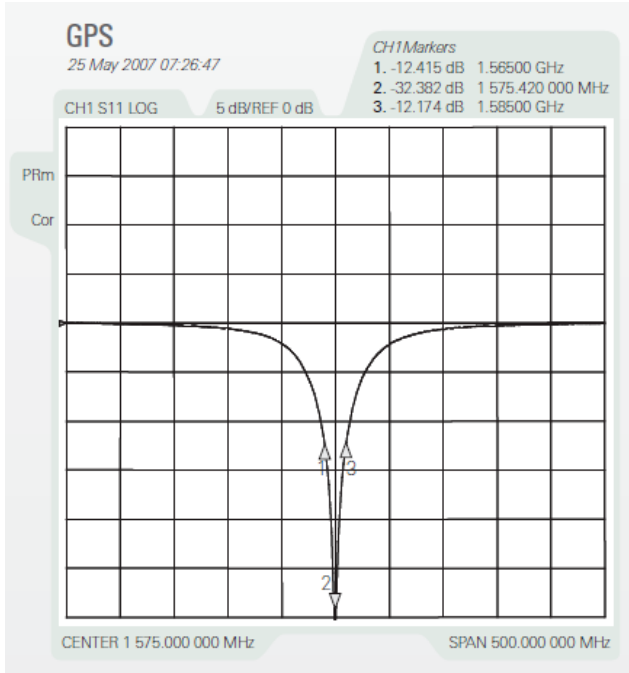
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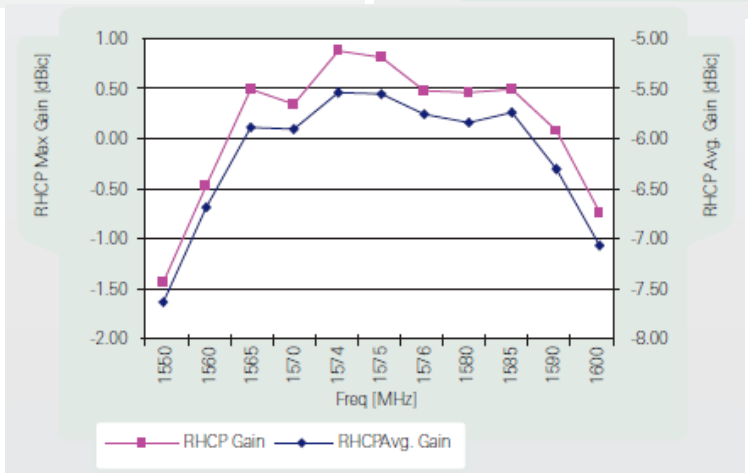
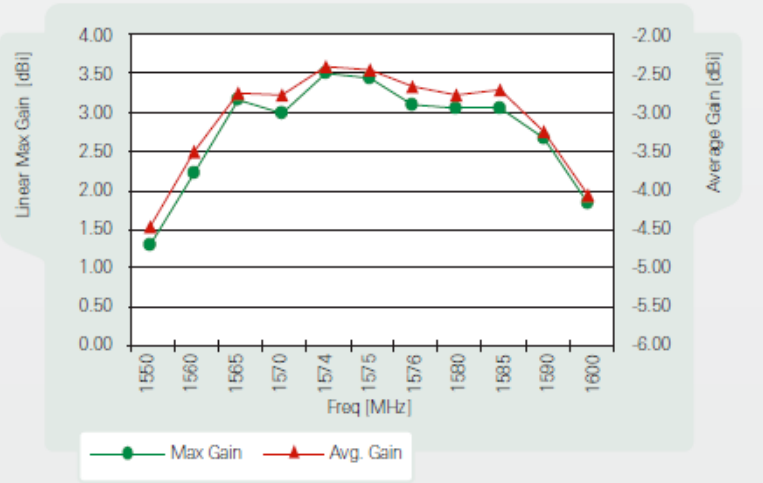
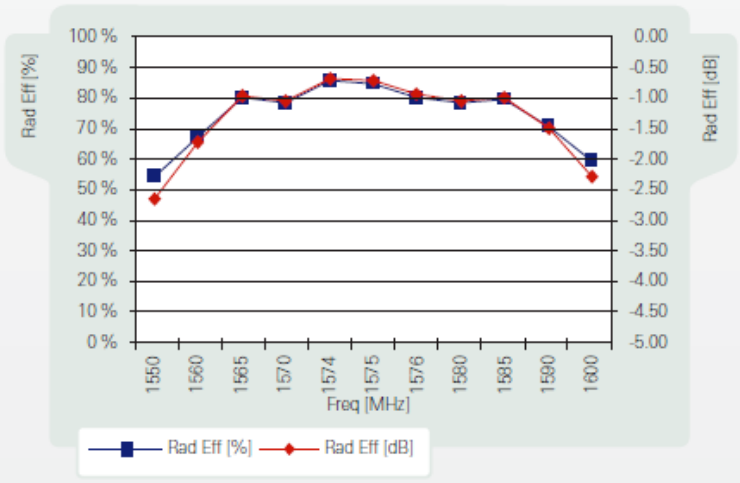
Typical Electrical Characteristics (T=25 °C)

Measured on the 80 x 37 mm test board without matching circuit and.

Typical Return Loss S11/ impedance



Free space efficiency and gain



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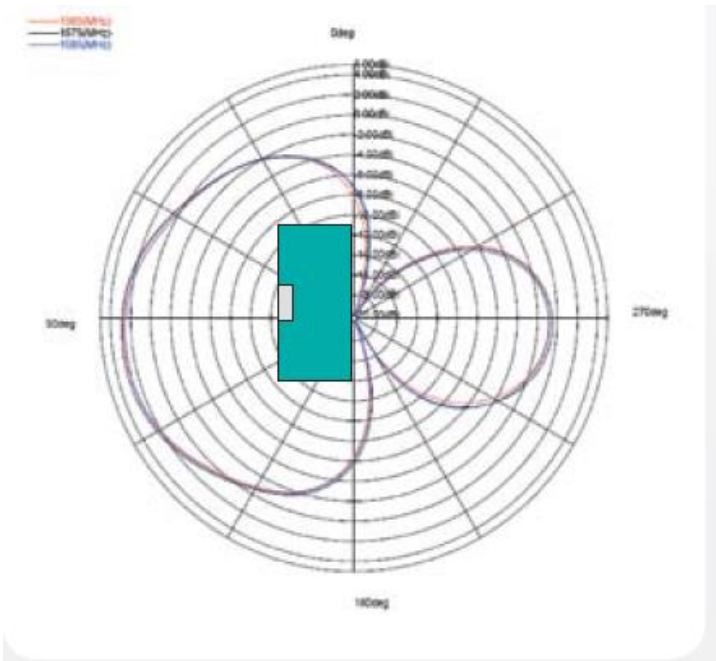


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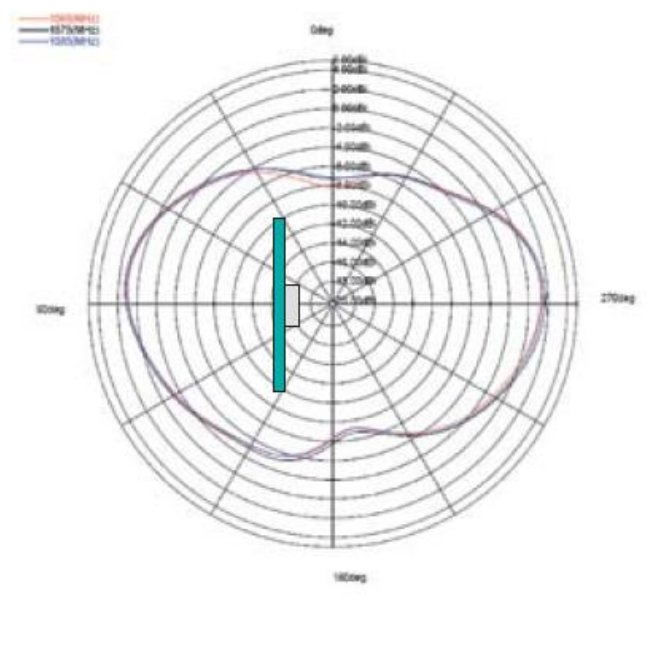
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Typical Free space Radiation Patterns

XZ-PLANE



ZY-PLANE



XY-PLANE

