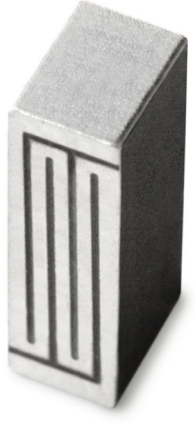
1.575 GHz GPS Ceramic Chip Antenna

On Ground type, ie. solid ground plane under antenna, top surface ground removal 10.80 x 6.25 mm.

Pulse Part Number: W3009



Features

- Omnidirectional radiation
- Low profile
- Compact size W x L x H (10 x 3.2 x 4 mm)
- Low weight (600 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.

GPS

Typical performance (test board size 80 x 37 mm, PWB top surface ground removal area 10.80 x 6.25 mm)

Frequency Range [MHz]	RHCP Gain [dBic]	Linear Max Gain [dBi]	Efficiency [%] / [dB]	Return loss min. [dB]	Impedance [Ω]	Operating Temperature [°C]
1575.42 +/-10	0.7 (Peak) 0.3 (Band edges)	3 (Peak) 2.5 (Band edges)	80 / -1 (Peak) 75 / -1.25 (Band edges)	-10	50	-40 to +85

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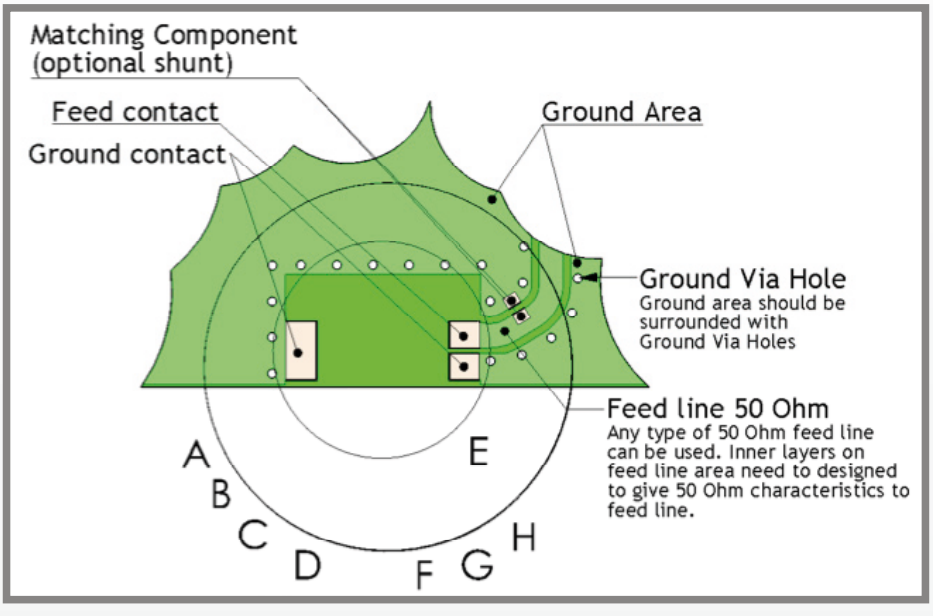
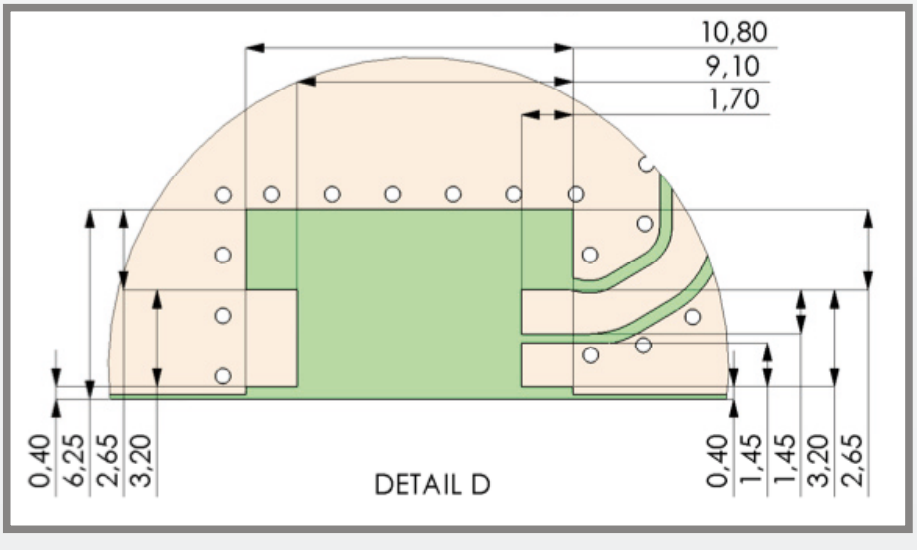
Terminal Configuration

Layout



Pad dimensions in top copper



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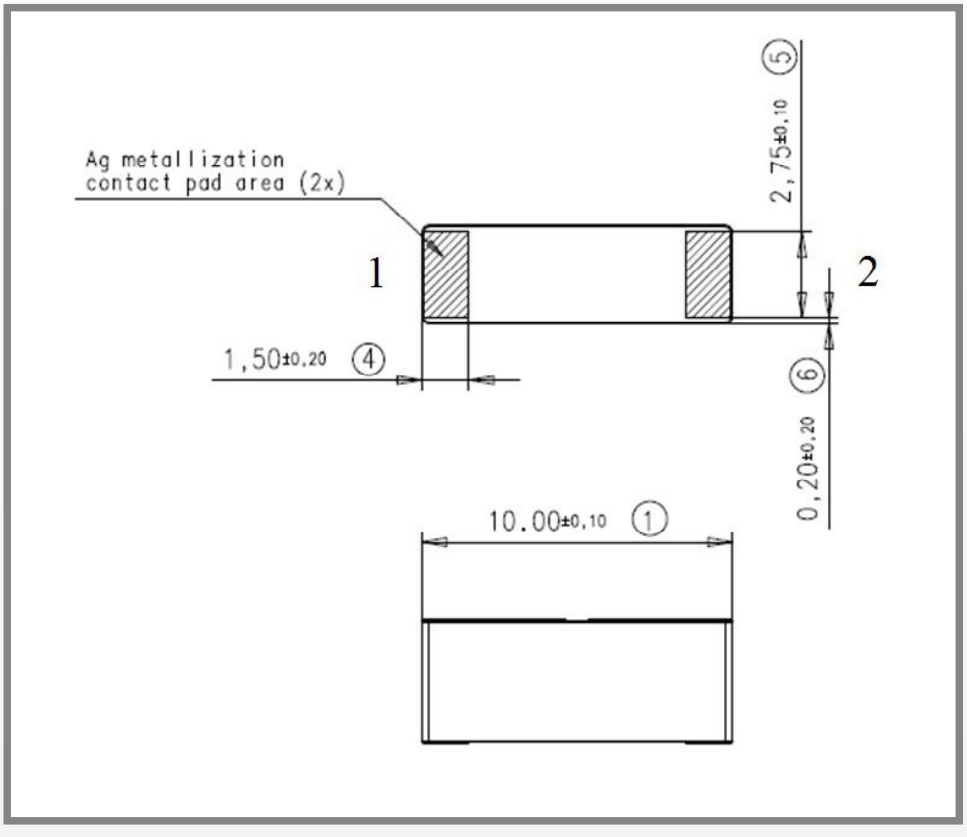
Terminal Configuration

Antenna



No.	Terminal Name	Terminal Dimensions
1	Feed / GND	1.50 x 2.75 mm
2	Feed / GND	1.50 x 2.75 mm
Antenna is symmetrical. Either of terminals 1 or 2 can be Feed / GND		

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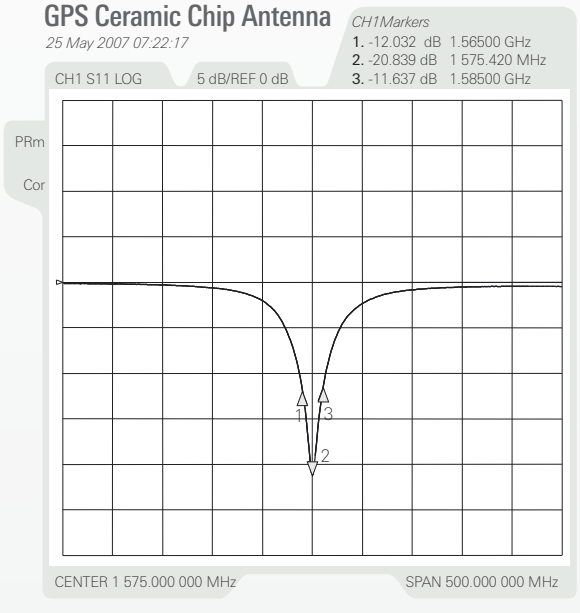
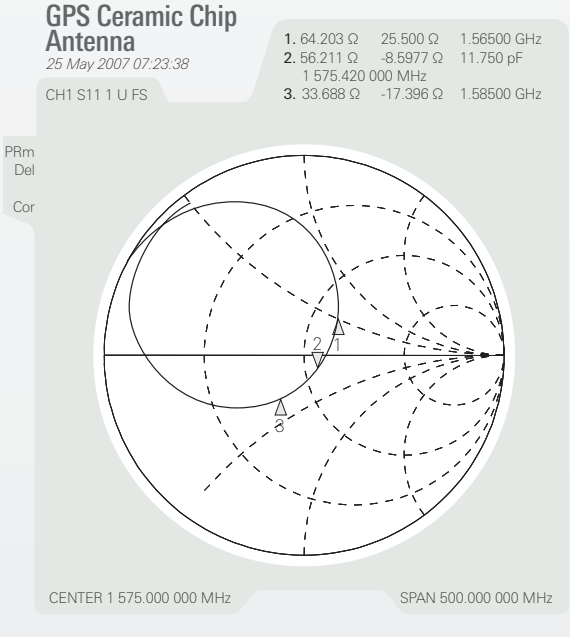
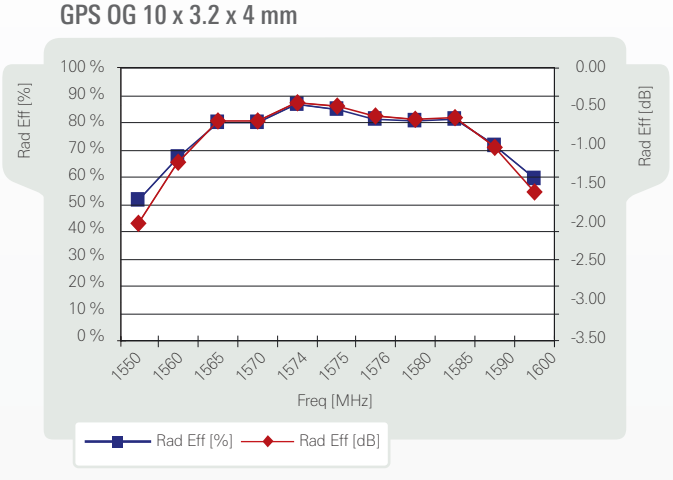
Typical Electrical Characteristics (T=25 °C)

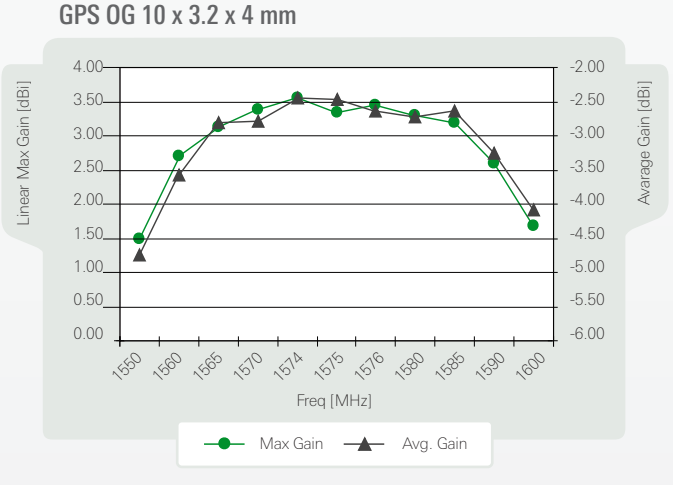
Measured on the 80 x 37 mm test board with matching circuit (2.2 pF shunt matching capacitor on feed).

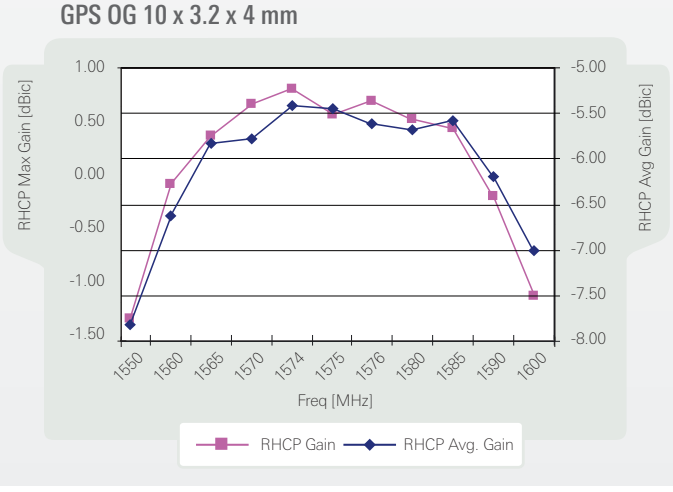
Typical Return Loss S11/ impedance, free space efficiency and gain











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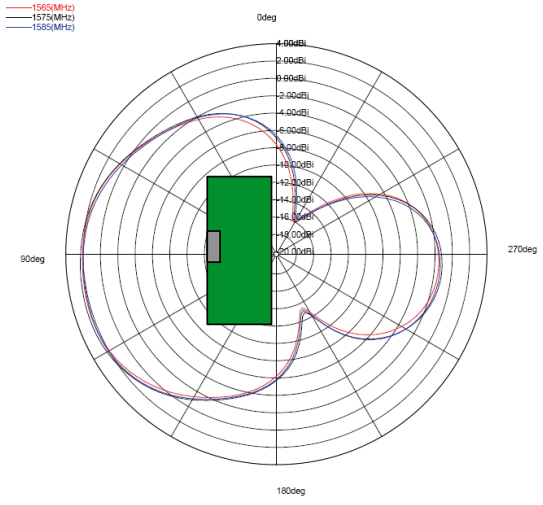
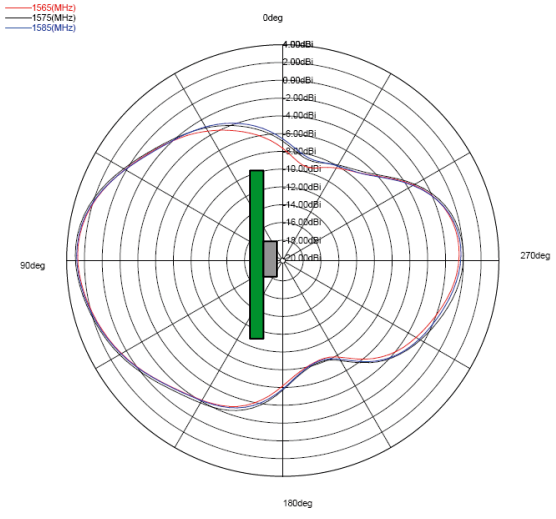
Typical Free Space Radiation Patterns

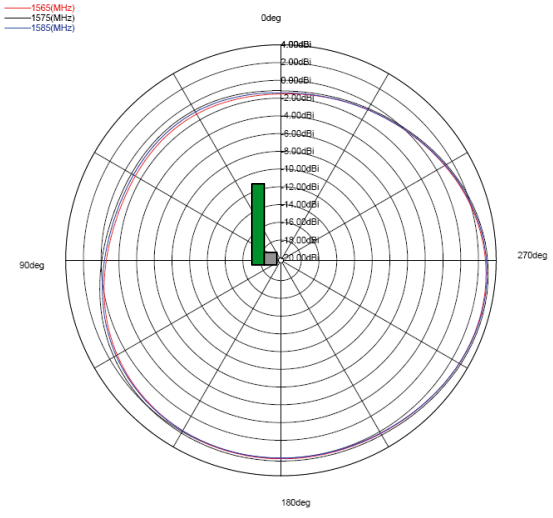
XZ-PLANE

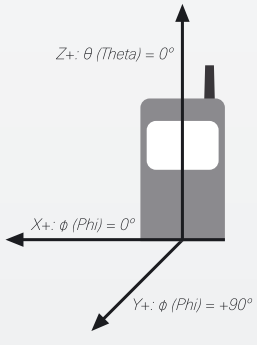


ZY-PLANE



XY-PLANE





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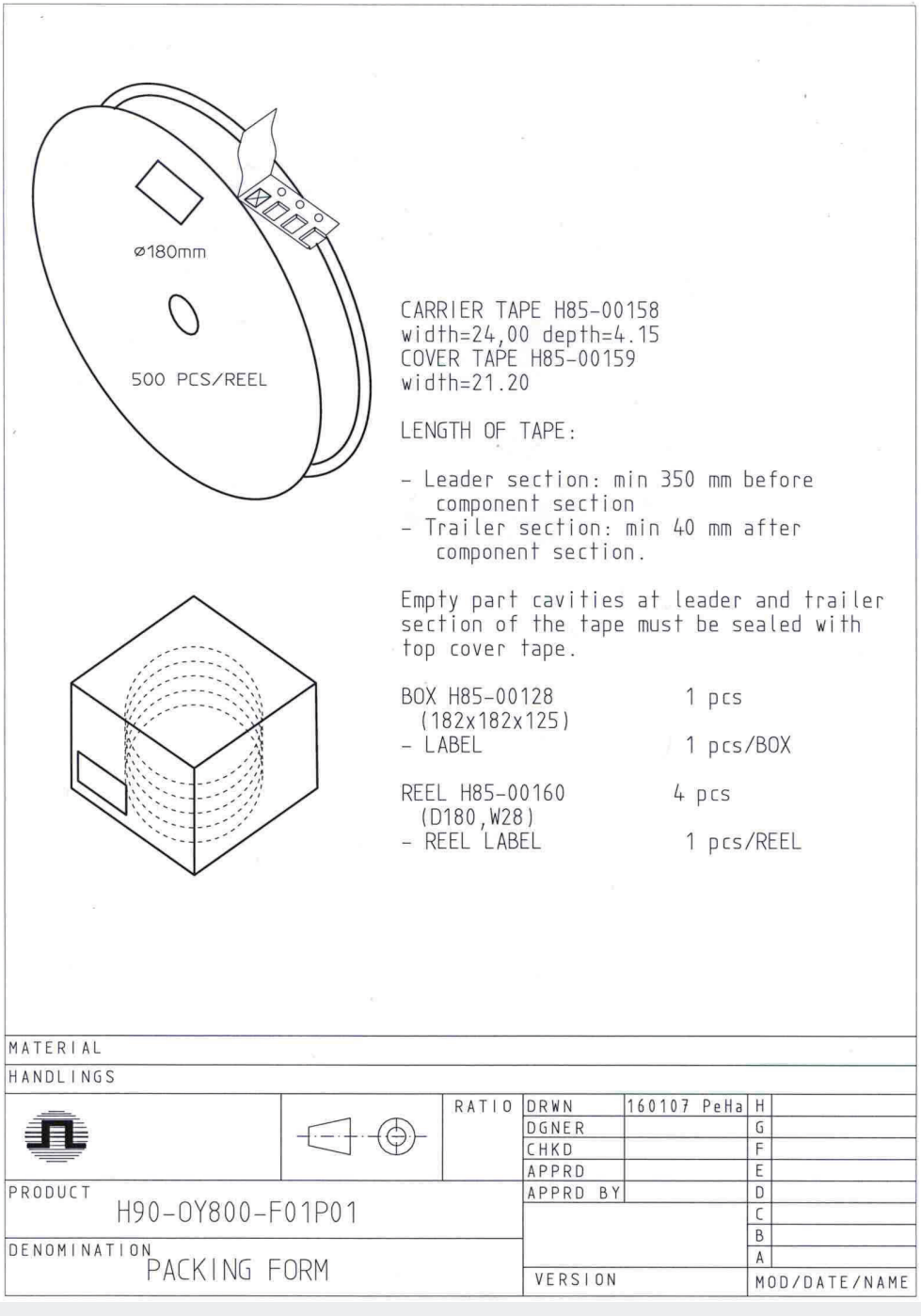
W3009 GPS Antenna Packing

Packing form



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