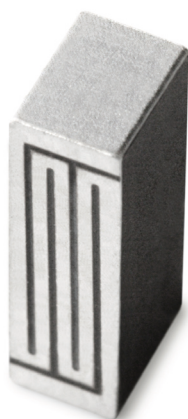


1.575 GHz GPS Ceramic Chip Antenna

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

Pulse Finland Oy

Takatie 6

90440 Kempele, Finland

Tel: +358 207 935 500

Fax: +358 207 935 501

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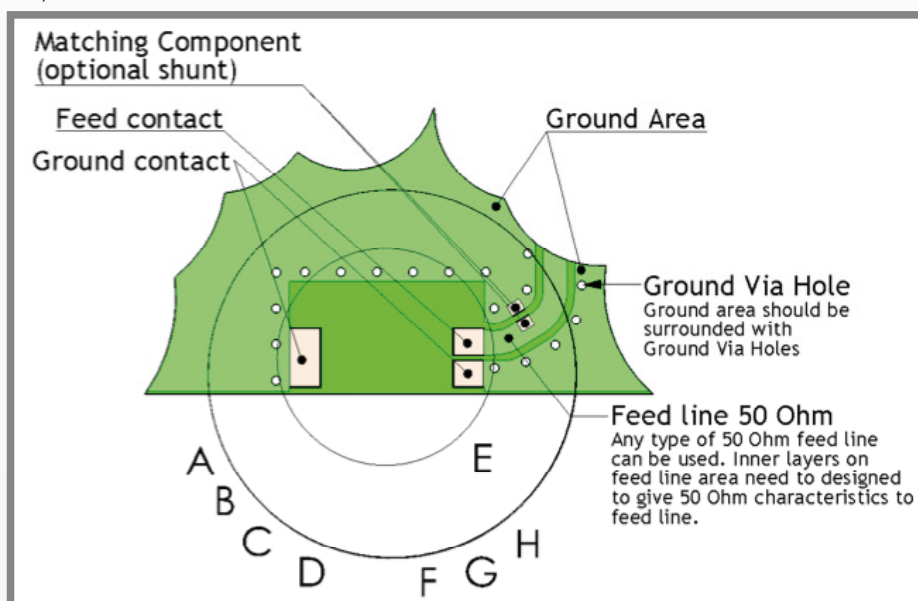
1.575 GHz GPS Ceramic Chip Antenna

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

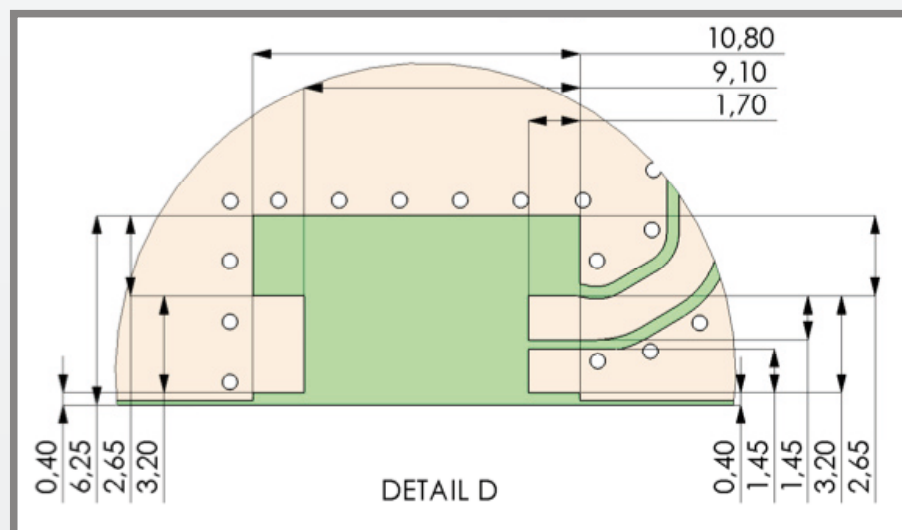
Pulse Part Number: W3009

Terminal Configuration

Layout



Pad dimensions in top copper



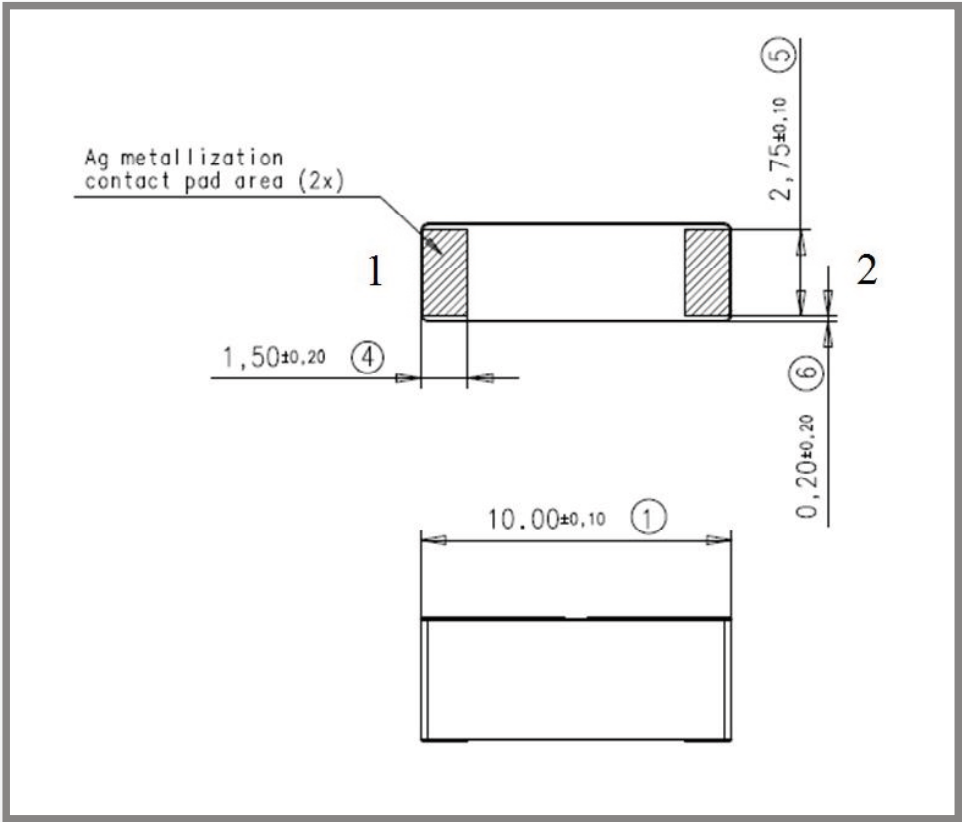
1.575 GHz GPS Ceramic Chip Antenna

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

Pulse Part Number: W3009

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		

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

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

GPS Ceramic Chip Antenna

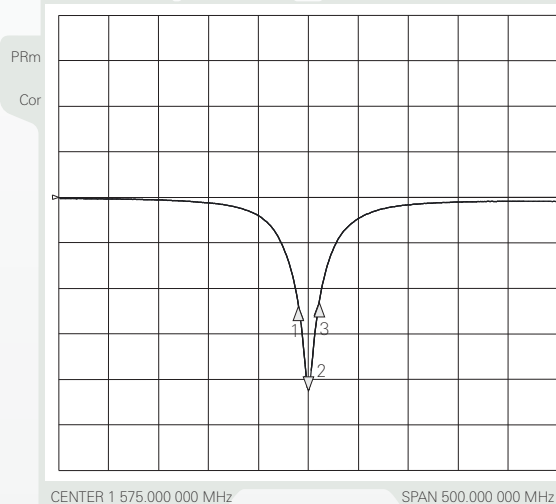
25 May 2007 07:22:17

CH1 S11 LOG

5 dB/REF 0 dB

CH1Markers

1. -12.032 dB 1.56500 GHz
2. -20.839 dB 1.575.420 MHz
3. -11.637 dB 1.58500 GHz

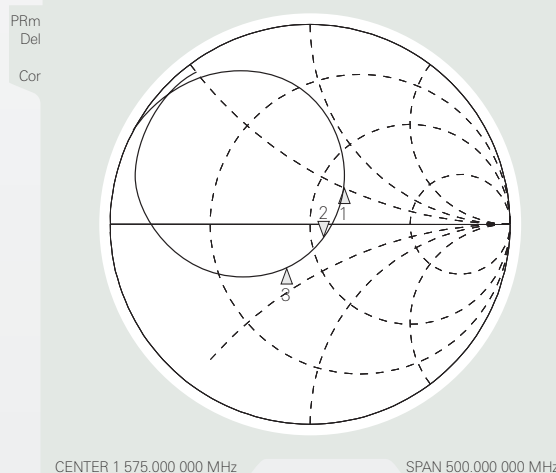


GPS Ceramic Chip Antenna

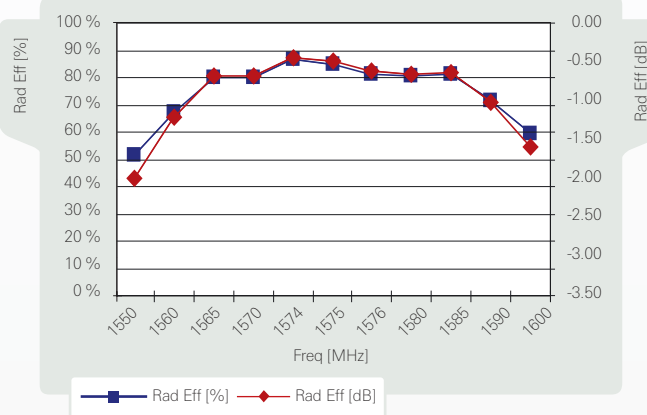
25 May 2007 07:23:38

CH1 S11 1 U FS

1. 64.203 Ω 25.500 Ω 1.56500 GHz
2. 56.211 Ω -8.5977 Ω 11.750 pF 1.575.420 000 MHz
3. 33.688 Ω -17.396 Ω 1.58500 GHz



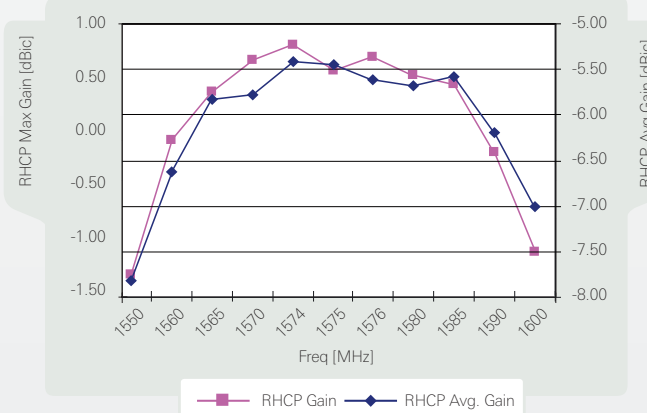
GPS OG 10 x 3.2 x 4 mm



GPS OG 10 x 3.2 x 4 mm



GPS OG 10 x 3.2 x 4 mm



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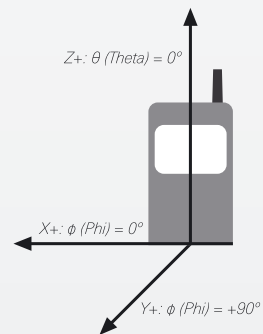
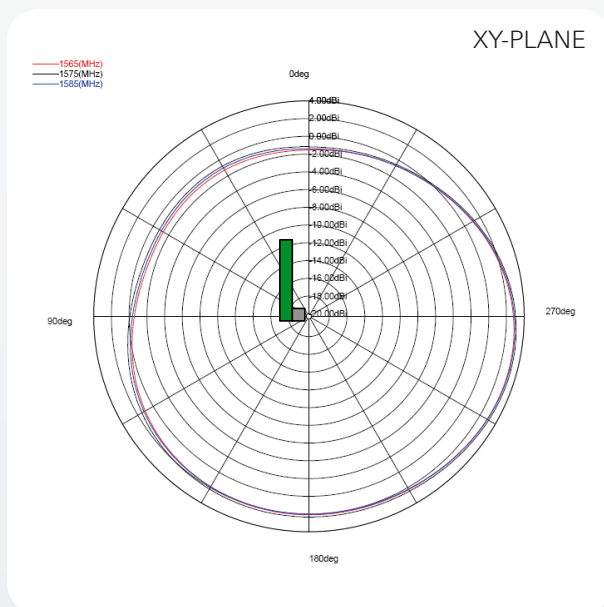
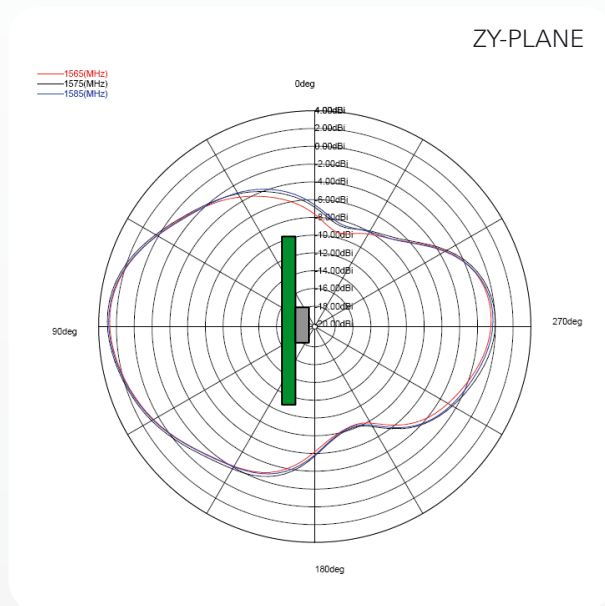
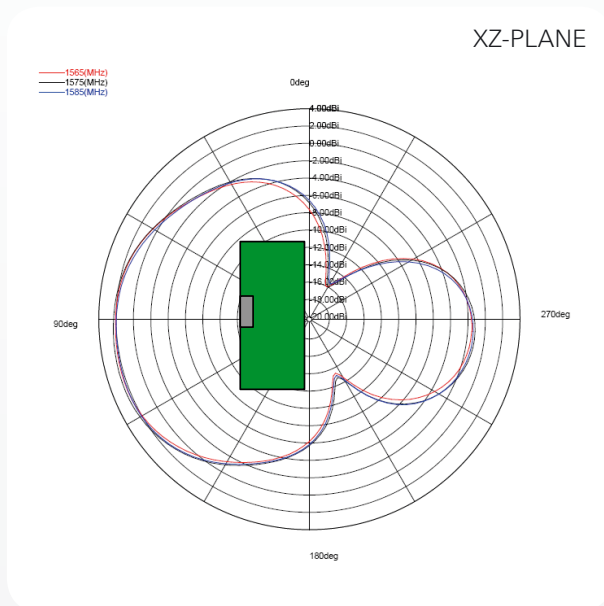
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1.575 GHz GPS Ceramic Chip Antenna

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Typical Free Space Radiation Patterns



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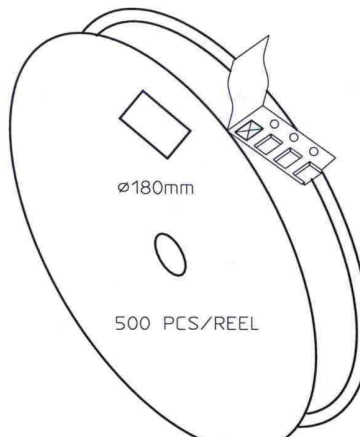
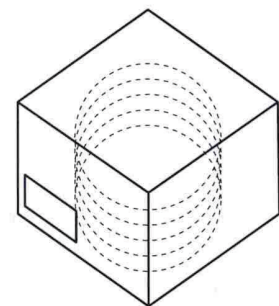

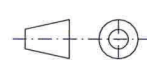
1.575 GHz GPS Ceramic Chip Antenna

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

Pulse Part Number: W3009

W3009 GPS Antenna Packing

Packing form

		<p>CARRIER TAPE H85-00158 width=24,00 depth=4.15 COVER TAPE H85-00159 width=21.20</p>	
		<p>LENGTH OF TAPE:</p> <ul style="list-style-type: none"> - Leader section: min 350 mm before component section - Trailer section: min 40 mm after component section. <p>Empty part cavities at leader and trailer section of the tape must be sealed with top cover tape.</p>	
<p>BOX H85-00128 (182x182x125) - LABEL</p>		<p>1 pcs 1 pcs/BOX</p>	
<p>REEL H85-00160 (D180, W28) - REEL LABEL</p>		<p>4 pcs 1 pcs/REEL</p>	
MATERIAL			
HANDLINGS			
		RATIO	
		DRWN	160107 PeHa H
		DGNER	G
		CHKD	F
		APPRD	E
PRODUCT		APPRD BY	D
H90-OY800-F01P01			C
DENOMINATION			B
PACKING FORM			A
		VERSION	MOD/DATE/NAME

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