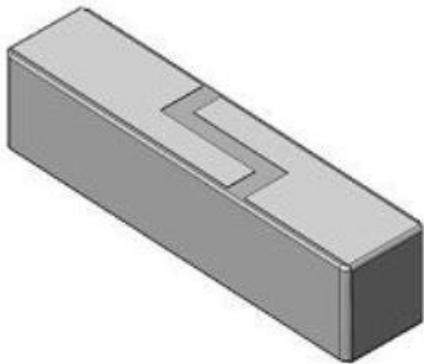


1.575GHz GPS Ceramic Chip Antenna

Pulse Part Number CW3062A-G



Features

- Omni directional radiation
- Low profile
- Compact size W x L x H (7 x 1.6 x 1.6 mm)
- Low weight (86 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.

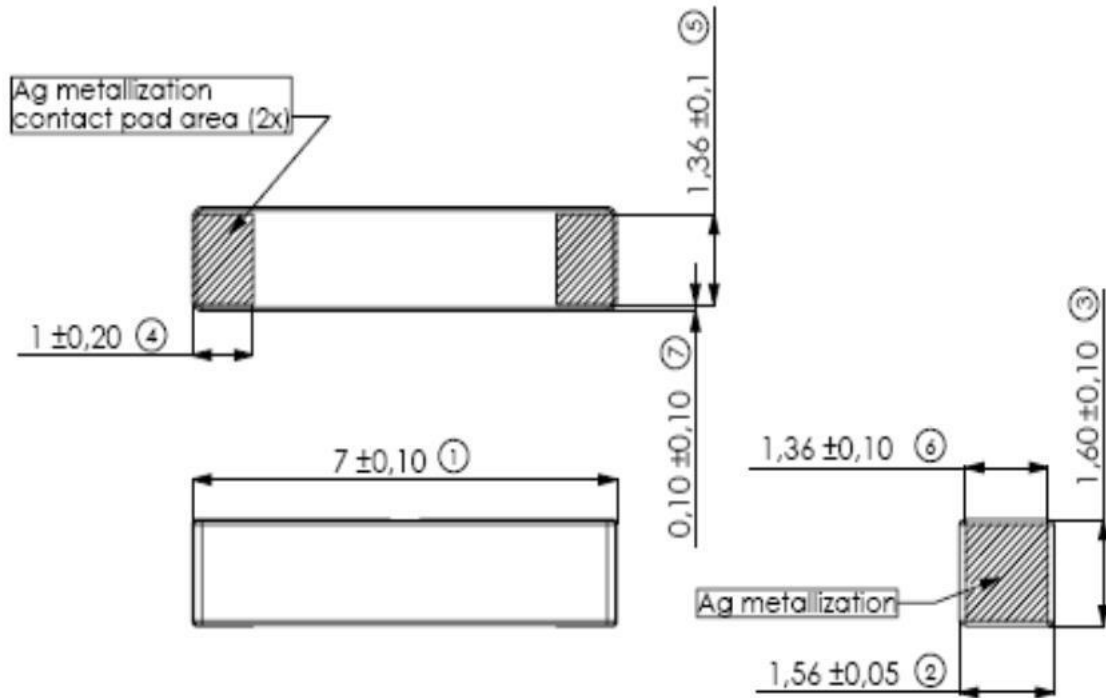
Typical performance (testboard size 80x37 mm, PWB ground clearance area 7.8 x 5.25 mm)

Frequency Range [MHz]	Efficiency [%]/[dB]	RHCP Gain [dBic]	Linear Max Gain [dBi]	Return loss min. [dB]	Impedance [Ω]	Operating Temperature [$^{\circ}$ C]
1575.42+/- 10	80 / -1(peak) 75/-1.25(band edges)	0 (peak) -0.5(band edges)	2.5 (peak) 2 (band edges)	-10	50	-40 to +85

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Terminal Configuration and antenna dimensions



No.	Terminal Name	Terminal Dimensions
1	Feed/ GND	1.00 x 1.36 mm
2	Feed/ GND	1.00 x 1.36 mm
Antenna is symmetrical. Either of terminals 1 or 2 can be Feed / GND		

1.575GHz GPS Ceramic Chip Antenna

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Antenna PWB Layout

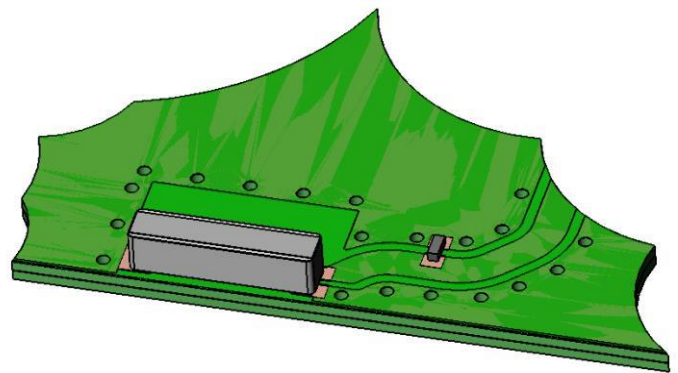
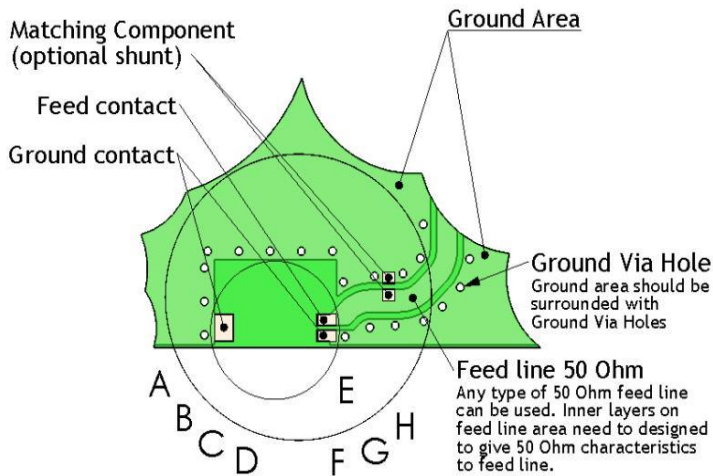
Ground cleared under antenna, clearance area 7.80 x 5.25 mm.

Matching and tuning component values depend on application and surrounding mechanics/ materials.

Feed line should be designed to match 50 Ω characteristic impedance, depending on PWB material and thickness.

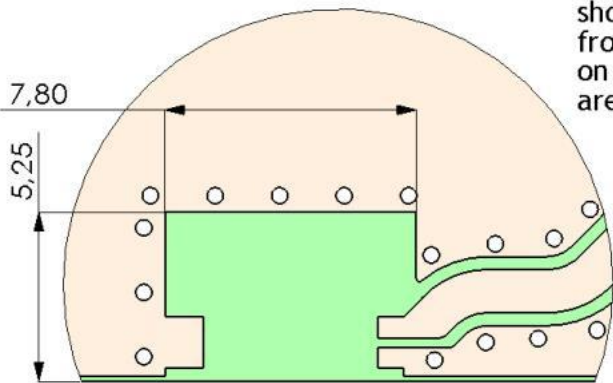
Recommended test board layout for electrical characteristic measurement, test board outline size 80 x 37 mm.

Note: All dimensions are in metric system.



Ground clearance area

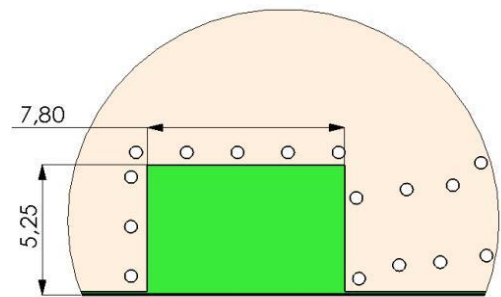
Ground clearance area (5,25 x 7,80 mm)



DETAIL A

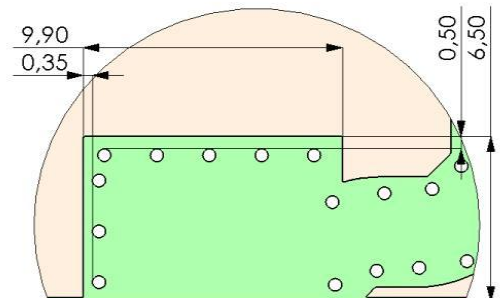
All metallization should be removed from all PWB layers on ground clearance area (5,25 x 7,80 mm)

Opening in bottom/inner ground layers



DETAIL B

Opening in other layers (no ground/ RF)



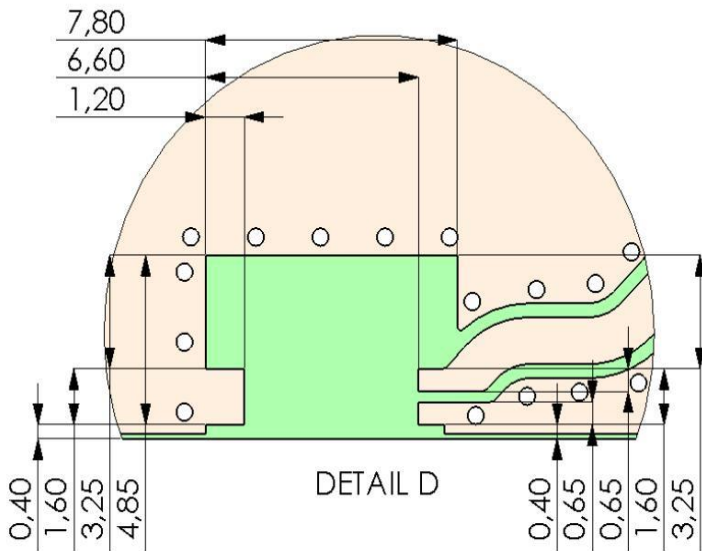
DETAIL C

1.575GHz GPS Ceramic Chip Antenna

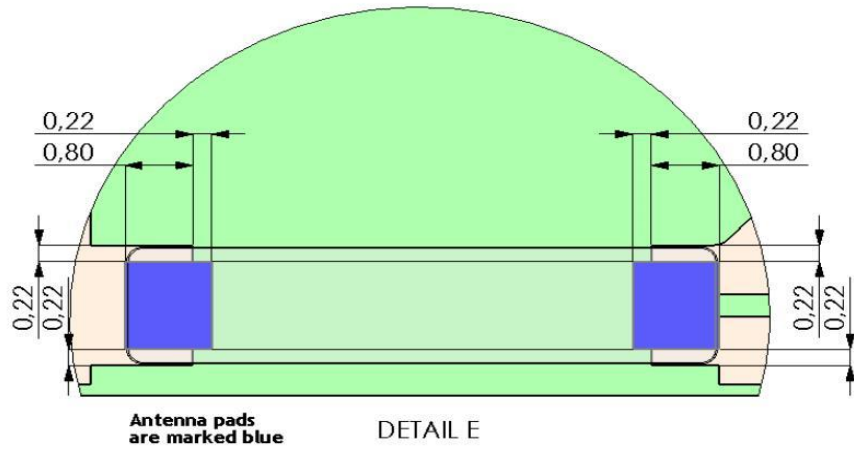
Pulse Part Number CW3062A-G

PWB pad dimensions and antenna position

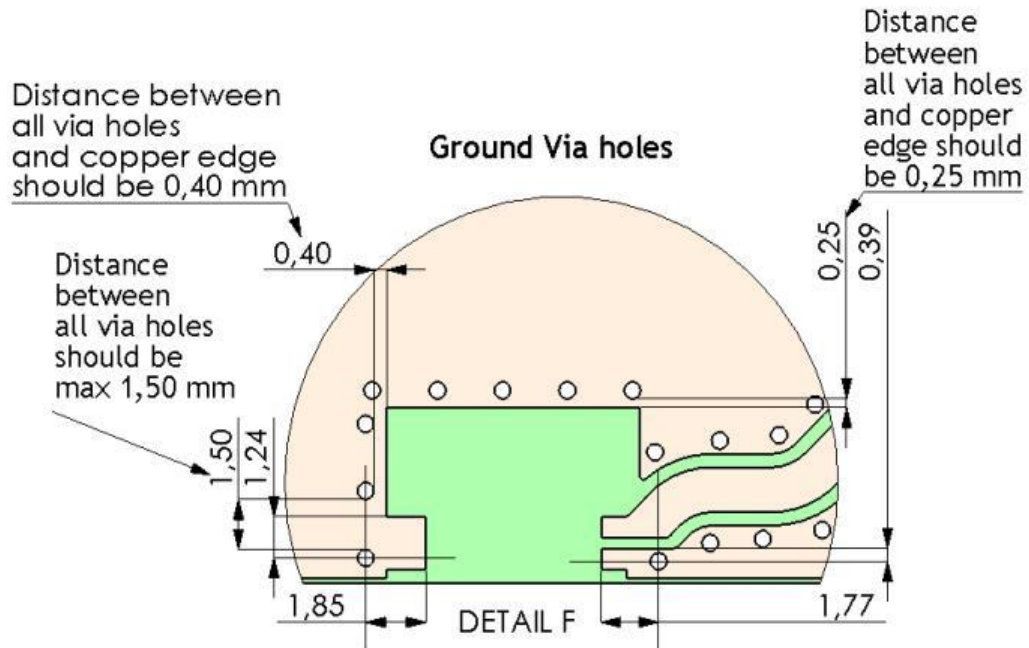
Pad dimensions in top copper



Antenna position on PWB layout



Typical Ground via hole placement in PWB layout

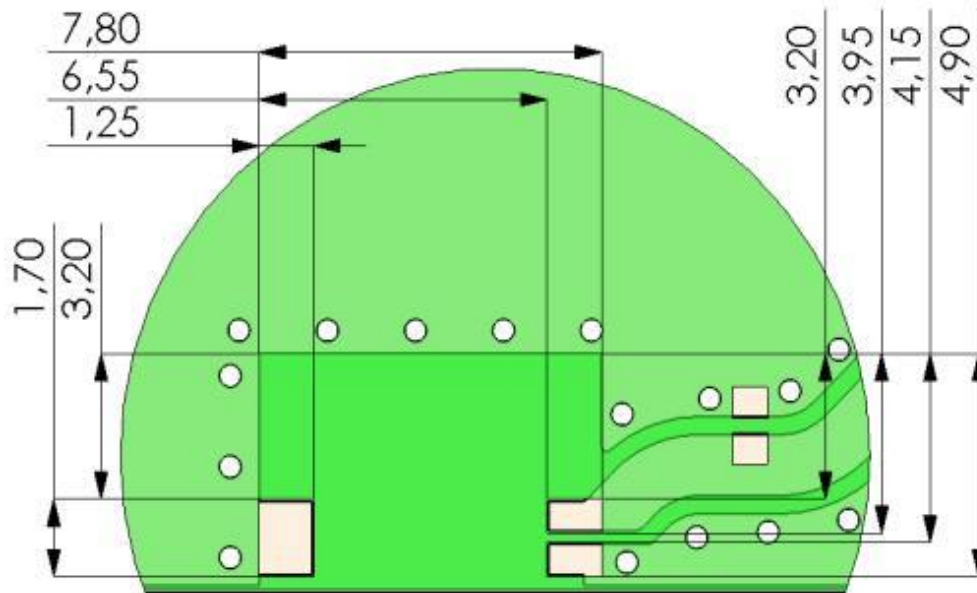


1.575GHz GPS Ceramic Chip Antenna

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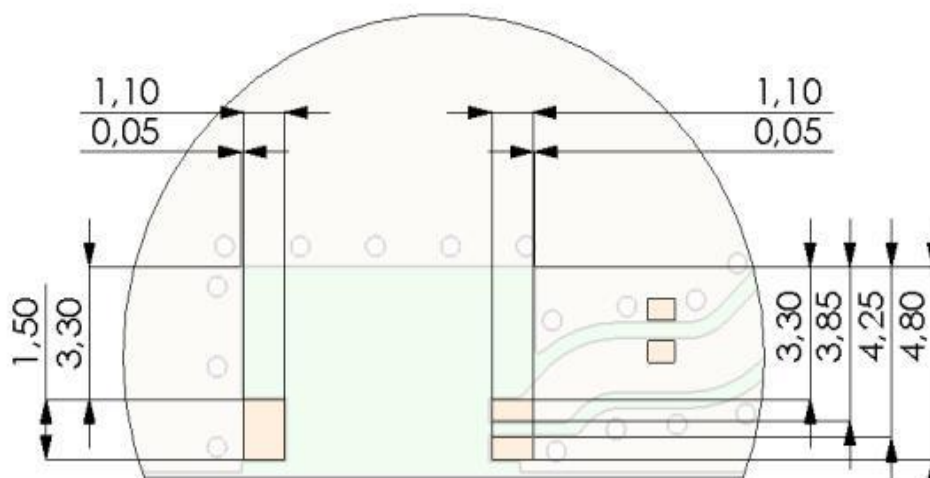
Solder resist opening and paste stencil recommendations

Solder resist opening



DETAIL G

Paste stencil recommendation



Paste stencil thickness recommendation is 0,1 mm

DETAIL H

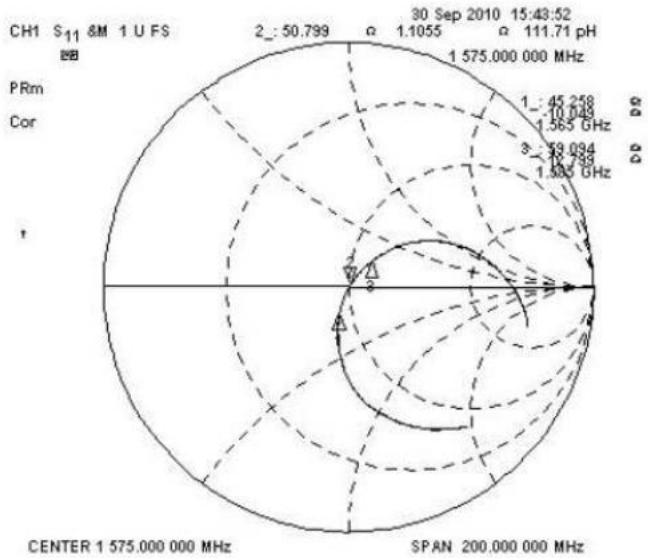
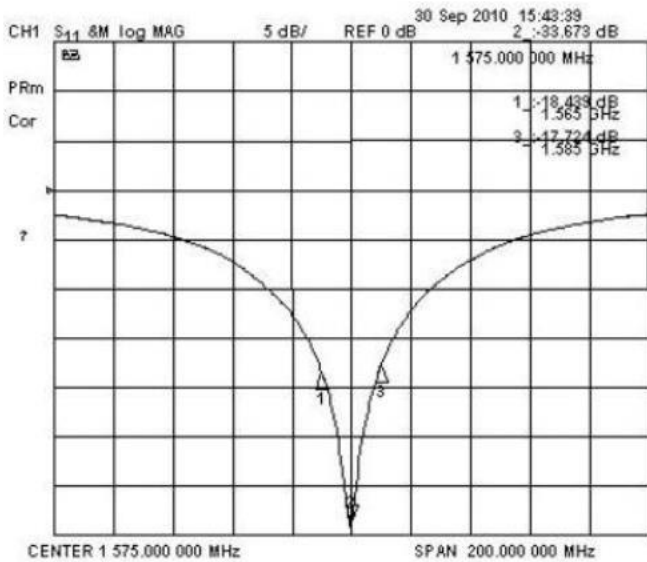
1.575GHz GPS Ceramic Chip Antenna

Pulse Part Number CW3062A-G

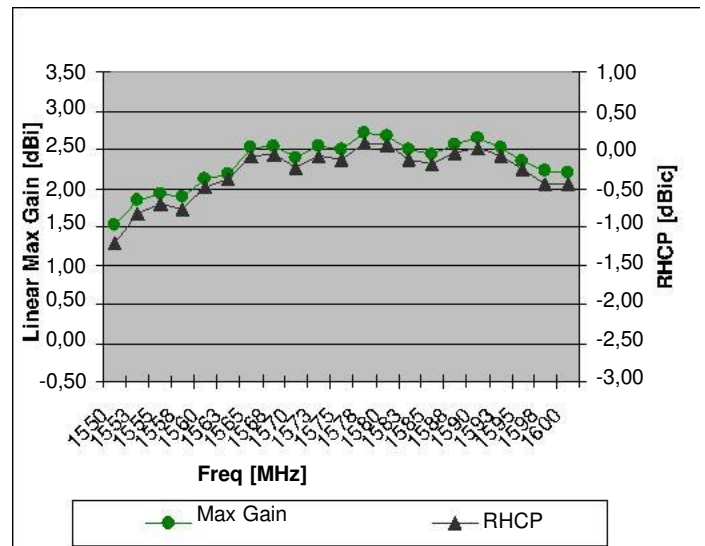
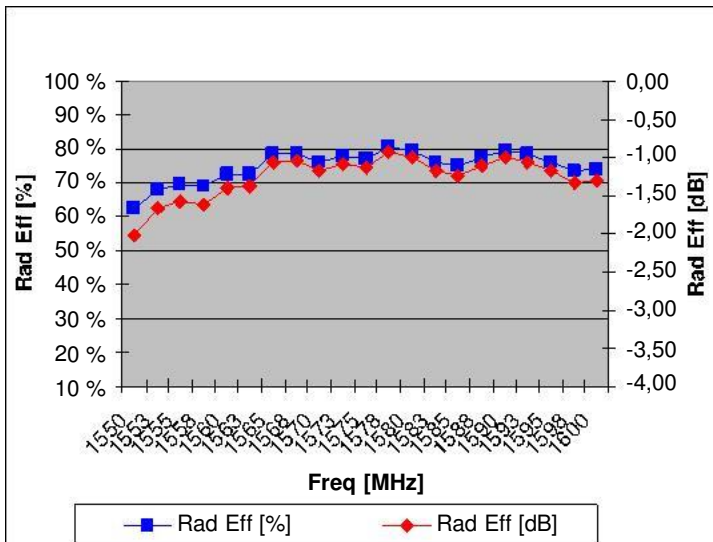
Typical Electrical Characteristics (T=25 ° C)

Measured on the 80 x 37mm test board. Matched with 2.2pF shunt capacitor

Typical Return Loss S11/ impedance



Free space efficiency, Maximum and RHCP Gain



Contact: mobiledeviceantenna.sales@pulseelectronics.com

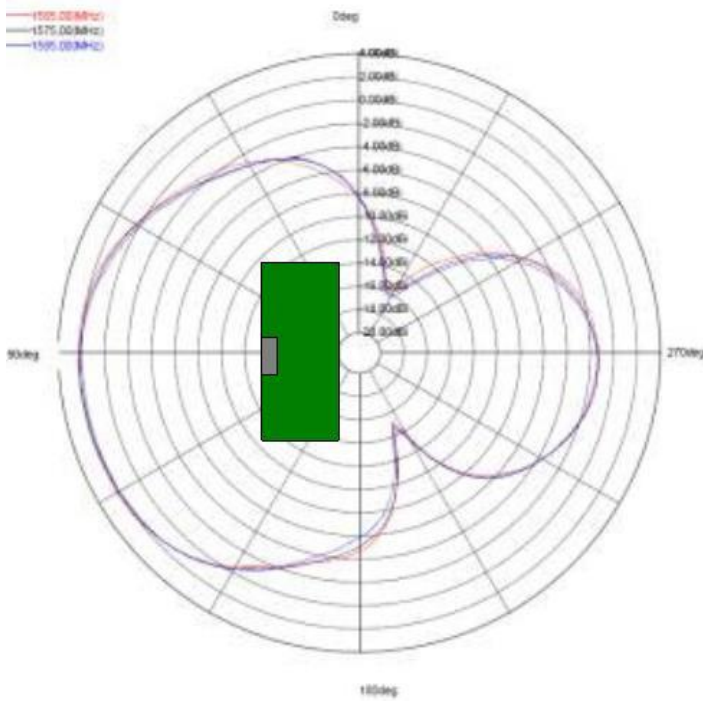


1.575GHz GPS Ceramic Chip Antenna

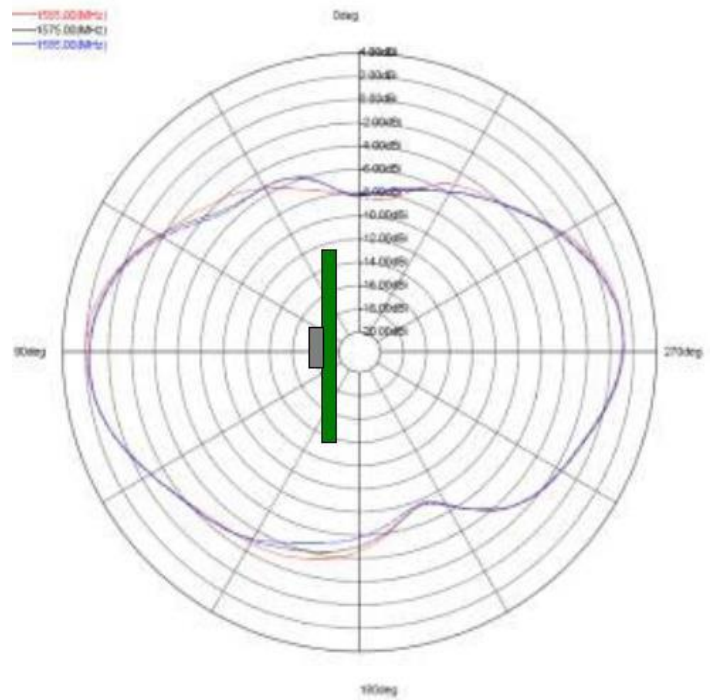
Pulse Part Number CW3062A-G

Typical Free Space Radiation Patterns

XZ-PLANE



ZY-PLANE



XY-PLANE

