

1.9 GHz Diversity RX ceramic antenna

Pulse Part Number CW3038



Features

- Omni directional radiation
- Low profile
- Compact size W x L x H (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

- PCS Rx
- 1.9 GHz Diversity RX

Electrical specifications @ +25 ° C

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

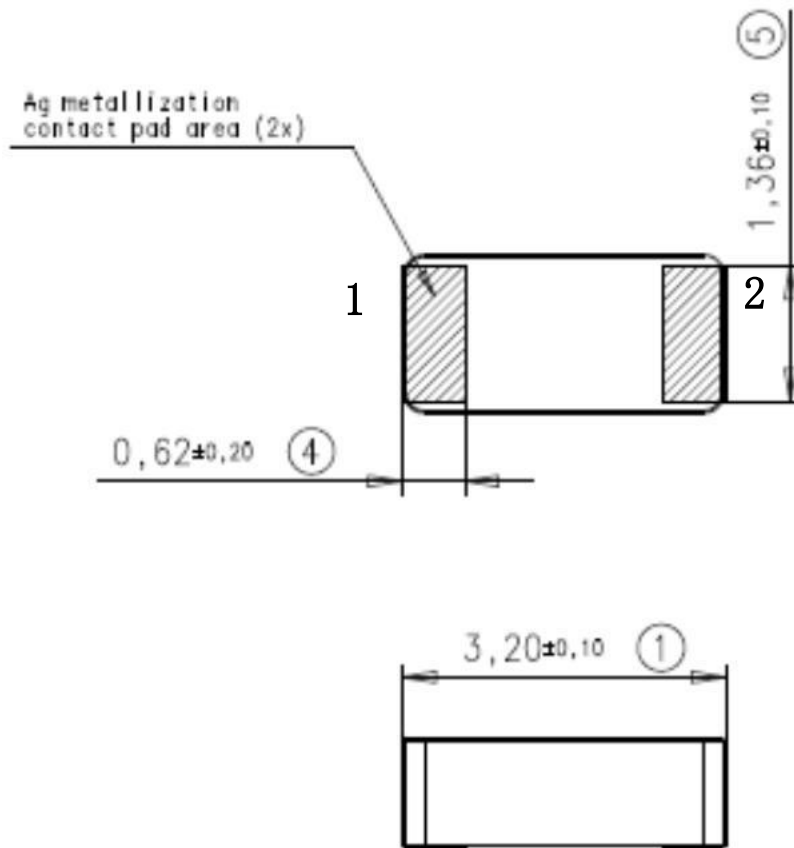
Typical performance (testboard size 80x37 mm, PWB ground clearance area 4.0 x 4.25 mm)

Frequency Range [MHz]	Linear Max Gain [dBi]	Return loss min. [dB]	Efficiency [%]/[dB]	Impedance [Ω]	Operating Temperature [$^{\circ}$ C]
1930 – 1990	1.8 (peak) 0.5 (band edges)	-6	70 / -1.55(peak) 50 / -3(band edges)	50	-40 to +85

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Terminal Configuration and antenna dimensions



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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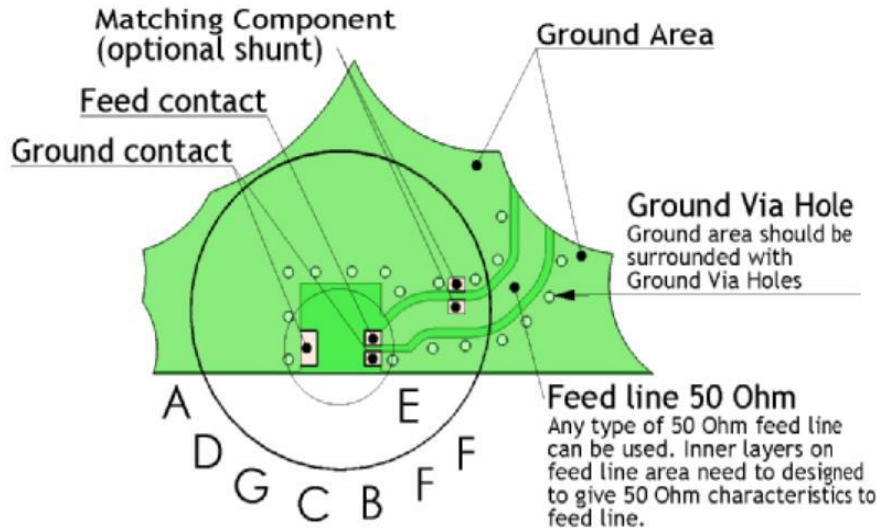
Antenna PWB Layout

Ground cleared under antenna, clearance area 4.00 x 4.25 mm, Matching and tuning component value and placement depend on application and surrounding mechanics / materials.

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

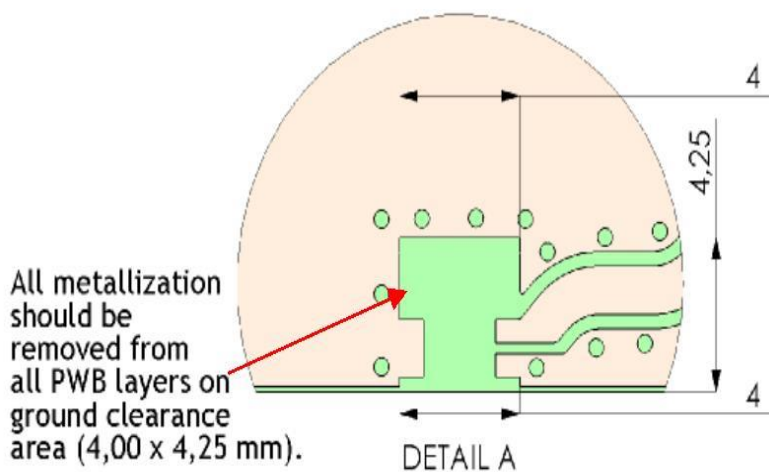
Recommended test board layout for electrical characteristic measurement, test board outline size 80 x 37 mm.

Note: All dimensions are in metric system.

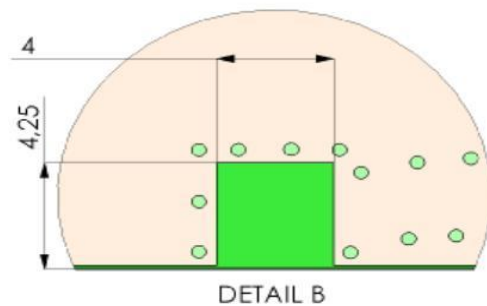


Ground clearance area

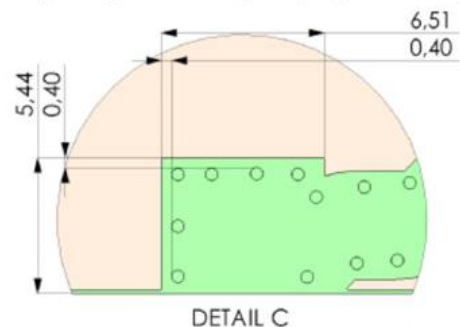
Ground clearance area (4,00 x 4,25 mm)



Opening in bottom/inner ground layers



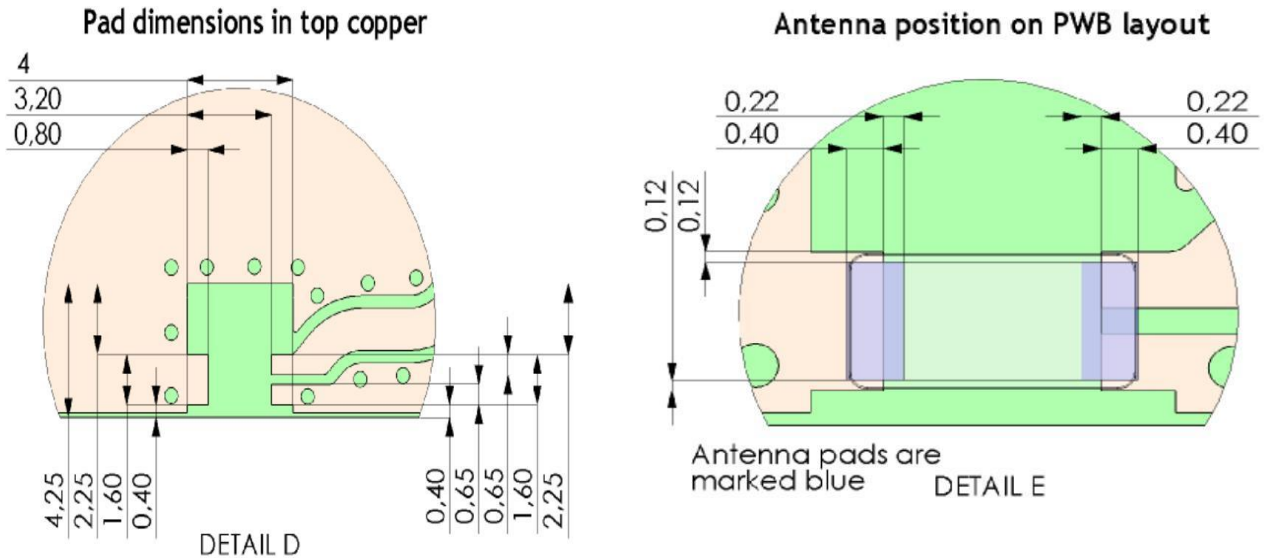
Opening in other layers (no ground/ RF)



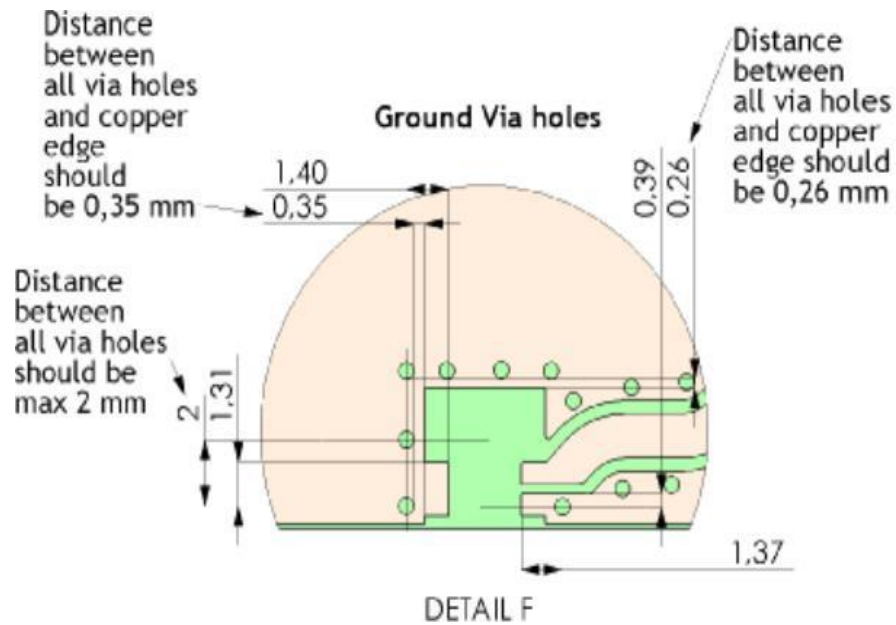
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PWB pad dimensions and antenna position



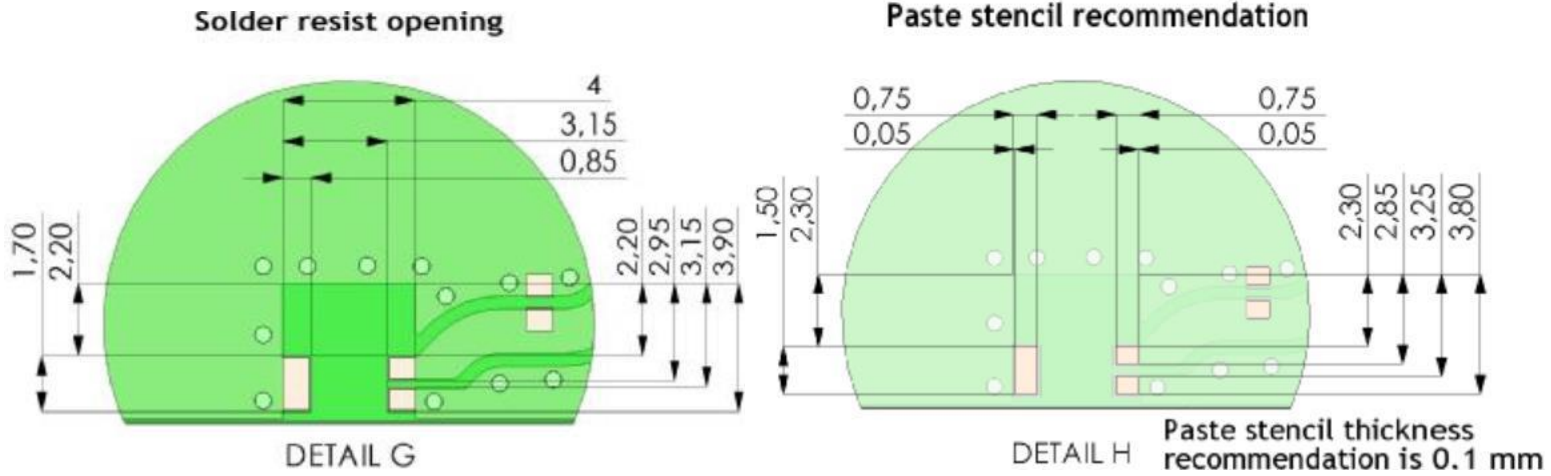
Typical Ground via hole placement in PWB layout



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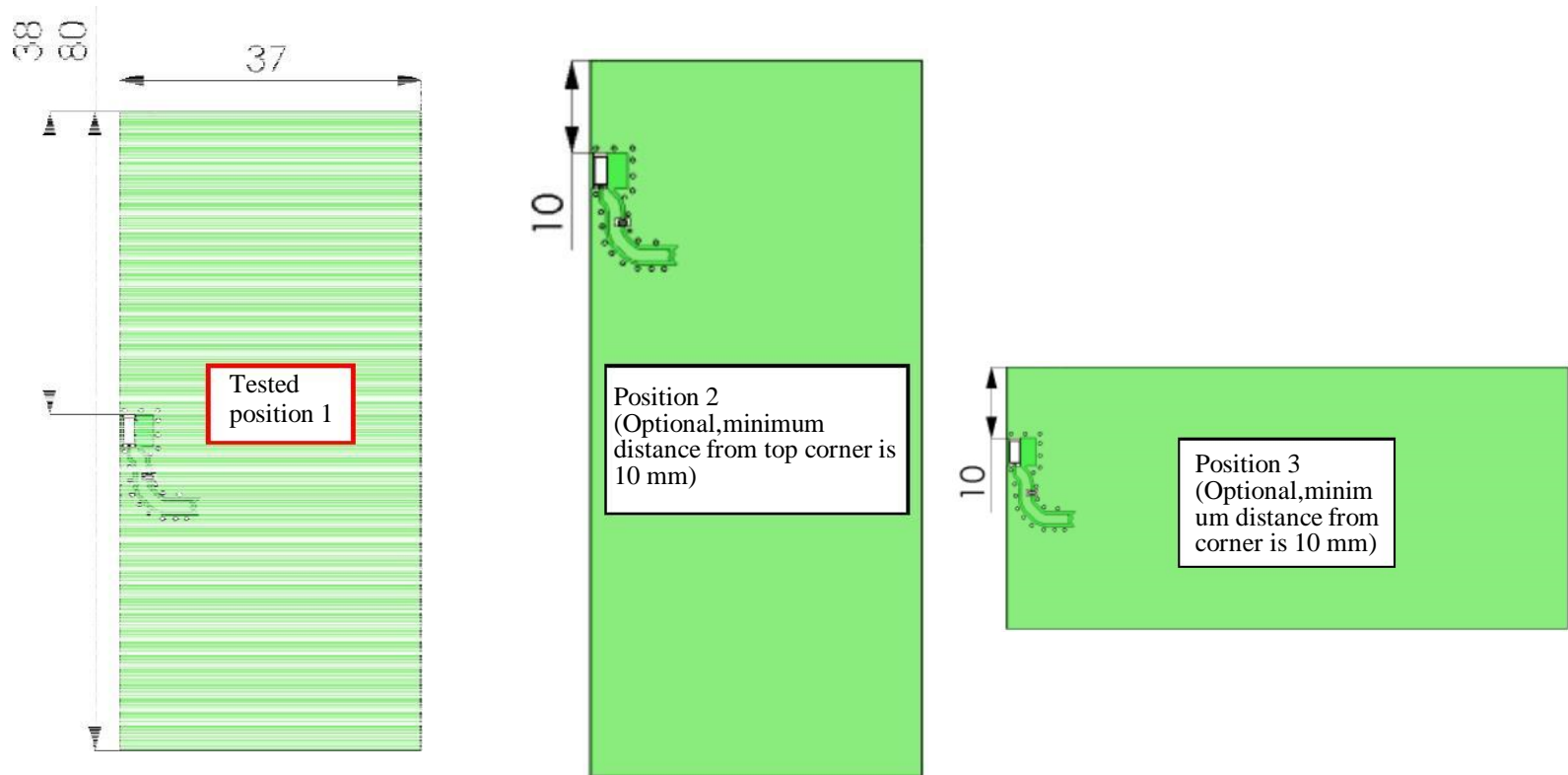
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Solder resist opening and paste stencil recommendations



Recommended antenna position on PWB

Our test PWB size is 37 x 80 mm, other sized boards can be used depending on customer device size (minimum 35 x 35 mm)



Contact: mobiledeviceantenna.sales@pulseelectronics.com

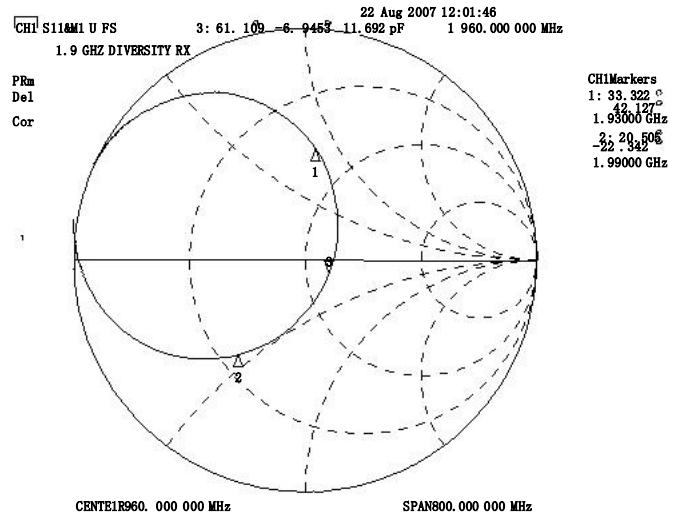
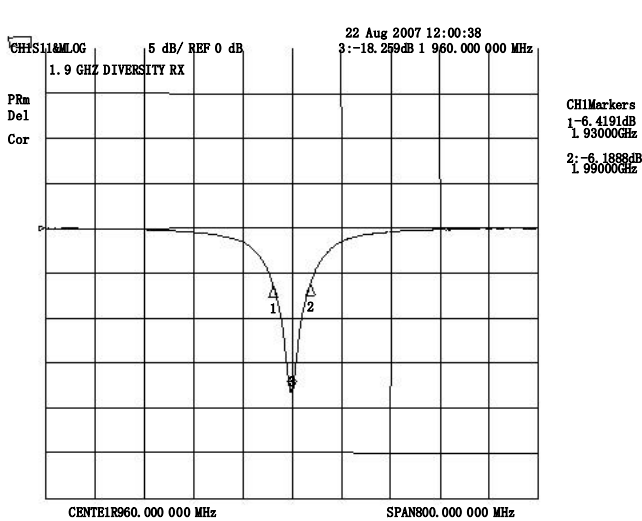
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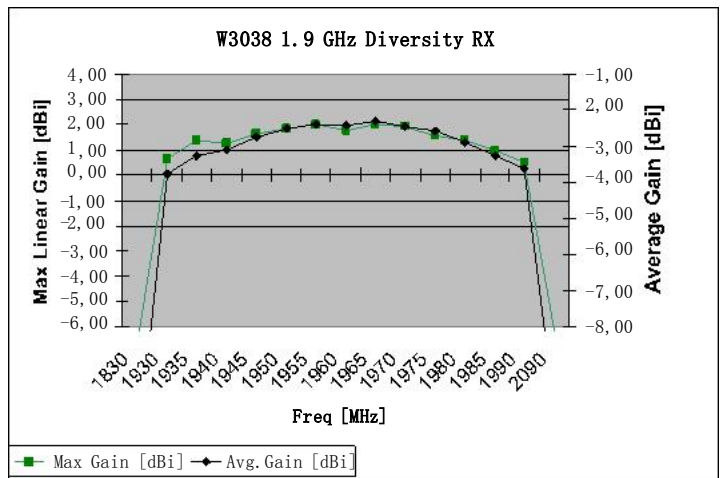
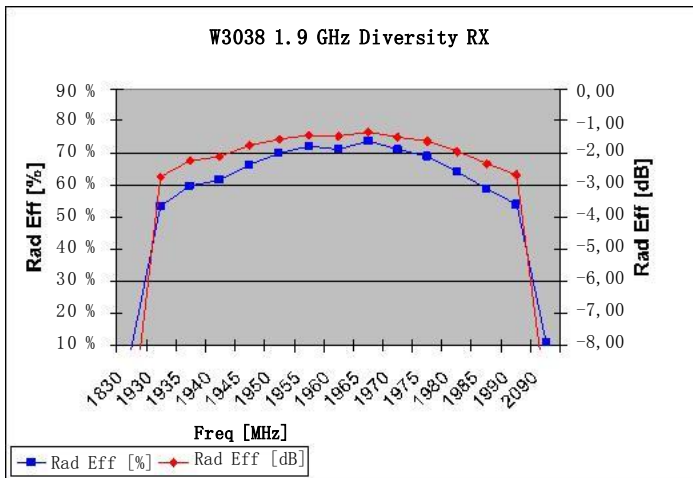
Typical Electrical Characteristics (T=25 °C)

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

Typical Return Loss S11/ impedance



Typical free space efficiency and maximum gain



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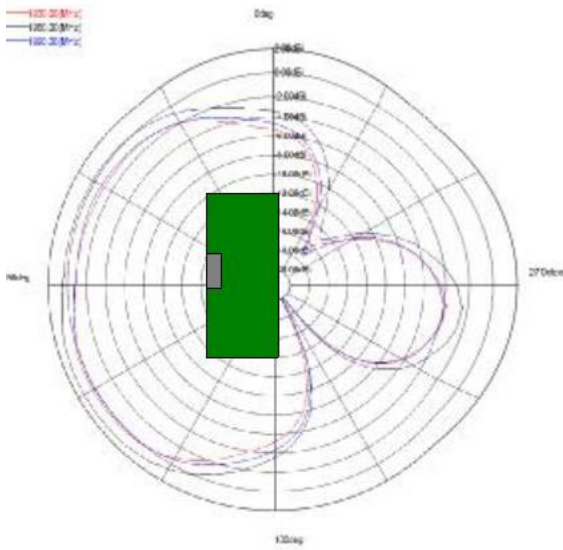


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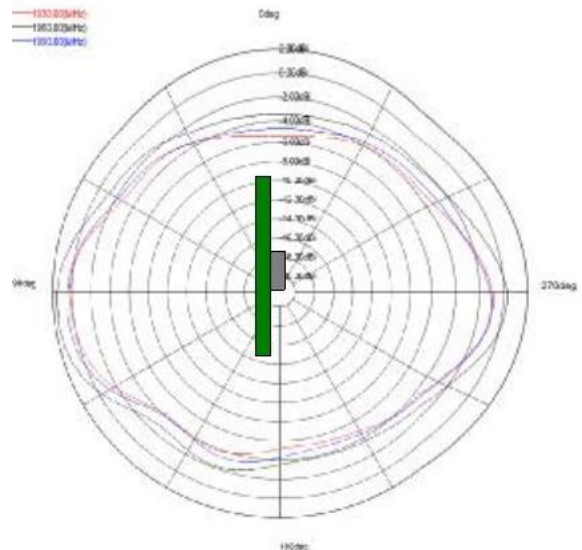
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Typical Free Space Radiation Patterns

XZ-PLAN



ZY-PLANE



XY-PLANE

