

Wimax 3.5GHz Ceramic antenna

Pulse Part Number CW3021



Features

- Omni directional radiation (xy-plane)
- 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

- Devices using Wimax
- 3.2 – 3.6 GHz

Electrical specifications @ +25 ° C

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

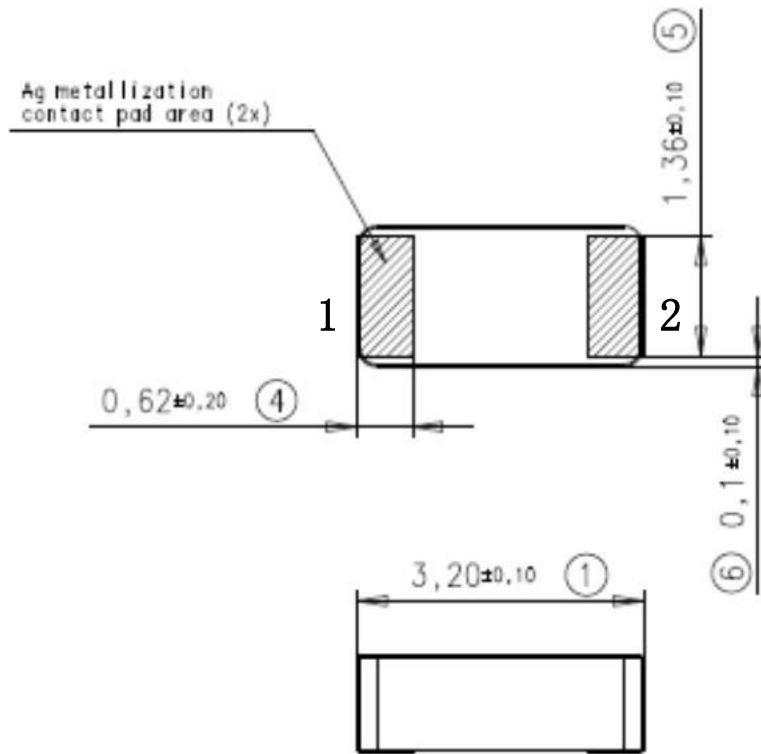
Typical performance (testboard size 80x37 mm, PWB ground clearance area 4.0 x 6.25 mm)

Frequency Range [MHz]	Linear Max Gain [dBi]	Return loss min. [dB]	Efficiency [%]/[dB]	Impedance [Ω]	Operating Temperature [$^{\circ}$ C]
3200 – 3600	3.0 (peak) 1.6 (band edges)	-7.5	85 / -0.7(peak) 70 / -1.6(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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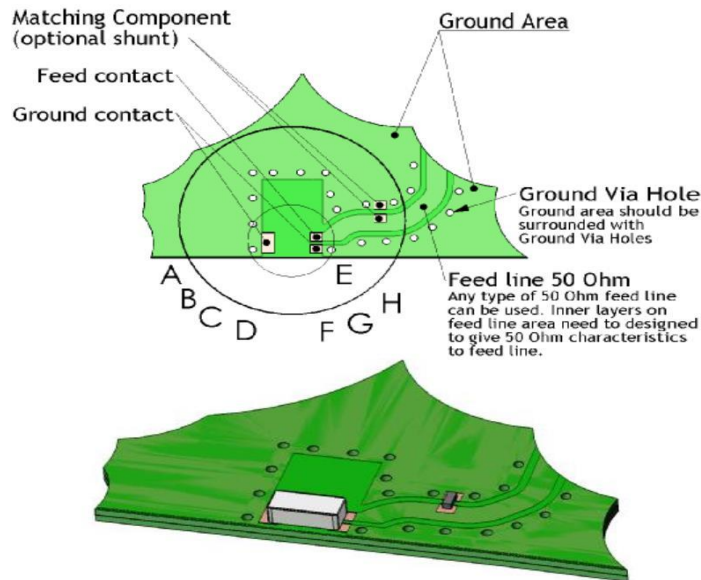
Antenna PWB Layout

Ground cleared under antenna, clearance area 4.00 x 6.25 mm, Matching and tuning component value and placement depend on application and surrounding mechanics / materials.

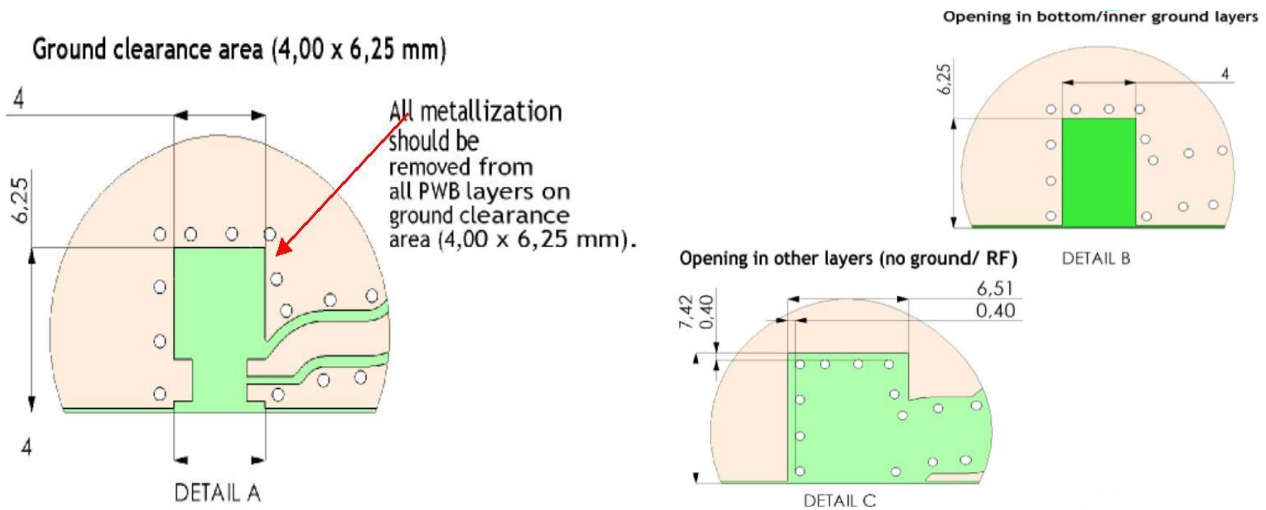
Feed line should be designed to match 50 Ω characteristic impedance, depending on PWB material and thickness.

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

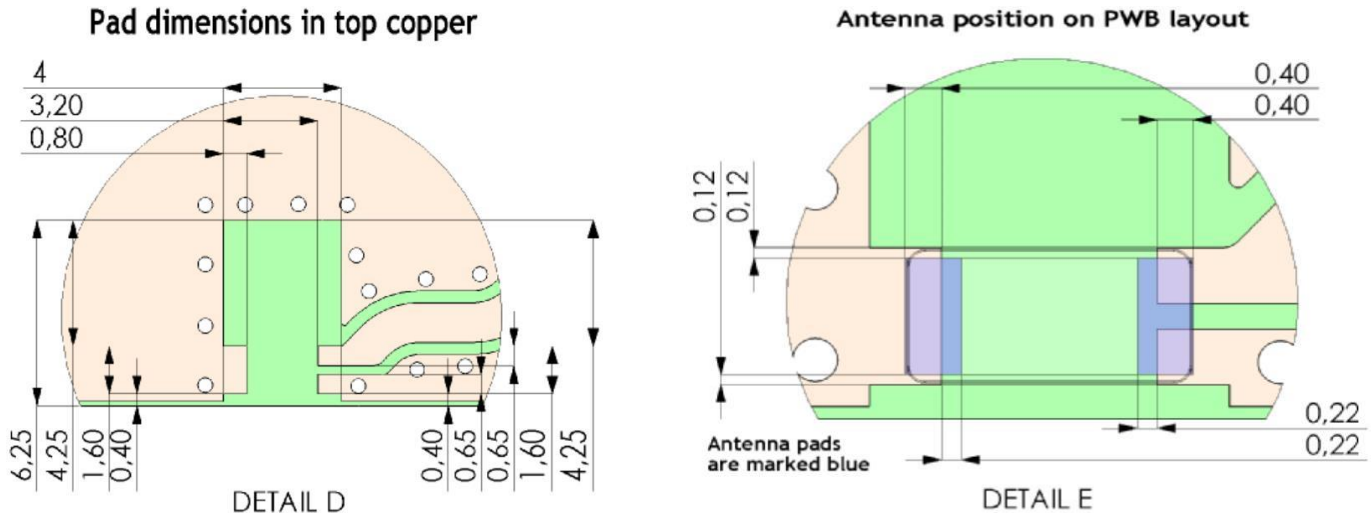


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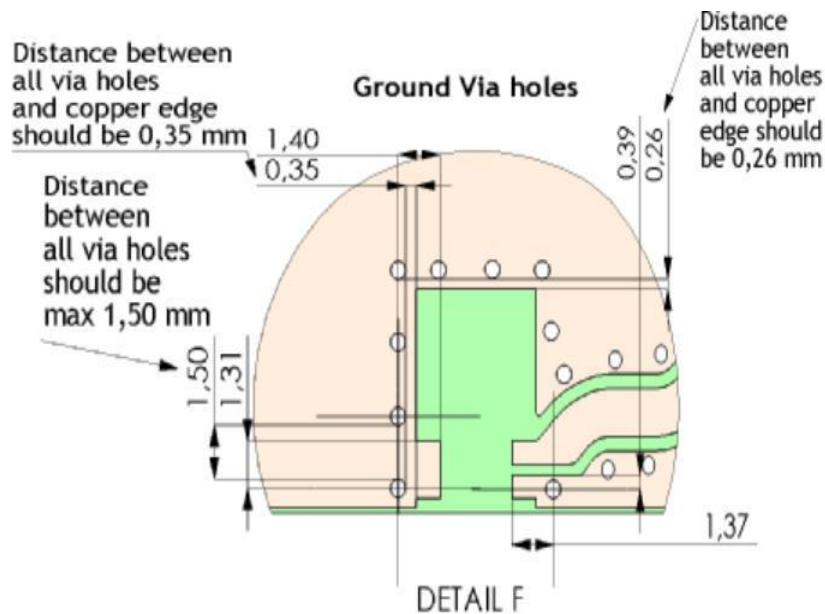
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PWB pad dimensions and antenna position



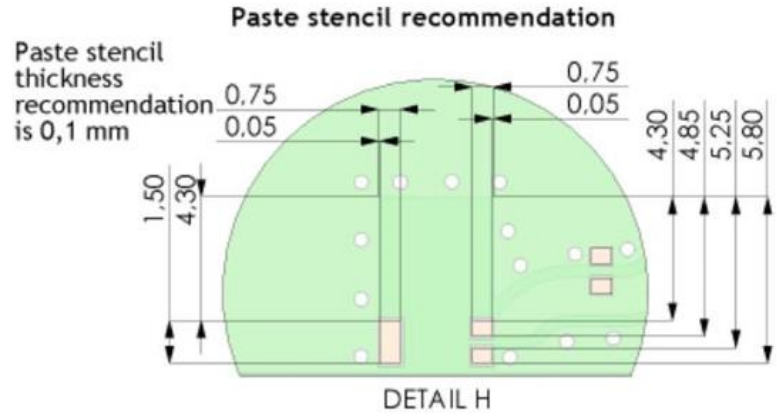
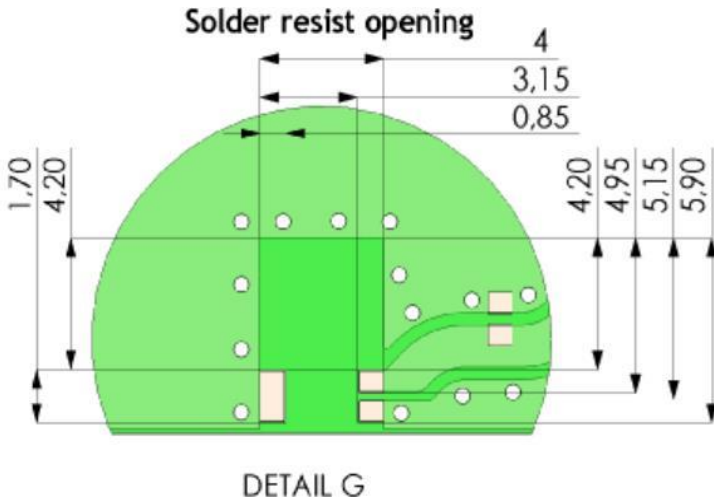
Typical Ground via hole placement in PWB layout



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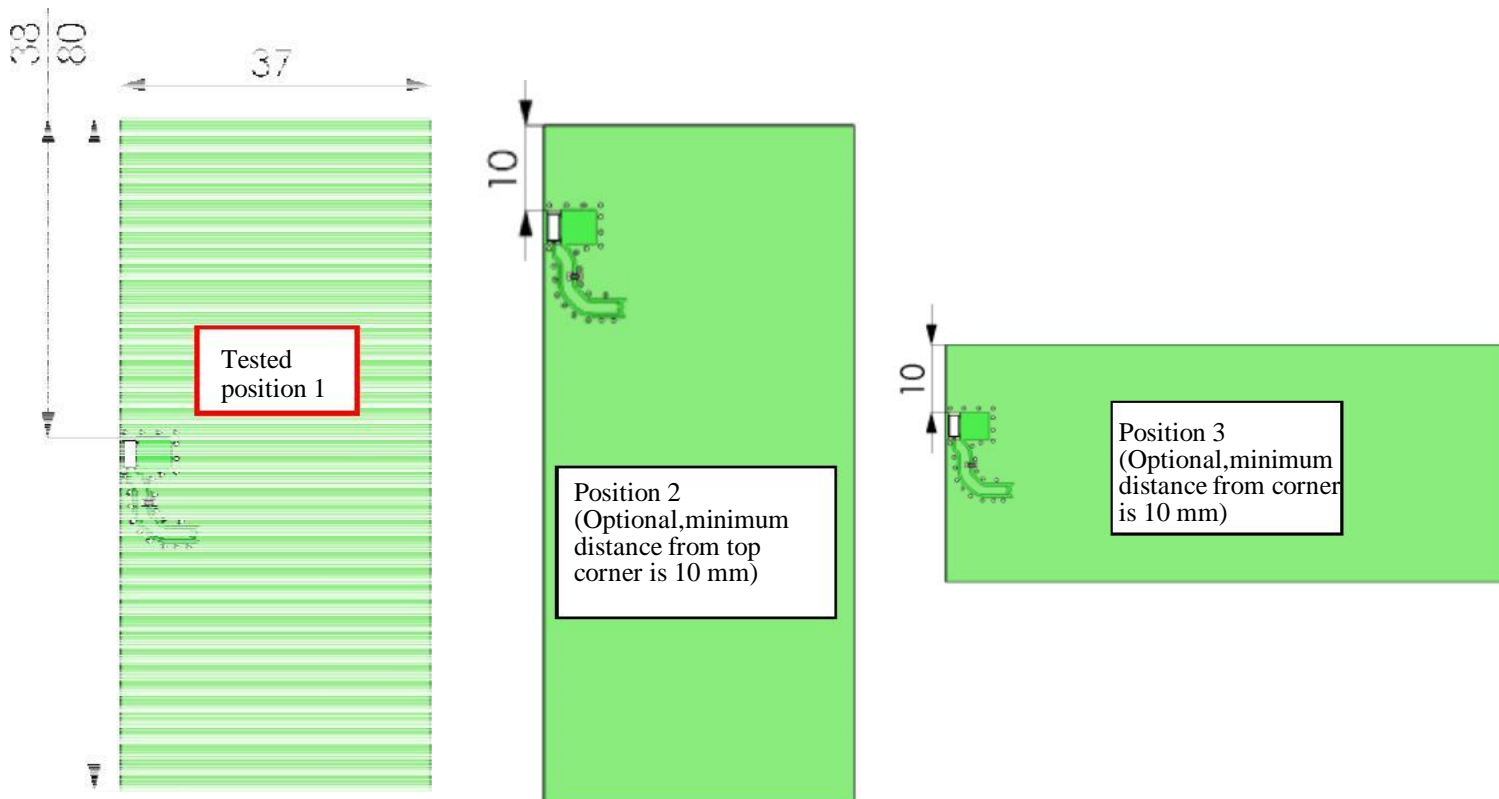
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Solder resist opening and paste stencil recommendations



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)



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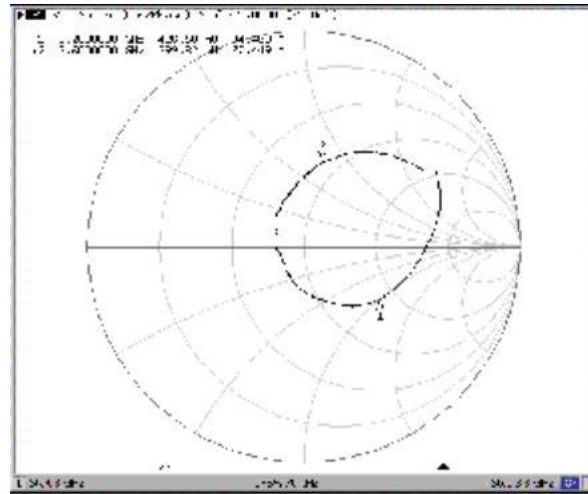
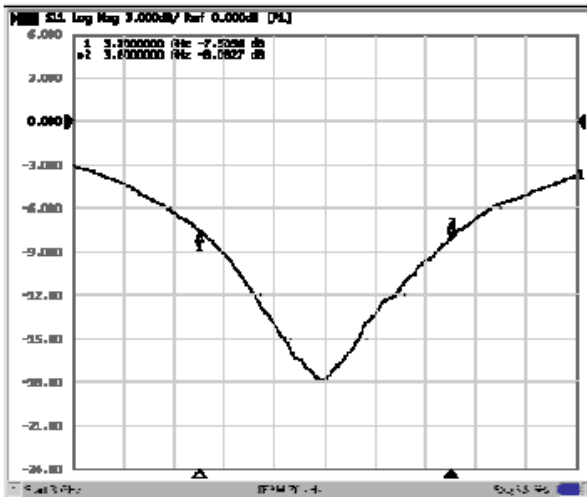
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Typical Electrical Characteristics (T=25 °C)

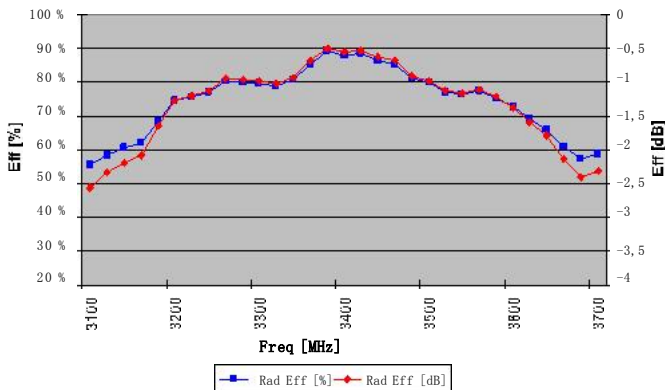
Measured on the 80 x 37mm test board with matching circuit (shunt 0.7 pF)

Typical Return Loss S11/ impedance

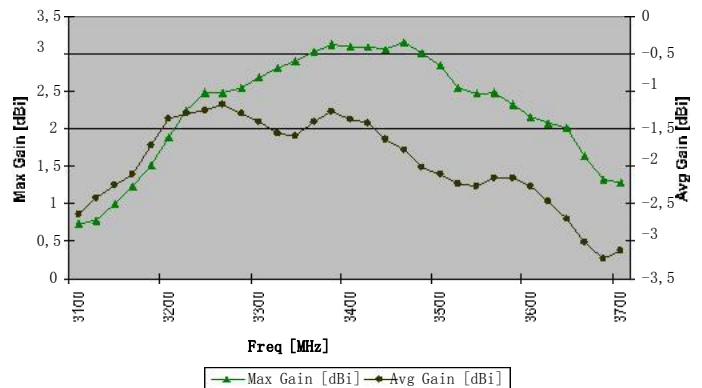


Typical free space efficiency and maximum gain

Wimax 3.2 – 3.6 GHz



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Typical Free Space Radiation Patterns

