

NIC Series: NGCP Ceramic PIFA Chip Antennas

[NGCP3505UC0R798G5TRF](#)

[NGCP4005UC0R880G6TRF](#)

[NGCP4005UC0R798G5TRF](#)

Purpose: This application note is made to show the performance due to the installation of the NGCP (Ceramic PIFA Chip Antenna) at different dimensions of the ground plane.

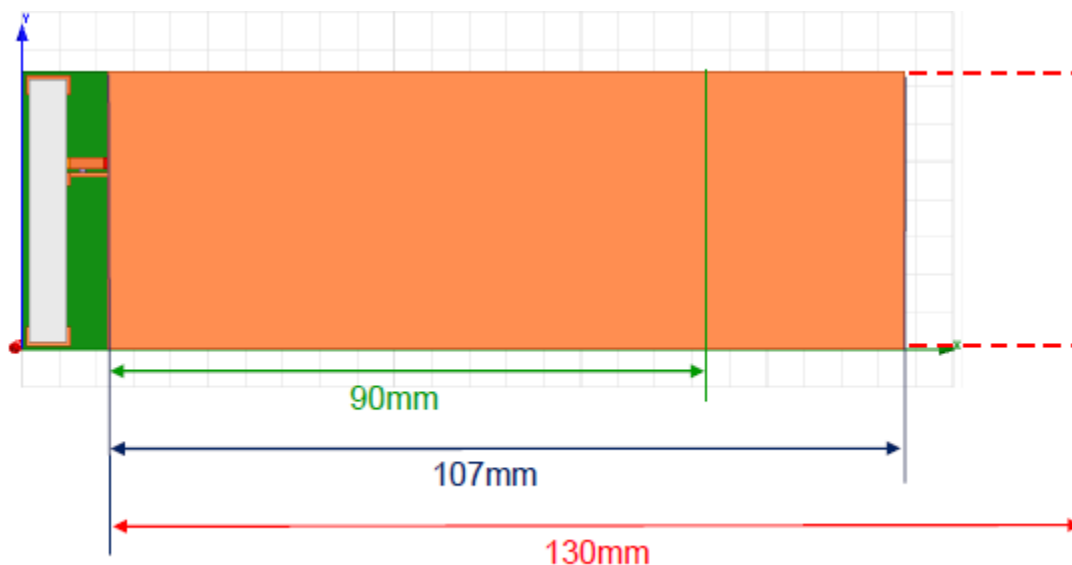
Studies:

1. The effects on radiation efficiency
2. The effects on efficiency due to distance

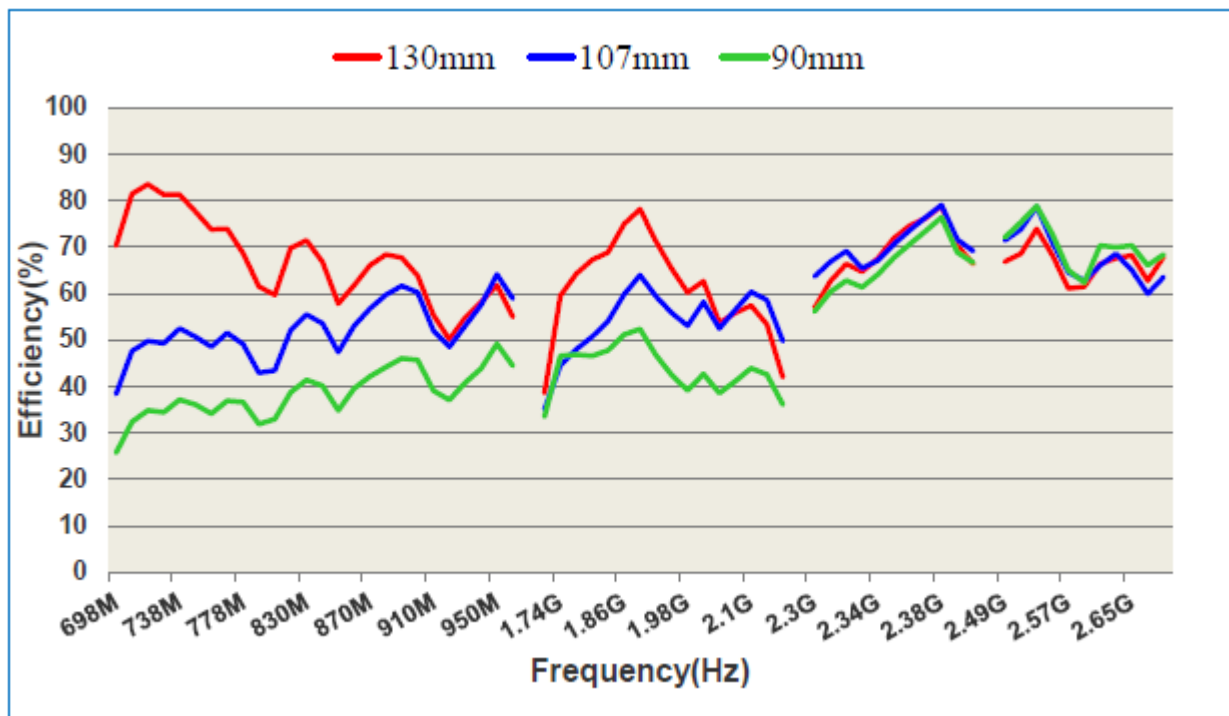
Prepared by NIC Components, nic-tpmg@niccomp.com

The effects of antenna's placement

Installing chip antenna at various ground plane dimensions of the circuit board. The orange area shows the ground plane and the green area shows the ground clearance.



Frequency vs Radiation Efficiency

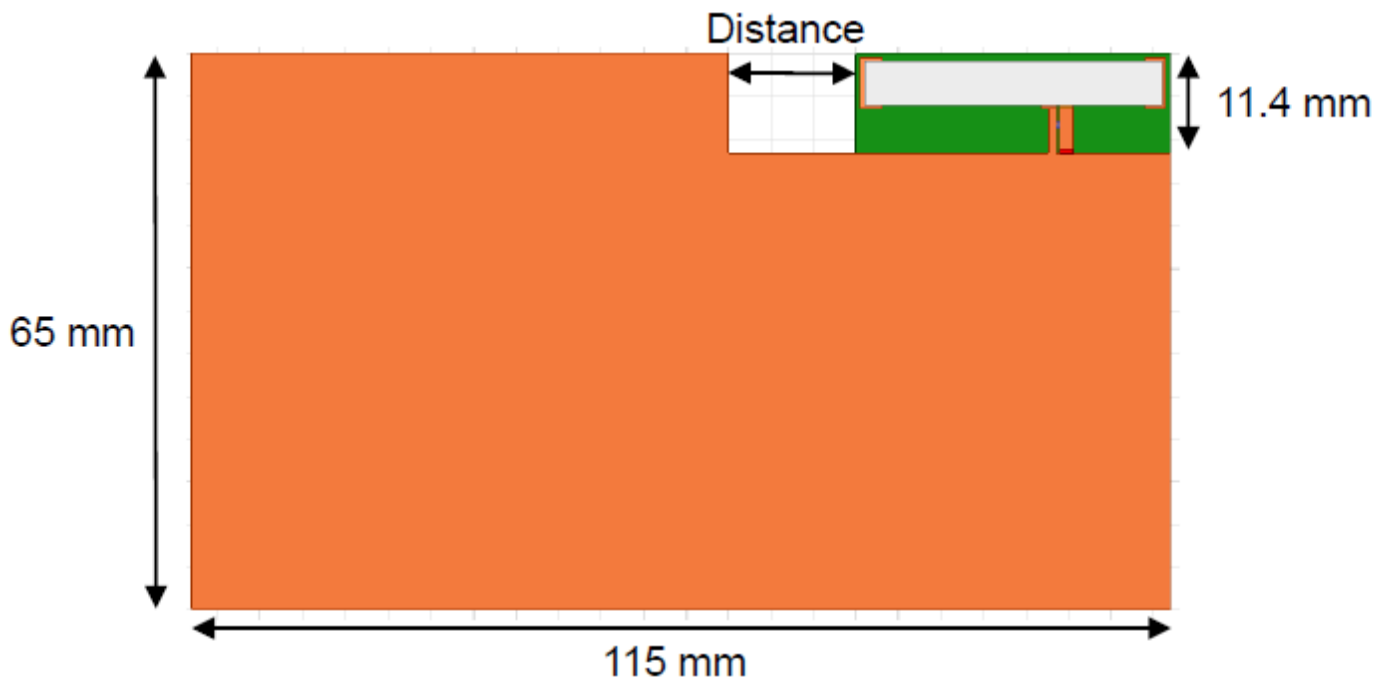


Conclusion:

According to the evaluation, we recommend to use placement 1 for achieving a better performance.

The effects of ground plane:

Chip antenna is installed at the upper right corner of a printed circuit board which is shown in figure below. The performance will vary due to the difference positions.



Distance vs. Efficiency

