

Inovonics – Custom PCB PIFA Antenna Datasheet

This datasheet provides the complete specifications of the Inovonics custom-designed onboard PCB Planar Inverted-F Antenna (PIFA) optimized for the 900 MHz ISM band. This antenna has been engineered and tested to ensure reliable performance in the UMA series.

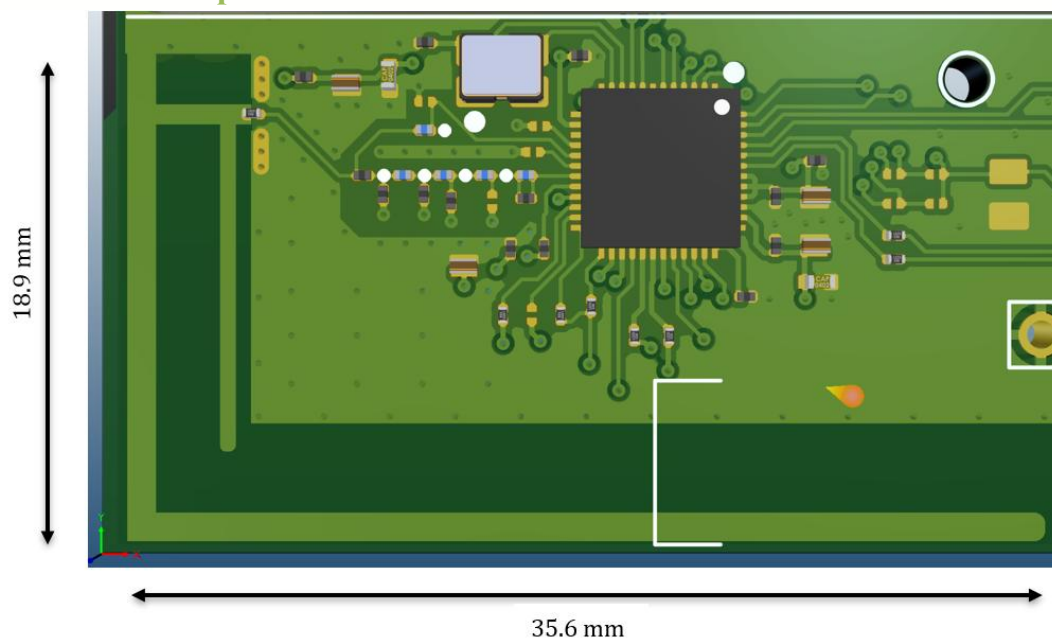
1. General Information

Antenna Type	Onboard PCB PIFA Trace Antenna
Manufacturer	Inovonics
Description	Compact in-house designed PCB PIFA antenna for sub-GHz applications in the 900 MHz ISM band. Ideal for embedded RF systems requiring robust and space-efficient performance.

2. Electrical Specifications

Frequency Range	900 – 940 MHz
Center Frequency	918 MHz
Bandwidth	40 MHz
Return Loss	-16.8 dB
Impedance	50 Ω
Average Gain	0 dB
Peak Gain	1 dBi
Radiation Pattern	Omnidirectional

3. Mechanical Specifications



Dimensions (W × L)	35.6 mm × 18.9 mm
Mounting Type	PCB Trace

4. Data

Return Loss Graph:

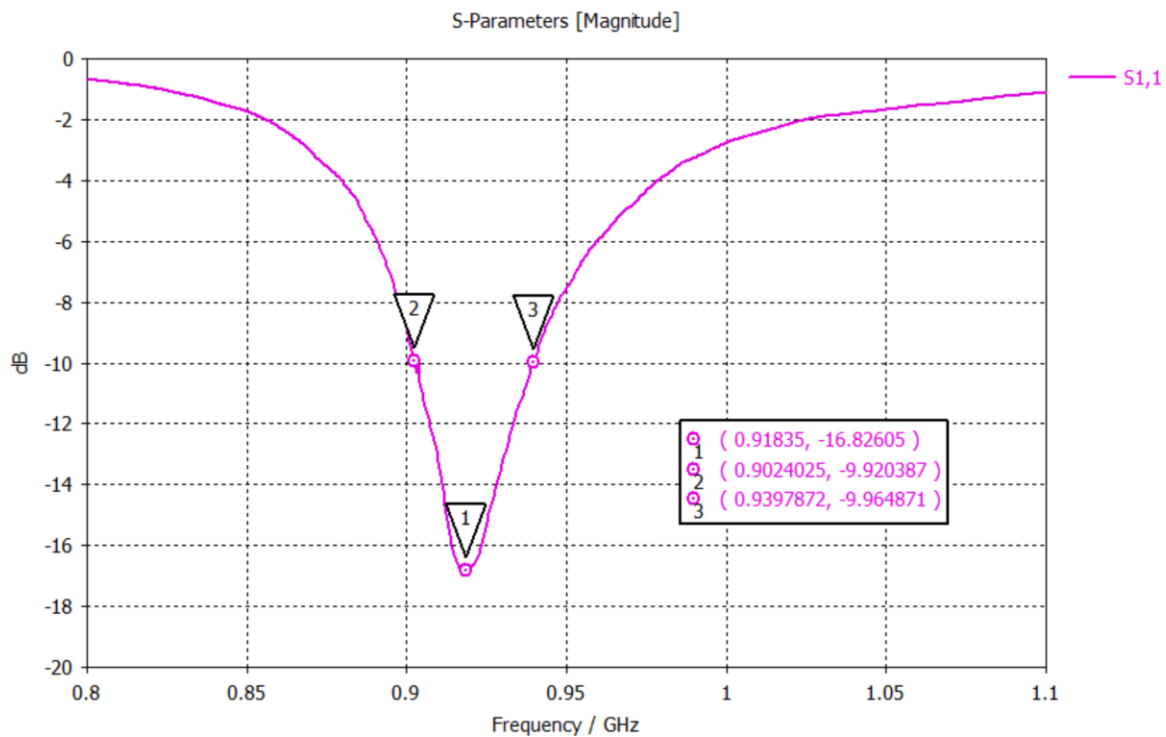


Figure 1: Return loss plot for UMA PIFA. The horizontal axis represents frequency (GHz), and the vertical axis represents return loss (dB).

Far-field 3D Radiation Pattern:

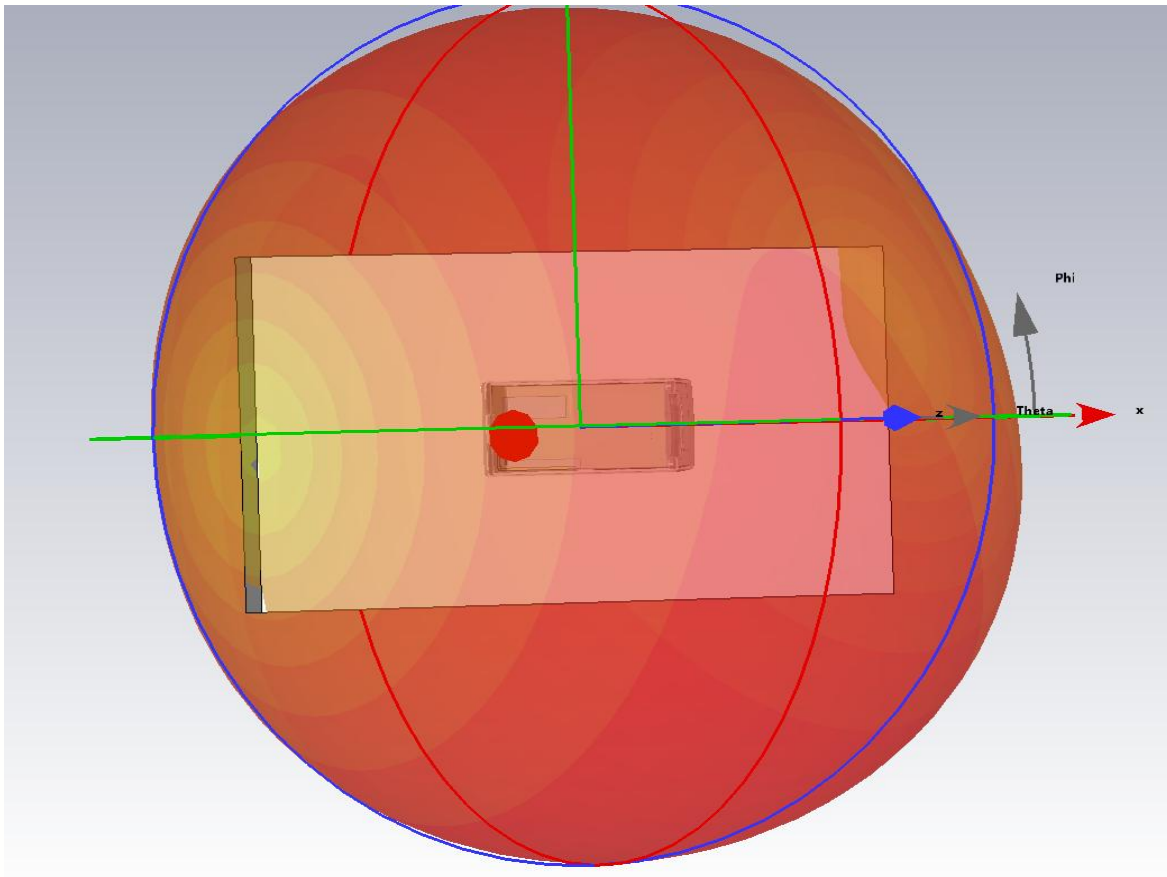


Figure 2: Far-field radiation pattern of UMA series device in enclosure, mounted on drywall.

5. Notes

- Avoid placing large metal objects or noisy digital circuitry near the antenna region.
- Antenna performance can vary depending on surrounding environment.