

Antenna Manufacturer: TouchGrid Pty Ltd

Manufacturer Address: 29a Strome Road, Applecross, Perth 6153, Western Australia, Australia

Antenna Frequency: 2400-2500MHz

Antenna Gain: 1.29dBi

AN1088: Designing with an Inverted-F 2.4 GHz PCB Antenna

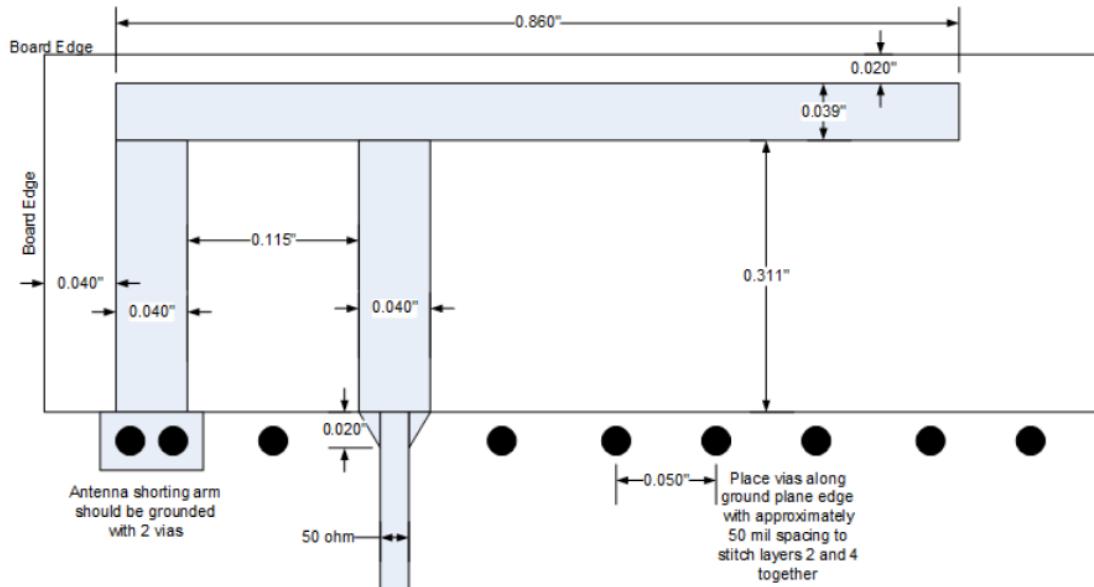
This document describes an Inverted-F 2.4 GHz PCB antenna designed by Silicon Labs for use with 2.4 GHz wireless chipset designs. The Inverted-F antenna is one of the more commonly used antennas at 2.4 GHz. Silicon Labs provides antenna dimensions in two different substrate thicknesses. PCB antennas are board specific, so you may need to modify the antenna dimensions for your board implementation.

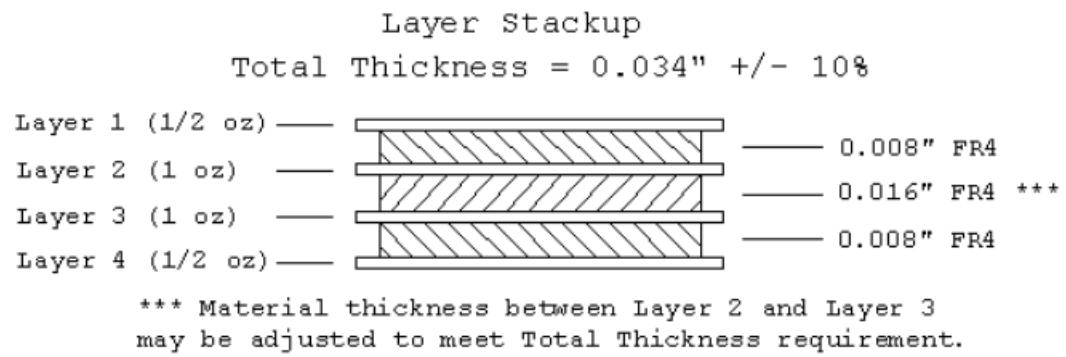
KEY POINTS

- Reference design layout
- Antenna placement and tuning
- Factors affecting antenna performance

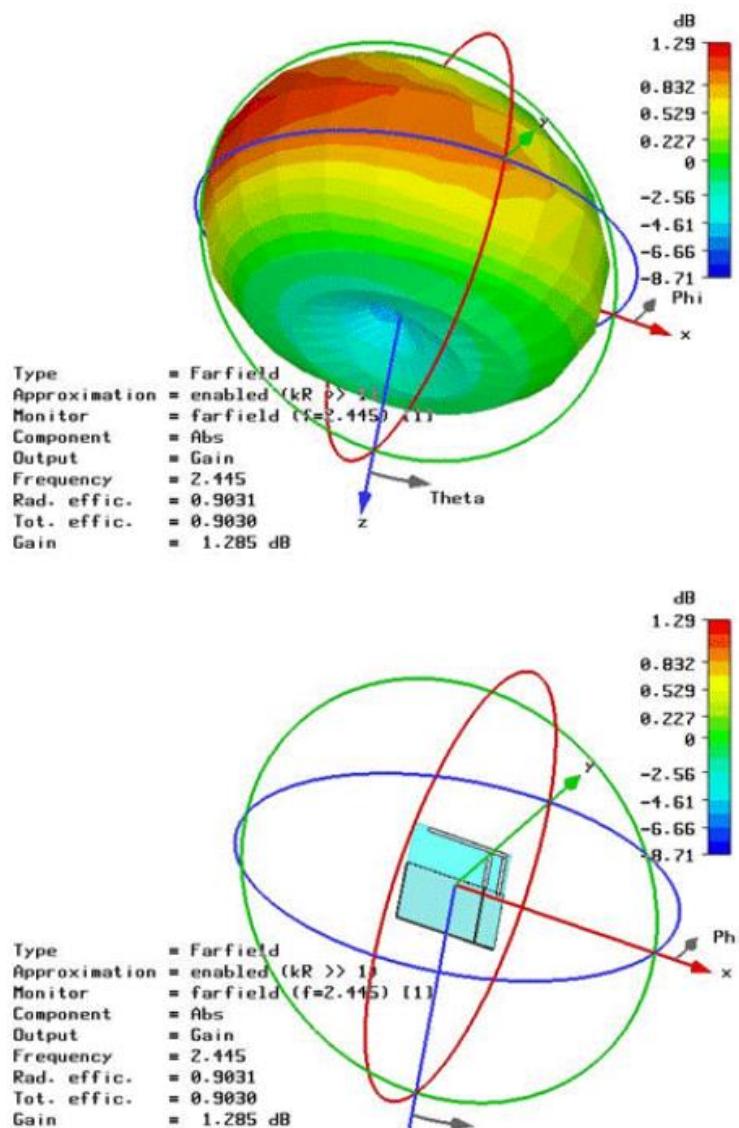
- EM250 4-Layer Design, Inverted-F Antenna, 0.8mm thick

Inverted-F Antenna Dimensions For 0.8mm FR4 Substrate
(Antenna can be mirrored)





(b) Total Thickness 0.8mm



Simulation of Gain Pattern for the 0.8 mm Antenna