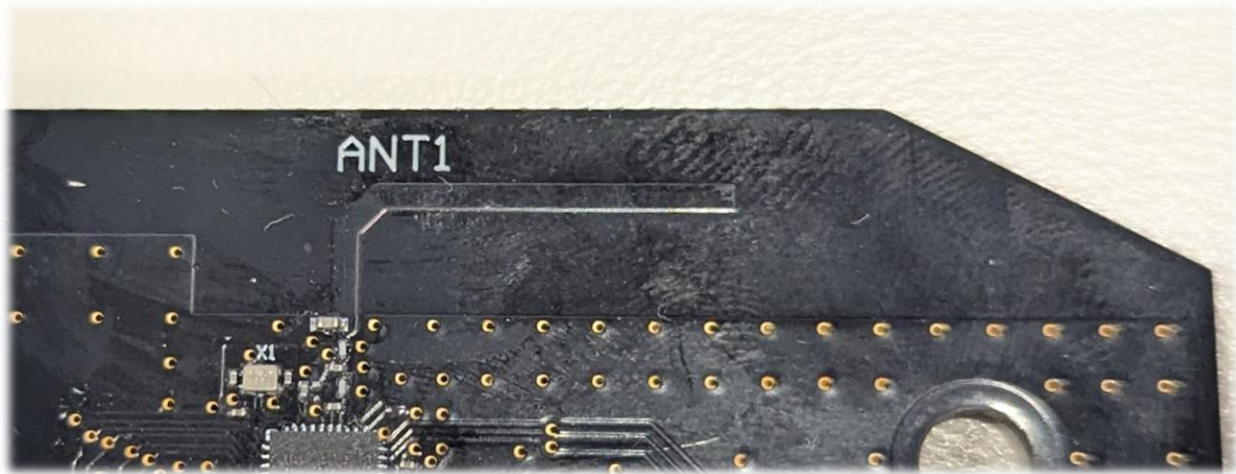


- Midmark IR 3.0 -
FCC Antenna Gain Information



1 DESCRIPTION

For FCC/IC certification, the following information will be provided:

1. Type of antenna being used
2. Construction of the antenna
3. Antenna gain vs frequency
4. Polar plots of the antenna pattern

These will be laid out in the sections to follow. All these values are from simulations.

2 TYPE OF ANTENNA AND CONSTRUCTION

The antenna is a printed inverted L antenna. The construction is of copper on the first layer of a PCB. The layers underneath the antenna are removed. Dimensions are shown in Figure 1 Antenna Construction.

Note: Length of ground plane is 109.8mm from the top left corner of the ground plane.

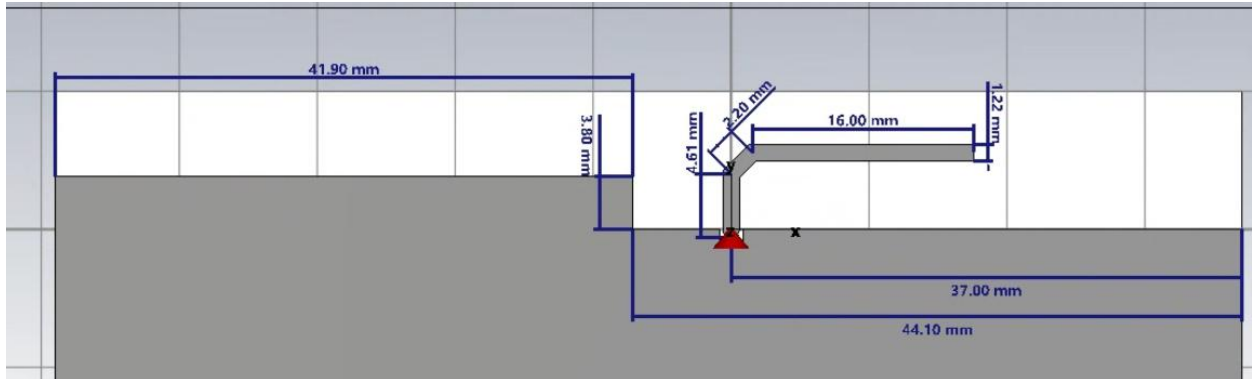


Figure 1 Antenna Construction

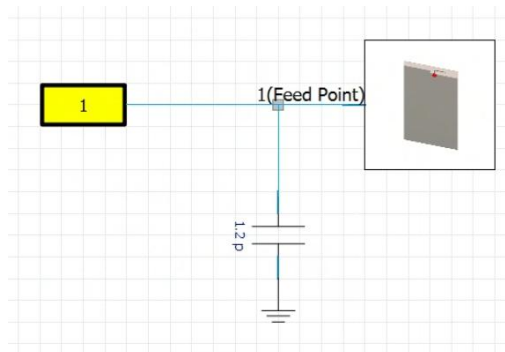


Figure 2: Antenna Tuning Network

3 ANTENNA GAIN VS FREQUENCY

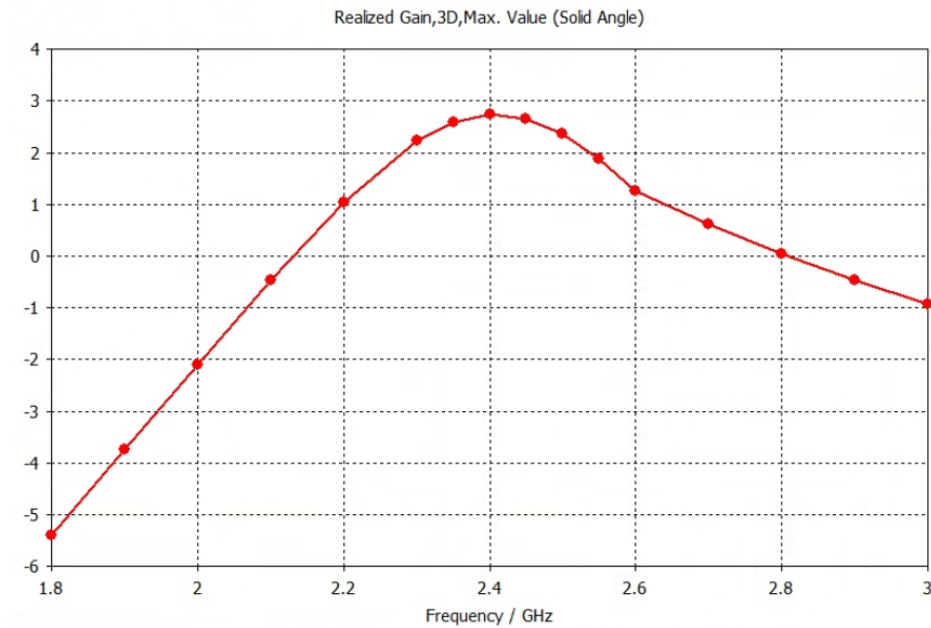


Figure 3: Antenna Realized Gain over Frequency

4 POLAR PLOTS AT 2.45 GHz

Use Figure 4 as a reference for Theta and Phi for the cuts. Cuts are seen Figure 5 to Figure 7

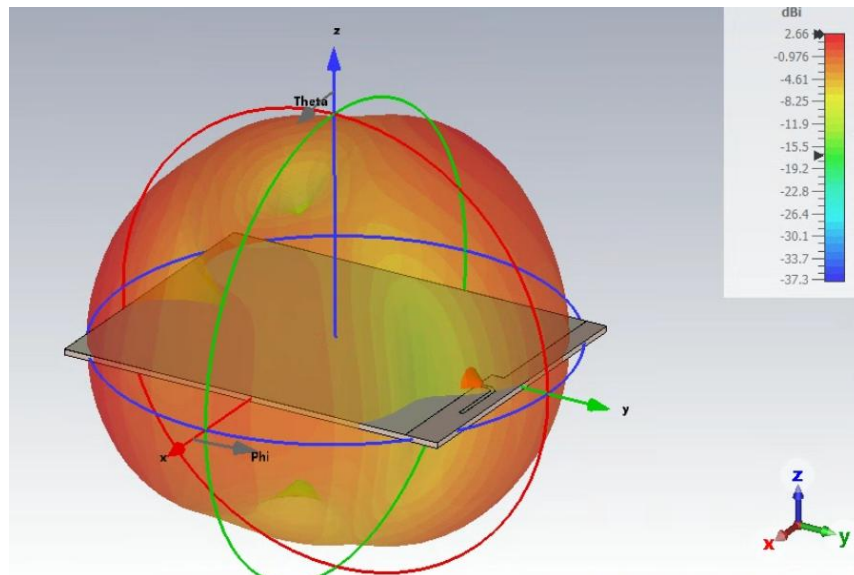


Figure 4: 3D Gain Plot, including Phi and Theta indicators

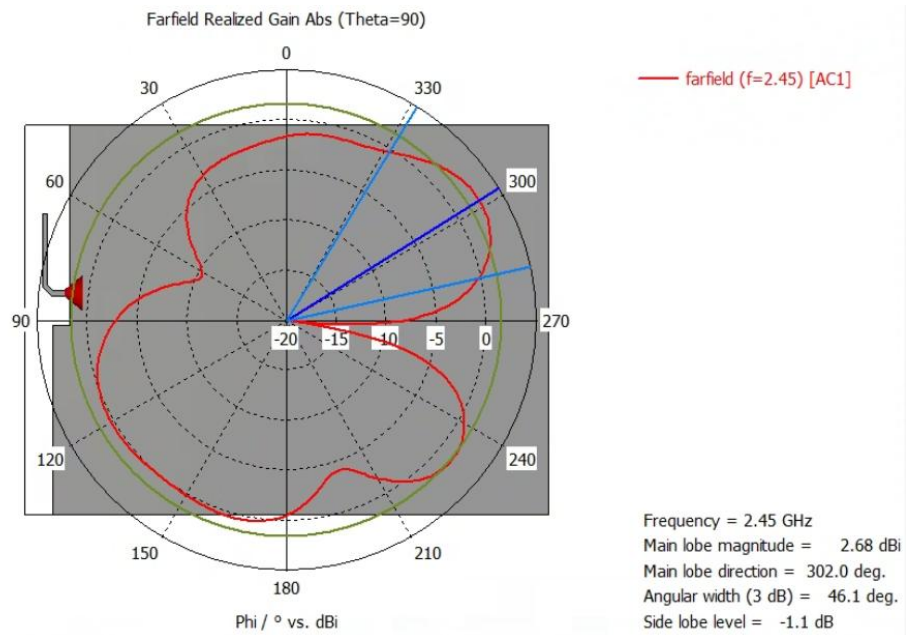


Figure 5: Theta = 90° Realized Gain over Phi

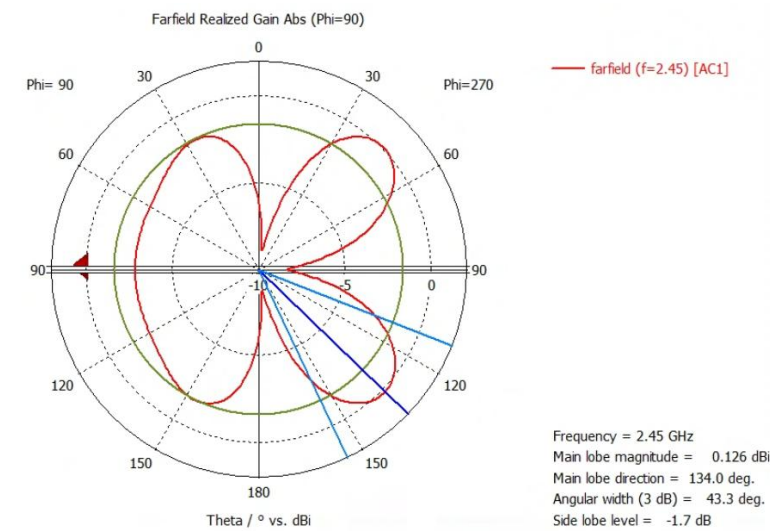


Figure 6: Phi = 90° Realized Gain over Theta

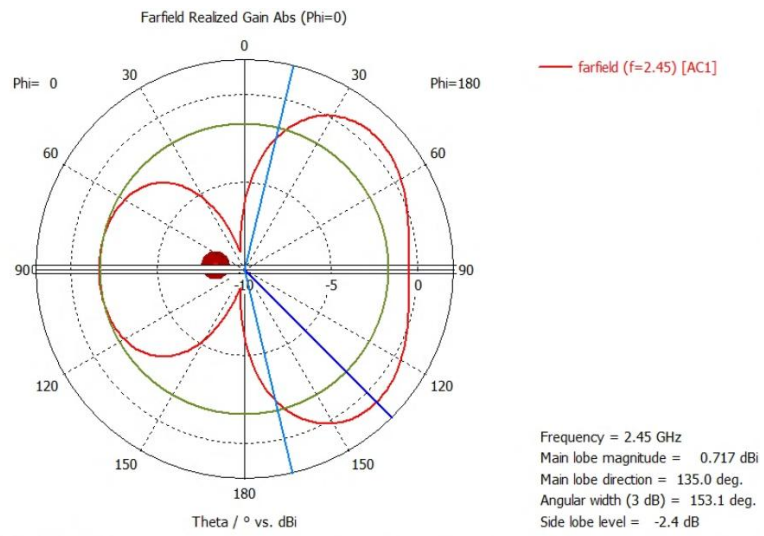


Figure 7: Phi = 90° Realized Gain over Theta