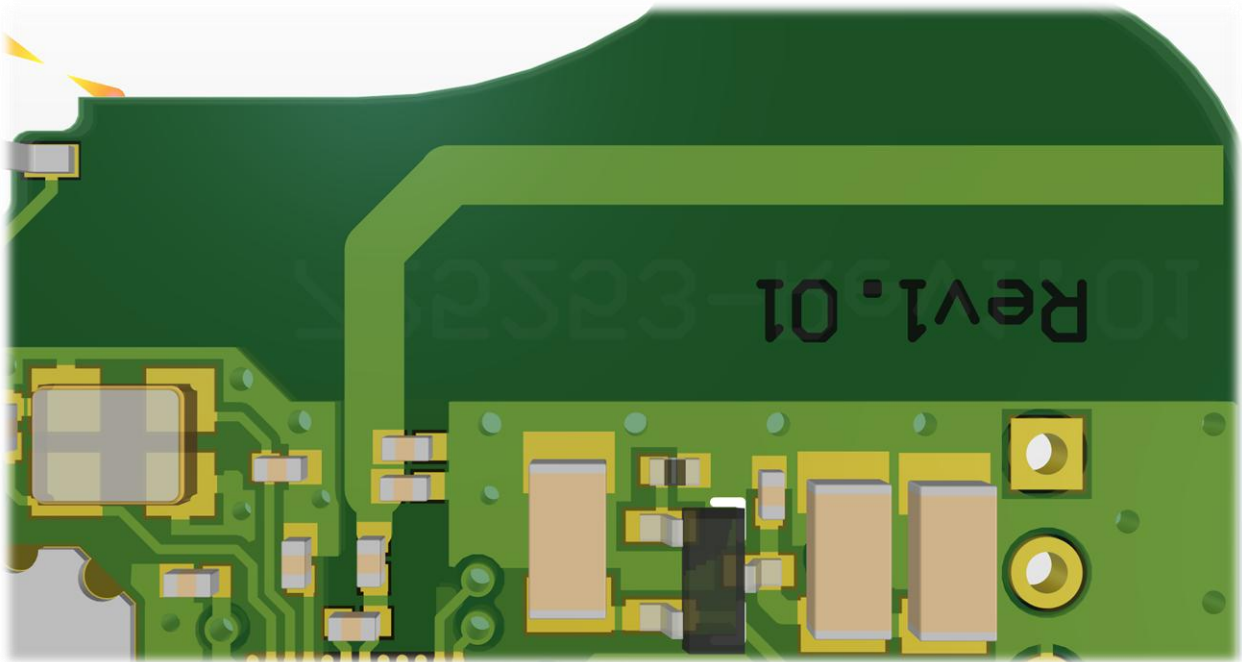


- Midmark BLE Remote Station -  
FCC Antenna Gain Information



# 1 DESCRIPTION

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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 measured.

## 2 TYPE OF ANTENNA AND CONSTRUCTION

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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: Ground plane is ~ 52mm x 18mm

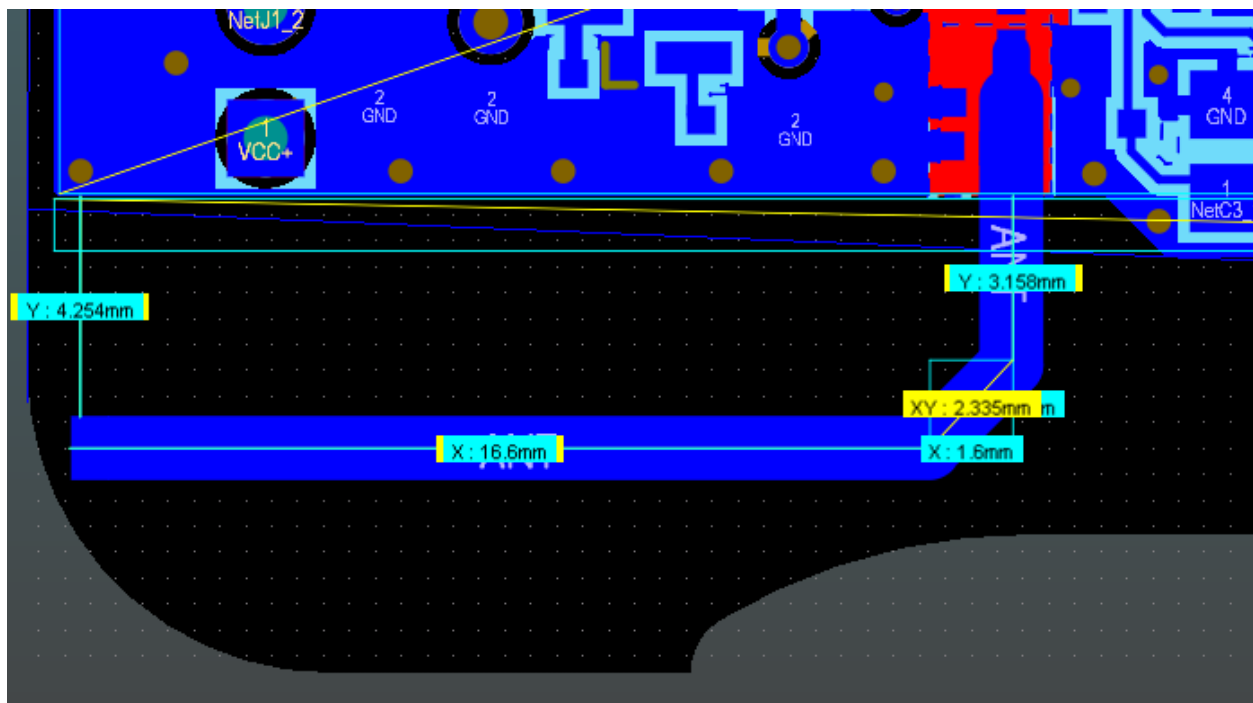


Figure 1 Antenna Construction

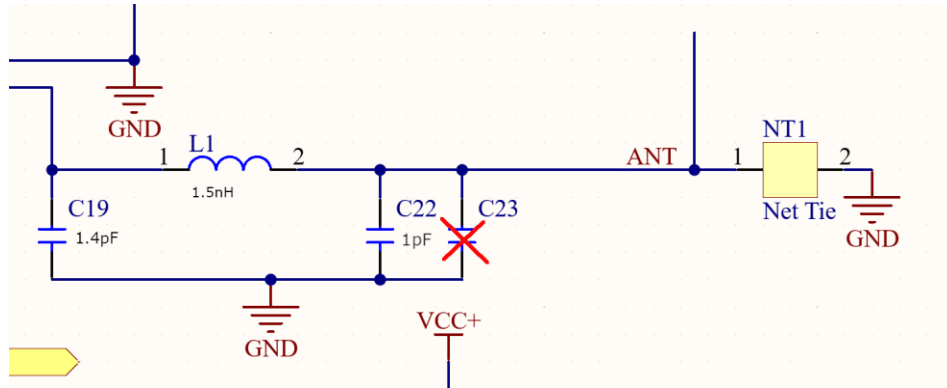


Figure 2: Antenna Tuning Network

### 3 ANTENNA GAIN VS FREQUENCY

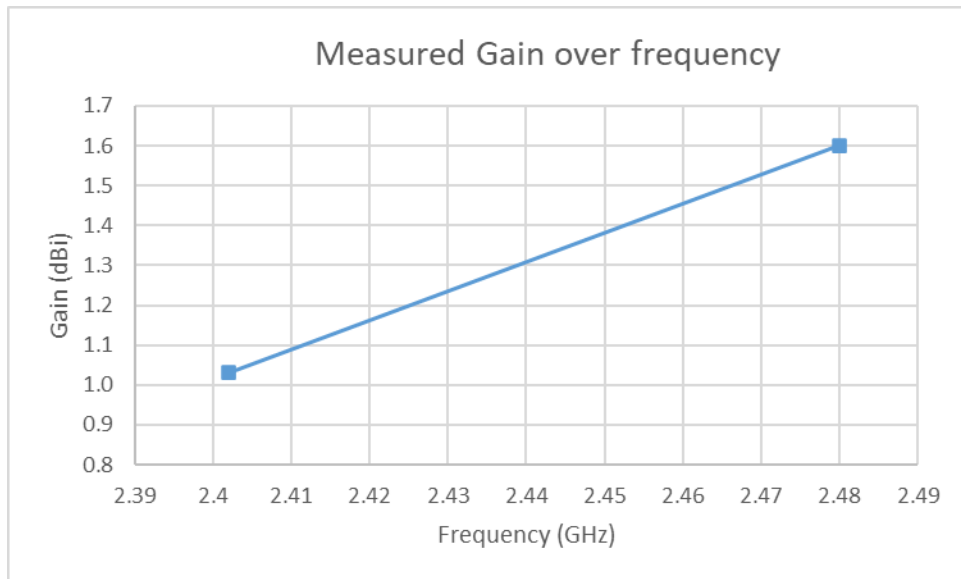


Figure 3: Antenna Gain over Frequency

### 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

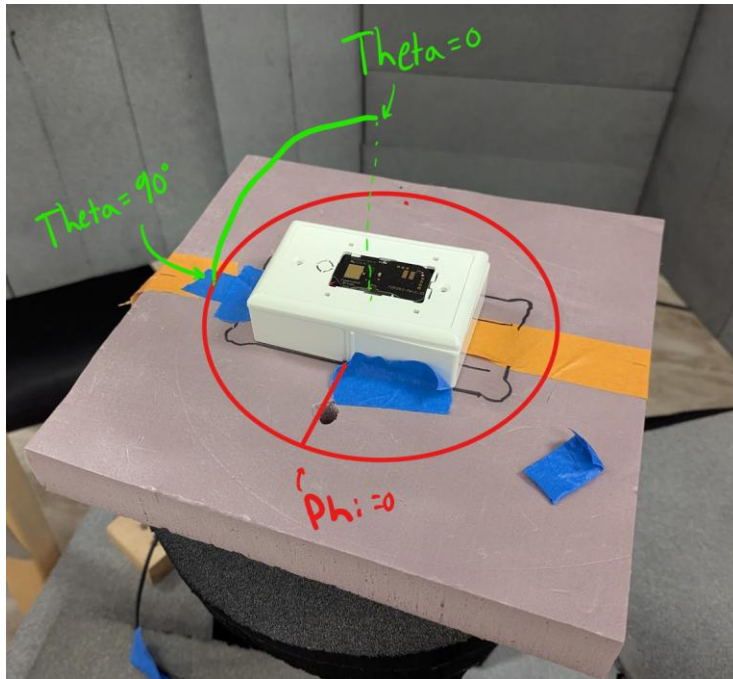


Figure 4: Gain Cut Diagram with Phi and Theta indicators

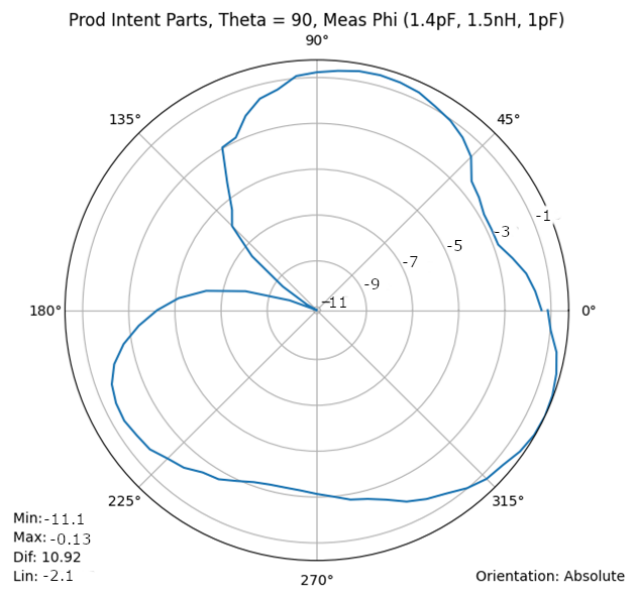


Figure 5: Theta = 90° Realized Gain over Phi @ 2.402 GHz

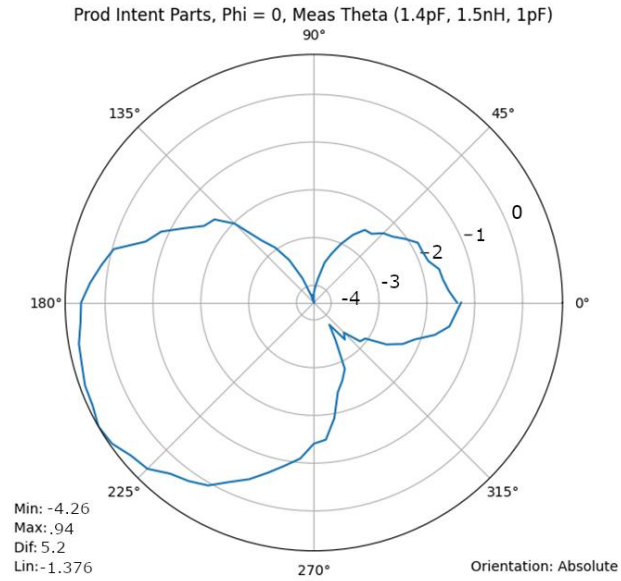


Figure 6: Phi = 0 ° Realized Gain over Theta @ 2.402 GHz

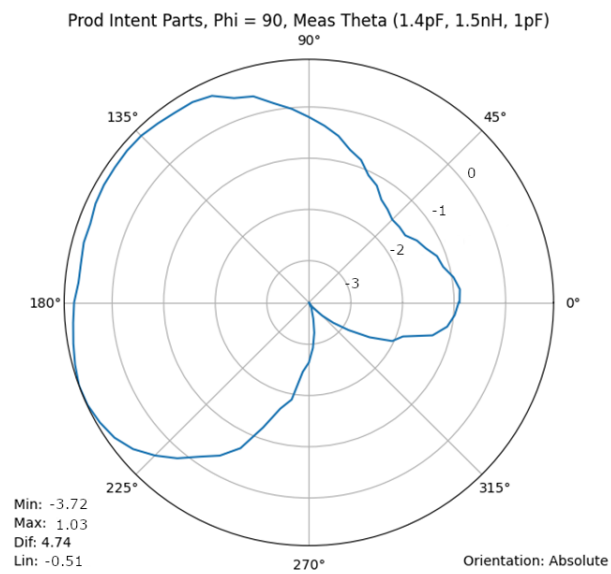


Figure 7: Phi = 90° Realized Gain over Theta @ 2.402 GHz