

4.4 Printed Antenna

The BRD4207A Radio Board includes a printed antenna tuned to have close to 50 Ohm impedance at the 863-930 MHz band, while the radio board is plugged into the WSTK. The antenna is not connected to the RF output by default; the RF output selector 0 Ohm resistor should be repositioned from the R2 to the R1 position in order to enable operation with the printed antenna.

The impedance and reflection of the printed antenna is shown in the following figures.

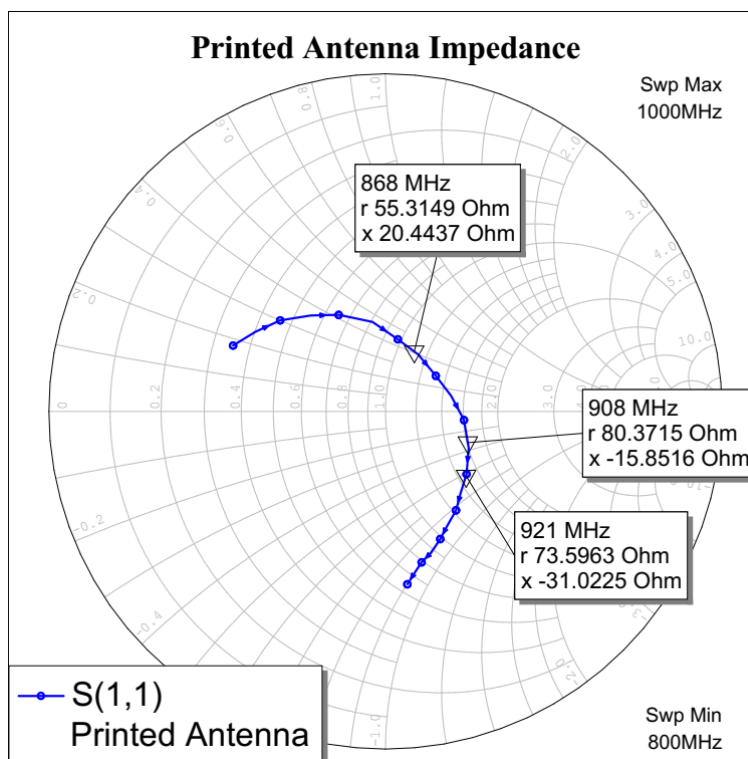


Figure 4.2. Impedance of the Printed Antenna of the BRD4207A

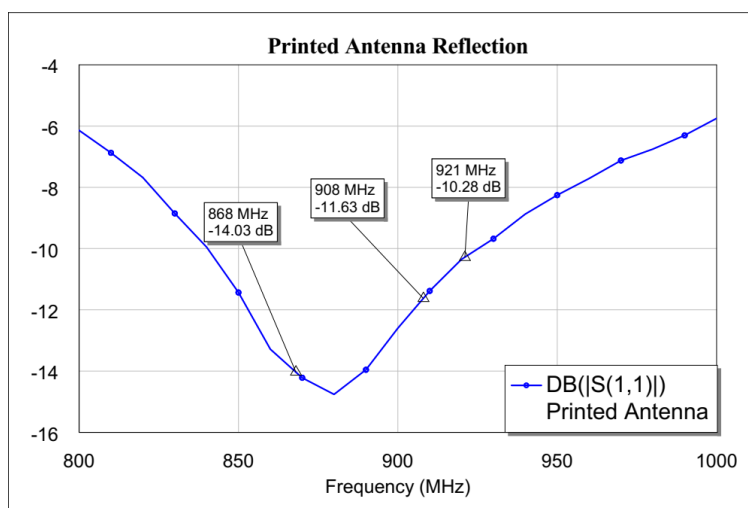


Figure 4.3. Reflection of the Printed Antenna of the BRD4207A

As it can be observed, the impedance is close to 50 Ohm at all of the marked frequencies. The reflection is better than -10 dB.

5. Mechanical Details

The BRD4207A Radio Board is illustrated in the figures below.

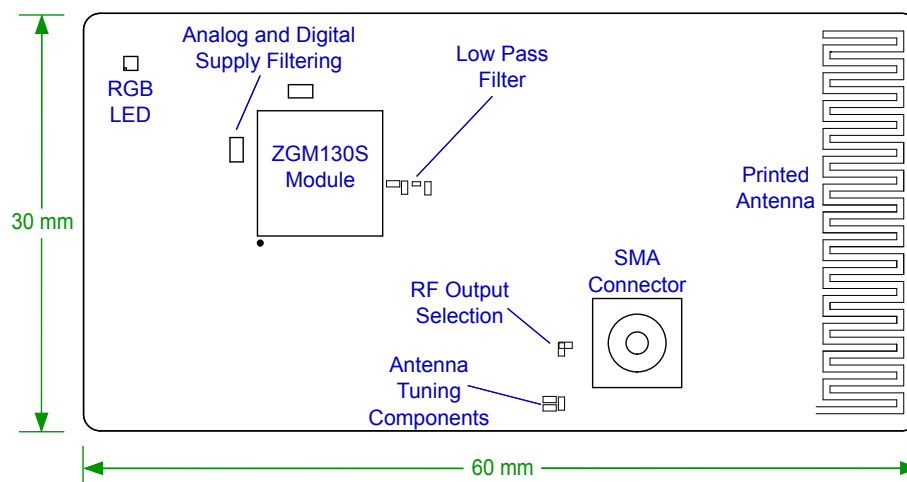


Figure 5.1. BRD4207A Top View

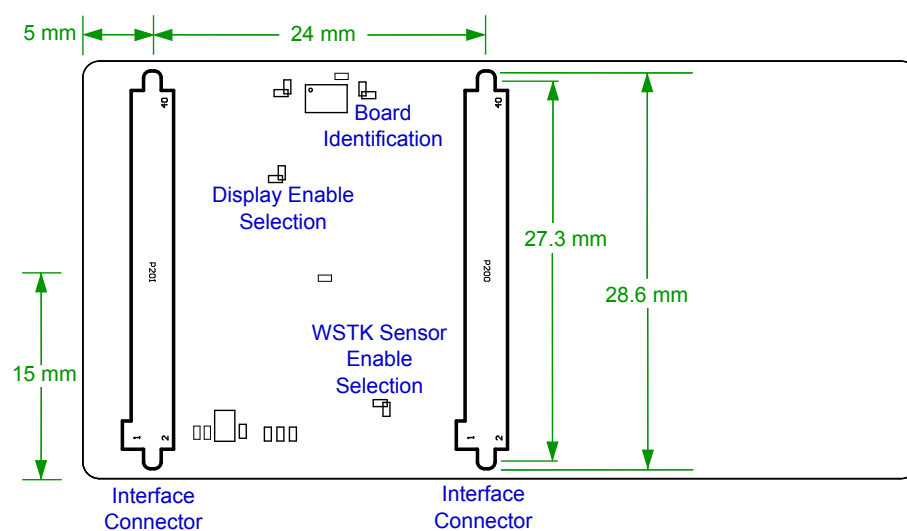


Figure 5.2. BRD4207A Bottom View

7.2.2 Antenna Pattern Measurements

The measured normalized antenna patterns are shown in the following figures.

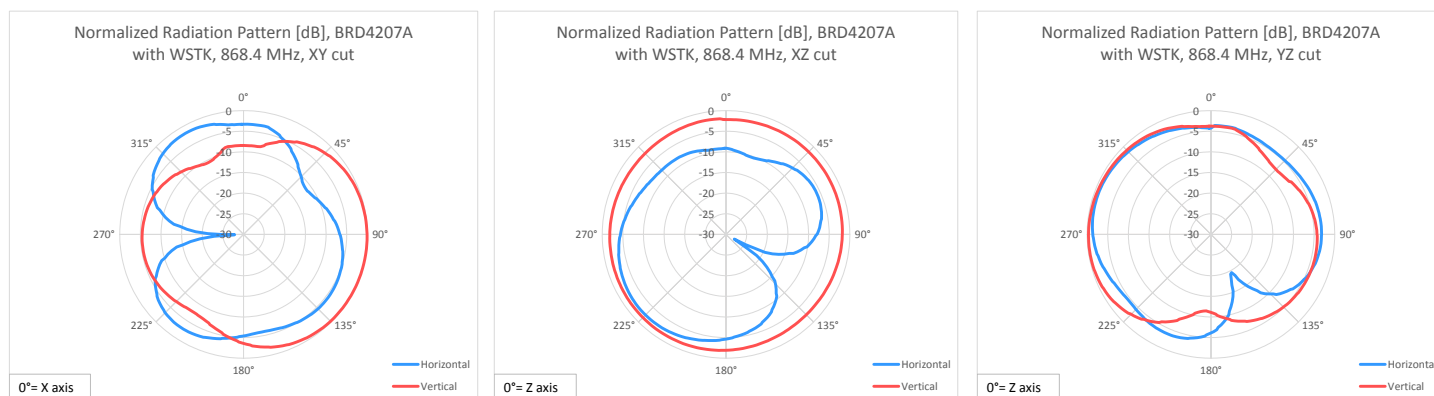


Figure 7.5. Normalized Antenna Pattern in the 868 MHz band

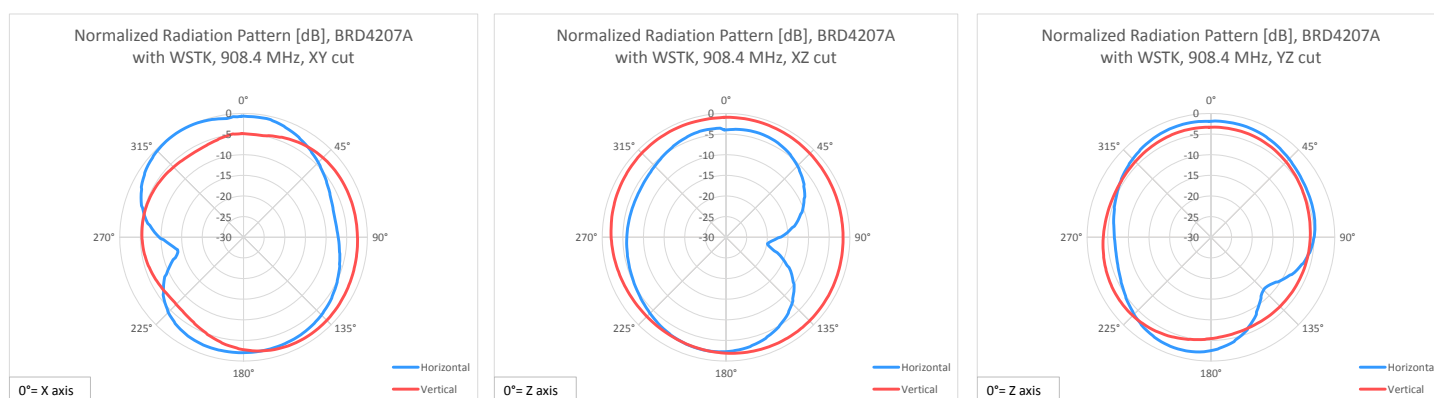


Figure 7.6. Normalized Antenna Pattern in the 908 MHz band

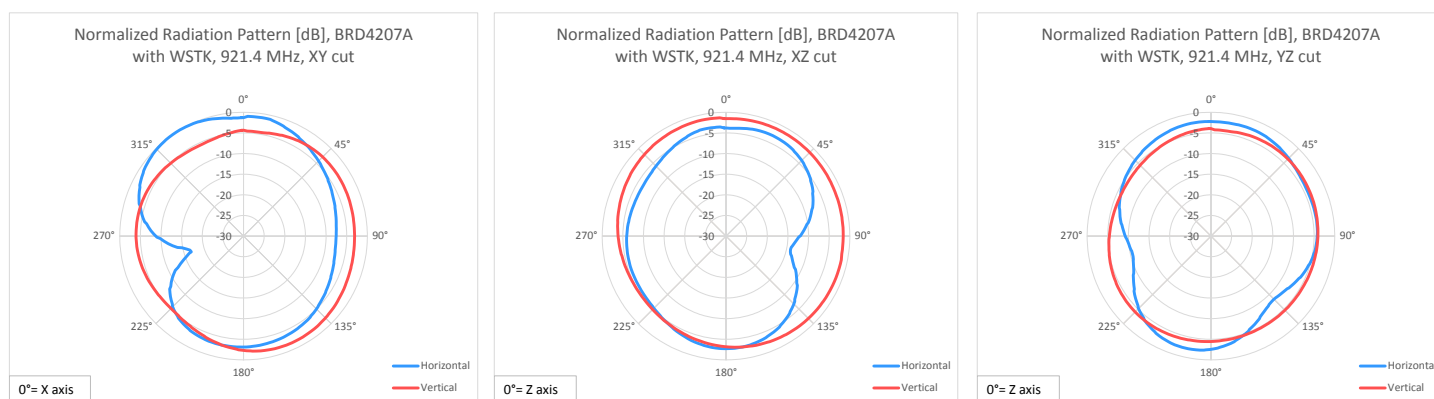


Figure 7.7. Normalized Antenna Pattern in the 921 MHz band