

ANTENNA DATA INFORMATION

The OMNI MAX+ has 1 PCB antenna for the Bluetooth LE interface and 1 coil antenna (several loops of wire) for the 134 kHz inductive interface.

The antenna for the Bluetooth interface is based on a reference design from STMicroelectronics for their chip STM32WB55 which is the chipset providing the Bluetooth functionality to our Product.

The maximum antenna gain measured was -1.8 dBi.

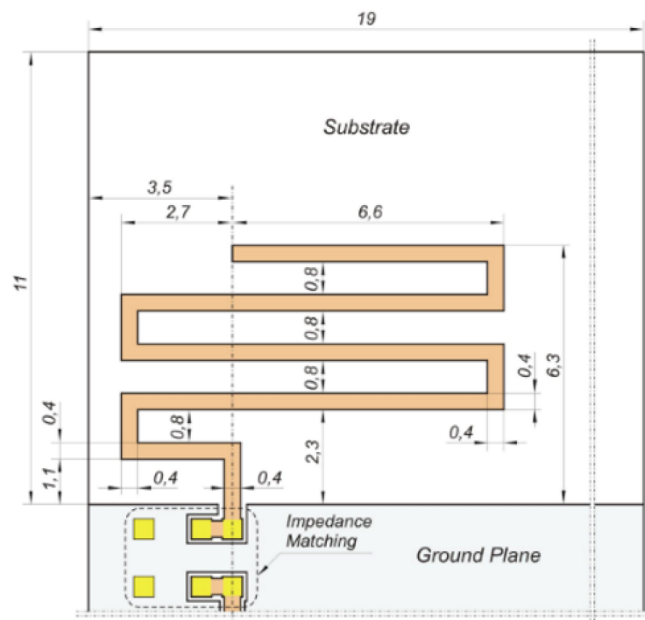
Please refer to the additional document to know more about the design.



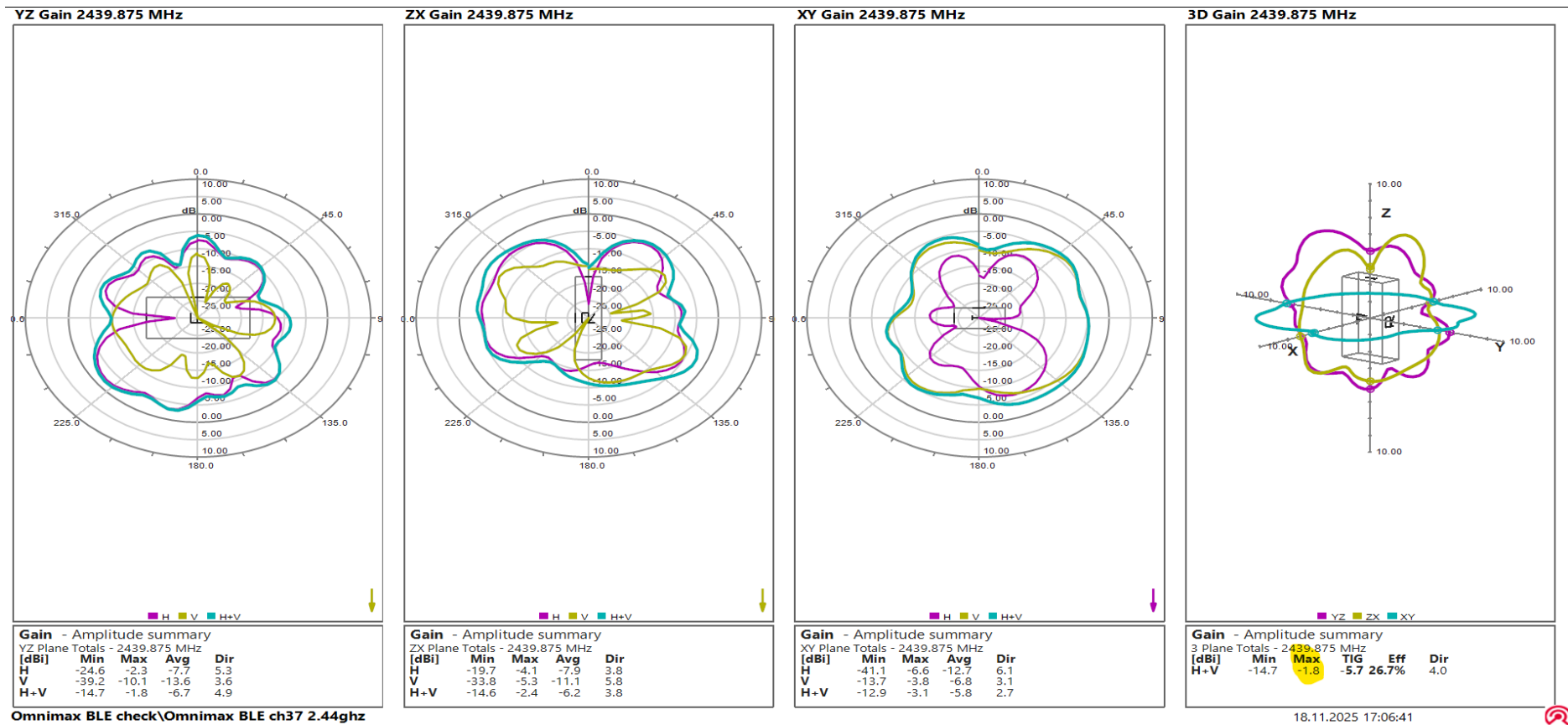
3 Layout specification

The PCB antennas, including the electrical parameters of PCB materials used, are layout sensitive. It is recommended to use a layout as close as possible to the one shown in the figure below.

Figure 2. PCB antenna dimensions (in mm)



The electrical parameters and performance of the PCB antenna are also determined by the substrate used, in particular the thickness of the core and dielectric constants.



Omnimax BLE check\Omnimax BLE ch37 2.44ghz

3-Ax Rotation: 72 Steps Frequency: 2439.875 MHz 45 kHz H=0
Measure: Rotation 3 Axes: EUT Distance: 1.00 meter

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The antenna for the 134 kHz inductive interface is a coiled wire along the contour of the device as shown in the next drawing and picture. This loop plugs into the PCB inside.

Antenna gain is not applicable in this case.

