Wavelynx Technologies, LLC
100 Technology Drive, Suite B150
Broomfield, CO 80021
Wavelynx.com

Dated: August 28, 2025

Subject: Antenna Justification Letter for FCC Part 15 Compliance
FCC ID: 2AEI3WLTC-AXM-125
Model Number: AX-01, AX-02, AX-05

To Whom It May Concern,

This letter provides justification for the antenna configuration used in the above-referenced device, submitted for certification under **FCC Part 15**.

Radiated Measurement Justification

All compliance testing, including fundamental and spurious emissions, was performed using **radiated measurement methods**. As such, antenna gain and performance characteristics were inherently captured in the test results. Therefore, no separate antenna gain documentation is required to demonstrate compliance with FCC limits.

This approach aligns with the guidance provided in the **FCC TCB Workshop (October 2022)** and **KDB 353028 D01**, which allows for a justification statement in lieu of antenna gain documentation when radiated measurements are used exclusively.

Antenna 1 Description (13.56 MHz)

- **Antenna Type:** PCB Trace Antenna
- **Location:** Integrated on the main PCB, as shown in the internal photographs
- **Dimensions:** 1.59 inches x 1.2 inches x 0.62 inches
- **Estimated Peak Gain:** 2 dBi
- **Polarization:** Linear
- **Orientation:** Horizontal
- **Frequency Bands Supported:** 13.56 MHz

Wavelynx Technologies, LLC
100 Technology Drive, Suite B150
Broomfield, CO 80021
Wavelynx.com

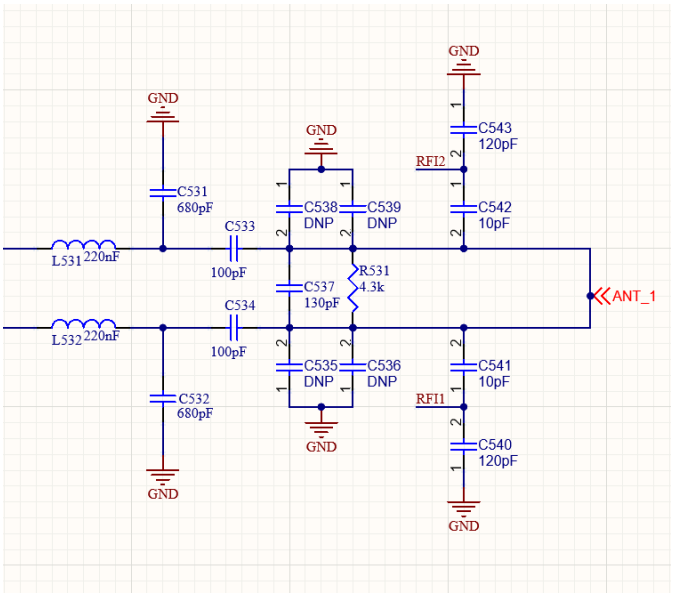
Supporting details and materials (13.56 MHz)

1. **Internal Photographs**

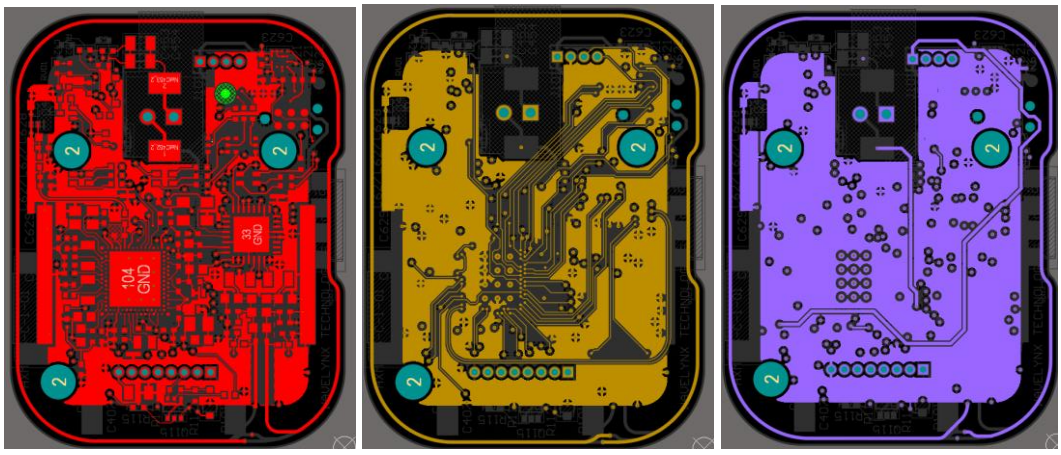
   Provided internal photos show the antenna location and antenna structure.

2. **PCB Layout Diagrams**

   - The Schematic shows the Antenna for this design:



   - The trace antenna makes several loops (on multiple layers of the PCB):



Wavelynx Technologies, LLC
100 Technology Drive, Suite B150
Broomfield, CO 80021
Wavelynx.com

3. **Antenna Specifications**
    - PCB trace of multiple loops with tuning components to tune the device to 13.56 MHz
4. **Estimated Gain Information**
    - 2 dBi - derived from reference design or engineering simulations
    - No passive reflectors or lenses are used

Antenna 2 Description (125 kHz)

- **Antenna Type:** Wire wound coil
- **Location:** Integrated on the main PCB, as shown in the internal photographs
- **Dimensions:** 7.7mm x 7.4mm x 2.65 mm
- **Estimated Peak Gain:** 2 dBi
- **Polarization:** Linear
- **Orientation:** Horizontal
- **Frequency Bands Supported:** 125 kHz

Supporting details and materials (125 kHz)

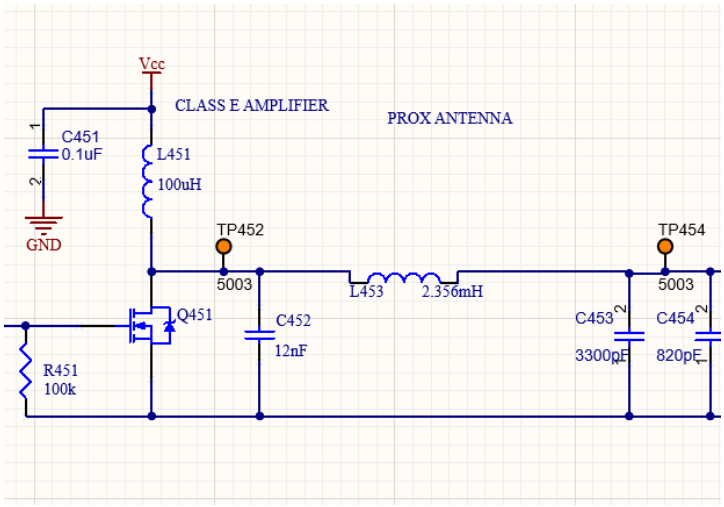
5. **Internal Photographs**

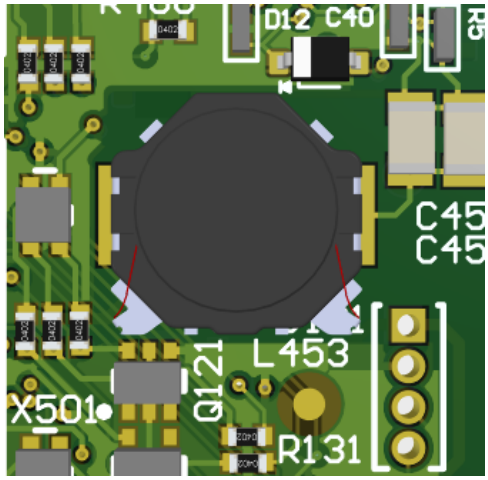
    Provided internal photos show the antenna location and antenna structure.

Wavelynx Technologies, LLC
100 Technology Drive, Suite B150
Broomfield, CO 80021
Wavelynx.com

6. **PCB Layout Diagrams**

    - The Schematic shows the Antenna for this design:





7. **Antenna Specifications**

    - Wire wound coil with an inductance of 2.36 mH

8. **Estimated Gain Information**

    - 2 dBi - derived from reference design or engineering simulations
    - No passive reflectors or lenses are used

Wavelynx Technologies, LLC
100 Technology Drive, Suite B150
Broomfield, CO 80021
Wavelynx.com

Compliance Statement

The antenna configuration has not been altered in a way that would affect radiated performance. No external gain-enhancing accessories (e.g., reflectors, lenses) are used. The antenna is permanently affixed and not user-accessible or replaceable.

Should you require any additional information or clarification, please do not hesitate to contact us.

Sincerely,

Signature: 
Name: Daniel Field
Title: VP of Product
Company: Wavelynx Technologies, LLC
Address: 100 Technology Drive, Suite B150, Broomfield, CO 80021
Phone: (720) 572-4963
Email: danielfield@wavelynx.com