FCC §15.407 (f) - RF EXPOSURE

Applicable Standard

According to§15.407(f) U-NII devices are subject to the radio frequency radiation exposure requirements specified in §1.1307(b), §2.1091 and §2.1093 of this chapter, as appropriate. All equipment shall be considered to operate in a "general population/uncontrolled" environment. Applications for equipment authorization of devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for this statement must be submitted to the Commission upon request.

According to KDB447498 D01 General RF Exposure Guidance v05r02:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

Measurement Result

For 5150-5250 MHz band:

The maximum conducted output power= 7.61dBm (5.77mW) at 5230 MHz
[(max. power of channel, mW)/(min. test separation distance, mm)] [√f(GHz)]
= 5.77/5*(√5.230) = 2.64 < 3.0

For 5725-5850 MHz band:

The maximum conducted output power= 7.59dBm (5.74mW) at 5825 MHz
[(max. power of channel, mW)/(min. test separation distance, mm)] [√f(GHz)]
= 5.74/5*(√5.825) = 2.77 < 3.0

So the stand-alone SAR evaluation is not necessary.