FCC §15.407(f), §1.1310 & §2.1093 – RF EXPOSURE

Applicable Standard

According to \$1.1310 and \$2.1093, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB447498 D01 General RF Exposure Guidance v06:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances \leq 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,

- mm)] $\cdot [\sqrt{f(GHz)}] \le 3.0$ 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 \leq 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is \leq 5

mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

Mode	Frequency Range (MHz)	Max Tune-up Conducted Power		Calculated Distance	Calculated Value	Threshold (1-g SAR)	SAR Test Exclusion
		(dBm)	(mW)	(mm)			
BT3.0	2402-2480	7.6	5.75	5.0	1.8	3	Yes
Wi-Fi	2412-2462	9.8	9.55	5.0	3.0	3	Yes
5G Wi-Fi	5150-5250	7.8	6.03	5.0	2.8	3	Yes
	5725-5850	7.8	6.03	5.0	2.9	3	Yes

Measurement Result

So the stand-alone SAR evaluation is not necessary.