RE: FCC Standalone SAR test exclusion considerations

Device FCC ID: 2AWYY-BETA

Equipment Specification:

F_{LOWER} (GHz)	F_{UPPER} (GHz)	RF Power Setting (dBm)	Tx Power Tolerance (dB)	Max RF power (dBm)	Max Antenna Gain (dBi)	P_{OUT} EIRP (dBm)	(mW)	Separation Distance (mm)
2.402	2.480	0	± 4dB	4.0	+0.50	4.5	2.8	< 5
	2.480		← for calculations →				3	5

SAR Test Exclusions Threshold:
Per KDB 447498 D01 General RF Exposure Guidance v06, §4.3.1:

a) For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:
[(*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

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 4.1 f) is applied to determine SAR test exclusion.

[(3 mW / 5 mm)] · [$\sqrt{2.480}$ GHz] = 0.9   ≤ 3.0

Given the above calculations a standalone SAR for this Bluetooth Low Energy implementation is not required.