RF exposure evaluation

§ 2.1093 Radiofrequency radiation exposure evaluation: Portable Devices.

According to § 15.247(i) and § 1.1307b(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the commission's guidance.

The 1-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, where

· f(GHz) is the RF channel transmit frequency in GHz
· Power and distance are rounded to the nearest mW and mm before calculation
· When the minimum test separation distance is < 5 mm, a distance of 5 mm according is applied to determine SAR test exclusion.
· The result is rounded to one decimal place for comparison

For BDR+EDR:

Channel	Frequency (GHz)	Tune up Power (dBm)	Max. Tune up Power (dBm)	Max. Tune up Power (mW)
CH 00	2.402	-4±1	-3	-3.33
CH 39	2.441	-2.8±1	-1.8	-1.90
CH 78	2.480	-2.7±1	-1.7	-1.78

For BLE:
For BDR+EDR:

Channel	Frequency (GHz)	Power (dBm)	Max. Power (mW)	Test distance (mm)	Result	exclusion thresholds for 1-g SAR
CH 78	2.480	-1.78	0.66	5	0.21	3.0

Result:
Base on the calculation value, No SAR measurement is required.