RF exposure evaluation

According to 447498 D01 General RF Exposure Guidance v05r02 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies

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:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/ (\text{min. test separation distance, mm})] \cdot [\sqrt{f(GHz)}\,] \leq 3.0$$

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 worst case for Bluetooth as below:

[2402MHz: 0.30dBm (1.07 mW) output power]

(1.07 mW /5mm) •[$\sqrt{2.402(GHz)}$]=0.33 <3.0 for 1-g SAR

The worst case for Bluetooth 4.0 as below:

[2402MHz: -5.21dBm (0.30 mW) output power]

(0.30 mW /5mm) •[$\sqrt{2.402(GHz)}$]=0.09 <3.0 for 1-g SAR

The worst case for WiFi as below:

[2412MHz: 4.45dBm (2.79 mW) output power]

(2.79mW /5mm) •[$\sqrt{2.412(GHz)}$]=0.87 <3.0 for 1-g SAR

0.87+0.33=1.2<3.0 for 1-g SAR

So SAR test is not required