RF Exposure evaluation

According to 447498 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 ≤ 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

EDR:

Worse case output power is as below: [2441MHz: 2.73dBm]

Antenna Gain is -0.58dBi

Maximum output power is 2.73dBm (1.87 mW).

(1.87mW /5mm)·[√2.441(GHz)]= 0.59<3.0 for 1-g SAR.

BLE:

Worse case output power is as below: [2440MHz: 0.17dBm]

Antenna Gain is -0.58dBi

Maximum output power is 0.17dBm (1.04 mW).

(1.04mW /5mm)·[√2.440(GHz)]= 0.32<3.0 for 1-g SAR.

2.4G SRD:

Field strength =69.25dBuV/m @3m
Ant gain 1.5 dBi; so Ant numeric gain=1.41

So pt= {[$10^{(69.25/20)}/10^6$ x3]^2/30x1.41} x 1000 mW =0.0036 mW
So (0.0036mW/5mm) x $\sqrt{}$2.421 GHz = 0.0011< 3 for 1-g SAR

BT+2.4G SRD:

0.59+0.0011=0.5911< 3 for 1-g SAR

Then SAR evaluation is not required.