

## 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  $\leq 50$  mm are determined by:

$$\left[ \frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \cdot \sqrt{f(\text{GHz})} \right] \leq 3.0$$
for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

- $f(\text{GHz})$  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

Worse case for BLE as below:

[2442MHz: -0.37dBm (0.92 mW) output power]

$(0.92 \text{ mW} / 5\text{mm}) \cdot \sqrt{2.442(\text{GHz})} = 0.288 < 3.0$  for 1-g SAR

So, SAR evaluation for BLE is not required

Worse case for BT as below:

[2441MHz: 2.44dBm (1.75 mW) output power]

$(1.75 \text{ mW} / 5\text{mm}) \cdot \sqrt{2.441(\text{GHz})} = 0.547 < 3.0$  for 1-g SAR

So, SAR evaluation for BT is not required