

## RF exposure evaluation

According to 447498 D01 V06 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$
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: 2.86dBm (1.93 mW) output power]

$(1.93 \text{ mW} / 5\text{mm}) \cdot [\sqrt{2.442(\text{GHz})}] = 0.603 < 3.0$  for 1-g SAR

So, SAR evaluation for BLE is not required

Worse case for Bluetooth as below:

[2402MHz: 5.72dBm (3.73 mW) output power]

$(3.73 \text{ mW} / 5\text{mm}) \cdot [\sqrt{2.402(\text{GHz})}] = 1.156 < 3.0$  for 1-g SAR

So, SAR evaluation for Bluetooth is not required

Worse case for 2.4G Wi-Fi as below:

[2437MHz: 8.21dBm (6.62 mW) output power]

$(6.62 \text{ mW} / 5\text{mm}) \cdot [\sqrt{2.437(\text{GHz})}] = 2.065 < 3.0$  for 1-g SAR

So, SAR evaluation for 2.4G Wi-Fi is not required