

## 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:

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

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 Bluetooth as below:

[2441MHz: 2.98dBm (1.99mW) output power]

$(1.99\text{mW} / 5\text{mm}) \cdot [\sqrt{2.441(\text{GHz})}] = 0.62 < 3.0$  for 1-g SAR

So, SAR evaluation for Bluetooth is not required

Worse case for WiFi as below:

[2437MHz: 6.20dBm (4.17mW) output power]

$(4.17\text{mW} / 5\text{mm}) \cdot [\sqrt{2.437(\text{GHz})}] = 1.30 < 3.0$  for 1-g SAR

So, SAR evaluation for WiFi is not required

Worse case for BLE as below:

[2442MHz: 0.11dBm (1.03mW) output power]

$(1.03\text{mW} / 5\text{mm}) \cdot [\sqrt{2.442(\text{GHz})}] = 0.32 < 3.0$  for 1-g SAR

So, SAR evaluation for WiFi is not required