

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

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

$f(\text{GHz})$  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 is as below:

Bluetooth LE : [2440MHz: -3.062dBm(0.494 mW) output power]

$(0.494\text{mW} / 5\text{mm}) \cdot \sqrt{2.440 \text{ (GHz)}} = 0.154 < 3.0$  for 1-g SAR

2.4G Technology: [2480MHz: 3.662dBm(2.324 mW) output power]

$(2.324\text{mW} / 5\text{mm}) \cdot \sqrt{2.480 \text{ (GHz)}} = 0.732 < 3.0$  for 1-g SAR

Bluetooth and 2.4G can transmit at the same time:

$0.154 + 0.732 = 0.886 < 3$

Then SAR evaluation is not required