



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:

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

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

Left earphone:

BT BLE

Worse case output power is as below: [2440MHz: -0.55dBm (0.88mW)]

Antenna Gain is -1.86dBi

Maximum output power is -0.55dBm (0.88mW).

$(0.88\text{mW} / 5\text{mm}) \cdot [\sqrt{2.440(\text{GHz})}] = 0.28 < 3.0$ for 1-g SAR

BT EDR

Worse case output power is as below: [2441MHz: 0.73dBm (1.18mW)]

Antenna Gain is -1.86dBi

Maximum output power is 0.73dBm (1.18mW).

$(1.18\text{mW} / 5\text{mm}) \cdot [\sqrt{2.441(\text{GHz})}] = 0.37 < 3.0$ for 1-g SAR



Right earphone:

BT BLE

Worse case output power is as below: [2440MHz: -0.06dBm (0.99mW)]

Antenna Gain is 0.73dBi

Maximum output power is -0.06dBm (0.99mW).

$(0.99\text{mW} / 5\text{mm}) \cdot [\sqrt{2.440(\text{GHz})}] = 0.31 < 3.0$ for 1-g SAR

BT EDR

Worse case output power is as below: [2441MHz: 1.26dBm (1.34mW)]

Antenna Gain is 0.73dBi

Maximum output power is 1.26dBm (1.34mW).

$((1.34\text{mW} / 5\text{mm}) \cdot [\sqrt{2.441(\text{GHz})}]) = 0.42 < 3.0$ for 1-g SAR

Then SAR evaluation is not required