

Maximum permissible emission (MPE) statement and calculation

This product is Bluetooth Class 2 device (output power max +4 dBm/3mW) intended for fixed installation use and is per definition by EN50360 deemed to comply with the basic restrictions without testing, also it is excluded from routine environmental evaluation for RF exposure as it does not fall under the product categories listed in Section 2.1093 of the FCC 's Rules.

EN50360:

“If the average power emitted by the mobile phone is less than or equal to 20mW, then the mobile phone is deemed to comply with the basic restrictions without testing.”

MPE calculation:

This device has maximum transmit power +4dBm (3mW).

Calculation from FCC document “Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies”:

4.3. General SAR test reduction and exclusion guidance

4.3.1. Standalone SAR test exclusion considerations

1) 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:

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

- ☐ $f(\text{GHz})$ 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

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

$$\left[\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \cdot \sqrt{f(\text{GHz})} \right]^*$$

Power = 3mW

Distance = (if distance < 5 mm, use value 5mm) = 5mm

Frequency = 2.45GHz

$$\left[\frac{3\text{mW}}{5\text{mm}} \right] \cdot \sqrt{2.45\text{GHz}} = 1.6 < 3.0 \text{ (1g SAR limit)} \Rightarrow \text{SAR test excluded for 1g and 10g SAR tests.}$$