

RF Exposure Requirements

Product Description: wireless mouse

Model No.: M16, T19, T21, V11, M530, M11, M18, M301, T518, U30, U21, U26, V12, Q8, Q85, Q12, G16, X801, M201, M521, T10, K09, T96, T30, V08, M102, M106

FCC ID: 2A49E-M16

According to the KDB 447498 D01 v06 section 4.3.1, for 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{(\text{min. test separation distance, mm})^2} \cdot f(\text{GHz}) \right] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz

- Power and distance are rounded to the nearest mW and mm before calculation¹⁷

- The result is rounded to one decimal place for comparison

Calculation Result:

For Bluetooth:

Tx frequency range: 2402-2480MHz

Min. test separation distance: 5mm

Maximum Conducted Output Power: -8.527dBm

Tune-Up output power: -8.0 dBm

RF channel transmit frequency: 2480MHz

Result: 0.1

Limit: 3.0

The exclusion thresholds is $0.1 < 3$

For SRD:

Tx frequency range: 2402MHz-2480MHz

Min. test separation distance: 5mm

Max. Field Strength: 87.62dBuV/m @3m

$EIRP = E - 104.8 + 20 \log D = 87.62 - 104.8 + 20 \log 3 = -7.64 \text{ dBm}$

Maximum Conducted Output Power: -7.64dBm

Tune-Up output power: -7.0 dBm

RF channel transmit frequency: 2402MHz

Result: 0.1

Limit: 3.0

The exclusion thresholds is $0.1 < 3$

So the transmitter complies with the RF exposure requirements and the SAR is not required.