

RF Exposure Requirements

Product Description: Wireless controller

Model No.: Q100, Q101, Q300, U100, K100, Q600, Q900, K200, K300

FCC ID: 2AO4O-Q100

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:

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

- $f(\text{GHz})$ 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:

Tx frequency range: 2402 MHz

Min. test separation distance: 5 mm

Maximum Conducted Output Power: -0.85 dBm (0.82 mW)

Tune-Up output power: 1 dBm (1.56 mW)

RF channel transmit frequency: 2402 MHz

Result: 0.31

Limit: 3.0

Tx frequency range: 2442 MHz

Min. test separation distance: 5 mm

Maximum Conducted Output Power: 0.61 dBm (1.15 mW)

Tune-Up output power: 1 dBm (1.56 mW)

RF channel transmit frequency: 2442 MHz

Result: 0.31

Limit: 3.0

Tx frequency range: 2480 MHz

Min. test separation distance: 5 mm

Maximum Conducted Output Power: -0.72 dBm (0.85 mW)

Tune-Up output power: 1 dBm (1.56 mW)

RF channel transmit frequency: 2480 MHz

Result: 0.31

Limit: 3.0

The exclusion thresholds is $0.31 < 3$, so the transmitter complies with the RF exposure requirements and the SAR is not required.