

RF Exposure Requirements

Product Description: Mobile phone stabilizer

Model No.: EMK-3AIX-01, EMK-3AIX-02, EMK-3AIX-03, EMK-3AIX-04,
EMK-3AIX-05, EMK-3AIX-06, EMK-3AIX-07, EMK-3AIX-08, EMK-3AIX-09

FCC ID: 2ATM4-EMK-3AIX

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:

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

- $f(\text{GHz})$ 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: -4.28 dBm (0.3733 mW)

Tune-Up output power: 1 dBm (1.26 mW)

RF channel transmit frequency: 2402 MHz

Result: 0.813

Limit: 3.0

Tx frequency range: 2442 MHz

Min. test separation distance: 5 mm

Maximum Conducted Output Power: -1.88 dBm (0.6486 mW)

Tune-Up output power: 1 dBm (1.26 mW)

RF channel transmit frequency: 2442 MHz

Result: 0.8063

Limit: 3.0

Tx frequency range: 2480 MHz

Min. test separation distance: 5 mm

Maximum Conducted Output Power: -1.49 dBm (0.7096 mW)

Tune-Up output power: 1 dBm (1.26 mW)

RF channel transmit frequency: 2480 MHz

Result: 0.8

Limit: 3.0

The exclusion thresholds is $0.813 < 3$, so the transmitter complies with the RF exposure requirements and the SAR is not required.