

RF Exposure Requirements

Product Description: T-51 Power Armor Helmet Gesture Control Speaker
Product Name: T-51 Power Armor Helmet Gesture Control Speaker
Model Number(s): BTHDEV180318
FCC ID Number: FCC ID: 2A18LBTHDEV180318

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:

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

Calculation Result:

TX frequency range: 2402-2480 MHz
Minimum test separation distance: 5 mm
Maximum Conducted Output Power: 3.38 dBm
Tune-Up output power: 4 dBm
RF channel transmit frequency: 2402 MHz
Result: 0.8
Limit: 3.0

The exclusion thresholds is $0.8 < 3$, so the transmitter complies with the RF exposure requirements and the SAR is not required.