

RF Exposure Requirements

Product Description: Visual IR Thermometer

Model No.: TVT-281, TVT-280, TVT-282, TSD200, TSD270, TSD272, IR-CAM2 PRO, IR0281

FCC ID: 2ALZ6-TVT281

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:

For Wi-Fi

Tx frequency range: 2412-2462MHz

Min. test separation distance: 5mm

Maximum Conducted Output Power: 9.11dBm

Tune-Up output power: 9.5 dBm

RF channel transmit frequency: 2462MHz

Result: 2.8

Limit: 3.0

The exclusion thresholds is $2.8 < 3$.

For Bluetooth

Tx frequency range: 2402-2480MHz

Min. test separation distance: 5mm

Maximum Conducted Output Power: 3.303dBm

Tune-Up output power: 4dBm

RF channel transmit frequency: 2480MHz

Result: 0.8

Limit: 3.0

The exclusion thresholds is $0.8 < 3$.

BT and Wi-Fi can't transmit at the same time. So the transmitter complies with the RF exposure requirements and the SAR is not required.