



RF Exposure evaluation

FCC ID: 2BMNP-SPK7818

According to 447498 D01 General RF Exposure Guidance v06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

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

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

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

According to FCC Part 2.1093, this device is classified as a Portable Device. A portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

BLE:

Worse case output power is as below: [2480MHz: 1.92dBm]

Maximum output power is 1.92dBm (1.56 mW).

$(1.56 \text{ mW} / 5\text{mm}) \cdot [\sqrt{2.480(\text{GHz})}] = 0.49 < 3.0$ for 1-g SAR.

2.4G SRD:

Worse case output power is as below: [2480MHz: 0.35dBm]

Maximum output power is 0.35dBm (1.08 mW).

$(1.08 \text{ mW} / 5\text{mm}) \cdot [\sqrt{2.480(\text{GHz})}] = 0.34 < 3.0$ for 1-g SAR.

Then SAR evaluation is not required.