

RF Exposure Requirements

Product Description: Bluetooth Speaker

Model No.: SP328-SILVER

FCC ID: 2AD8RSP328

According to the KDB 447498 D01 V05r02, the following RF exposure evaluation shall to demonstrate RF exposure compliance.

Bluetooth

Tx frequency range: 2402~2480MHz

Maximum Conducted Output Power: 2.182dBm

Maximum Tune up Power: 2.5dBm (1.78mW)

Maximum Antenna Gain: 0dBi

Device category: Portable device (Distance: 5mm)

- 1) 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:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot \left[\sqrt{f_{\text{(GHz)}}} \right] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR,}^{25} \text{ where}$$

- $f_{\text{(GHz)}}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation²⁶
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

So the RF exposure Limit: 10mW

Source-based time-averaged EIRP output power is $1.78\text{mW} < 10\text{mW}$

So the transmitter complies with the RF exposure requirements and the SAR is not required.