



RF Exposure Analysis – SAR Test Exemption

FCC ID: 2BCK5TBV10

The Tedee Bridge equipment operates using a 2.4GHz BT LE transmitter, together with a pre-certified 2.4GHz/ 5GHz WLAN transmitter. (FCC ID:2AHMR-BW16).

The WLAN transmitter is installed and operated in accordance with its certification conditions and DOES NOT operate simultaneously with the BT transmitter.

The following FCC Rule Parts are applicable:

Part 2.1093 – Radiofrequency radiation exposure evaluation: portable devices

Part 1.1307(b)(3)(i)(C) - SAR test exemption (ii)

Part 1.1307(b)(3)(i)(B) - SAR test exemption (iii)

For the Tedee Bridge – BT Operation

Values (as defined in Tedee Operational Description document):

BT Operating Frequency: 2402 – 2480MHz

Tx Power: +6.0dBm max.

Antenna gain +2.0dBi

EIRP = 8.0dBm

ERP = 8.0-2.15dBm = 5.85dBm (3.85mW)

Minimum separation distance (R) = 20cm (0.2m)

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Evaluation

From Part 2.1093(c)(1). RF exemption applies if the maximum transmitted power is less than the maximum of the following three criteria:

- i) Less than 1 mw Blanket exemption. $PTH = 0.001 \text{ W}$ – (The Tedee Bridge is NOT compliant)
- ii) determination of exemption under the MPE-based §1.1307(b)(3)(i)(C), if i) not met
- iii) determination of exemption under the SAR-based §1.1307(b)(3)(i)(B) if both i) and ii) are not met;

Determination of threshold power (PTH) under the MPE-based §1.1307(b)(3)(i)(C)

This is only applicable at a separation distance greater than $\lambda/2\pi$

For the Tedee Bridge:

2.4GHz operation - $\lambda/2\pi = 0.02\text{m}$

The Tedee Bridge separation distance equals 0.2m therefore this clause IS applicable.

From §1.1307(b)(3)(i)(C), Table 1:

Threshold ERP PTH (2.4GHz) = $19.2R^2$ watts

(R = metres)

ie: Threshold Power $PTH = 19.2 \times 0.22 \text{ ERP}$

$$= 768\text{mW}$$

The Tedee Bridge max. transmitter power @ 2402MHz = 3.85mW ERP, so §1.1307(b)(3)(i)(B) is not applicable and the Tedee Bridge is therefore exempt from MPE evaluation in accordance with §1.1307(b)(3)(i)(C).