



## FCC ID: 2BBAS-GEMTONESSPORT

### RF exposure evaluation

According to §15.247(i), §1.1307 (b) and KDB447498, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the commission's guidance.

The SAR-based exemption formula of §1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold  $P_{th}$  (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive).  $P_{th}$  is given by Formula (B.2).

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B.2})$$

where

$$x = -\log_{10} \left( \frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

$f$  is in GHz,  $d$  is the separation distance (cm), and  $ERP_{20 \text{ cm}}$  is per Formula (B.1).

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. We use 5mm as separation distance to calculate BT

Antenna gain: 3.59 dBi

Conducted Transmit Power Max: = -8.07dBm = 0.156 mW

EIRP = -8.07dBm + 3.59 dBi = -4.48dBm

ERP = -4.48 - 2.15dB = -6.63 dBm

The maximum ERP power specified is -6.63 dBm = 0.22mW

The source-based time-averaging conducted output power

= 0.22 \* Duty factor mW (where Duty Factor ≤ 1)

= 0.22 mW



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Antenna gain: 3.59 dBi

Conducted Transmit Power Max: = -9.54dBm = 0.11 mW

EIRP = -9.54dBm + 3.59 dBi = -5.95dBm

ERP = -5.95 - 2.15dB = -8.1dBm

The maximum ERP power specified is -8.1dBm = 0.15mW

The source-based time-averaging conducted output power

= 0.15 \* Duty factor mW (where Duty Factor ≤ 1)

= 0.15 mW

The SAR Exclusion Threshold Level:

$$P_{th}(mW) = ERP_{20cm} * (d/20cm)^X \quad (X = -\log_{10}\left(\frac{60}{ERP_{20cm}\sqrt{f}}\right))$$
$$= 2.72 mW$$

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.