

- ◆ FCC 47 CFR Part 2 Subpart J, §2.1093
- ◆ FCC KDB 447498 D01 General RF Exposure Guidance v06
- ◆ ISED Canada RSS-102 Issue 5 Amendment 1, (February 2021)
- ◆ Health Canada Safety Code 6
- ◆ ISED Canada Notice 2016-DRS001 (Updated July 2020)

FCC Estimated Simultaneous Transmission SAR level =

$$\begin{aligned}
 & [(\text{max. power of channel, including tune-up tolerance, mW}) \div (\text{min. test separation distance, mm})] \times [v(F_{\text{GHz}})/x] \text{ for BT} + \\
 & [(\text{max. power of channel, including tune-up tolerance, mW}) \div (\text{min. test separation distance, mm})] \times [v(F_{\text{GHz}})/x] \text{ for 134.2kHz} + \\
 & [(\text{max. power of channel, including tune-up tolerance, mW}) \div (\text{min. test separation distance, mm})] \times [v(F_{\text{GHz}})/x] \text{ for 13.56 MHz} \\
 = & \\
 & [(2.6, \text{ mW}) \div (5, \text{ mm})] \times [v(2.48)/7.5] \text{ for BT} + \\
 & [(0.65, \text{ mW}) \div (5, \text{ mm})] \times [v(0.0001342)/7.5] \text{ for 134.2kHz} + \\
 & [(0.77, \text{ mW}) \div (5, \text{ mm})] \times [v(0.01356)/7.5] \text{ for 13.56 MHz} \\
 & \text{Note: Used 7.5 for } x \text{ to cover worst case of head/body/extremity requirements.}
 \end{aligned}$$

$$= 0.3 \text{ W/kg for BT} + 0.00055 \text{ W/kg for 134.2 kHz} + 0.006548 \text{ W/kg for 13.56 MHz}$$

Estimated FCC Simultaneous Transmission SAR level (for BT + 134.2kHz + 13.56 MHz) = 0.31 W/kg

ISED Canada Estimated Simultaneous Transmission SAR level =

$$\begin{aligned}
 & (\text{Maximum power level including tuneup tolerance}_{(mW)} \div \text{max power level of exemption at the same frequency and distance})(mW) \times 0.4 \\
 & \text{W/kg} = \text{result W/kg for BT} + \\
 & (\text{Maximum power level including tuneup tolerance}_{(mW)} \div \text{max power level of exemption at the same frequency and distance})(mW) \times 0.4 \\
 & \text{W/kg} = \text{result W/kg for 134.2kHz} + \\
 & (\text{Maximum power level including tuneup tolerance}_{(mW)} \div \text{max power level of exemption at the same frequency and distance})(mW) \times 0.4 \\
 & \text{W/kg} = \text{result W/kg for 13.56 MHz} \\
 = & \\
 & (2.6_{(mW)} \div 4(mW)) \times 0.4 \text{ W/kg for BT} + \\
 & (0.65_{(mW)} \div 71(mW)) \times 0.4 \text{ W/kg for 134.2 kHz} + \\
 & (0.77, mW \div 71(mW)) \times 0.4 \text{ W/kg for 13.56 MHz}
 \end{aligned}$$

$$= 0.26 \text{ W/kg for BT} + 0.0037 \text{ W/kg for 134.2 kHz} + 0.0043 \text{ W/kg for 13.56 MHz}$$

Estimated ISED Simultaneous Transmission SAR level (for BT + 134.2kHz + 13.56 MHz) = 0.27 W/kg

Therefore, the equipment meets the SAR Exemption requirements.