MPE Calculation / RF Exposure

Product: DOG TRAINING DEVICE
Applicant: Dogtra Co., Ltd.
Model: iQ Plus Tx
Address: #715-2(146BL-3L) Gojan-dong, Namdong-gu, Incheon, South Korea
FCC ID: SWN-TD10UT

This is a portable device as it is a hand-held transmitter paired with a receiver collar which is used in a dog training application. The SAR exclusion from KDB 447498 Appendix C being applied.

Formula from Section 4.3.1 of KDB 447498 D01

For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):
1) For test separation distances > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by [1 + log(100/f(MHz))]
2) For test separation distances ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by ½

Exclusion Threshold = 7.5

Calculation

Step 1: at 100 MHz and 50 mm, power threshold = (7.5 * 50) / sqrt(0.1) = 1185 mW
Step 2a): 1185 + (50 – 50) x (27.195/150) = 1185 mW
Step 3a): 1185 x [1 + log(100/27.195)] = 1855.13 mW
Step 3b): 1855.13/2 = 927.56 mW

Frequency	Conducted Peak Output power	Conducted Peak Output contained tolerance	RF Exposure Limit
27.195 MHz	55.17 mW	87.70 mW	927.56 mW

Conclusion PER the exclusion requirement of KDB 447498 a SAR measurement is not necessary.

Note: Measured maximum output power : 17.43 dBm / Tune-up tolerance :17 dBm ± 2 dB