

MPE Calculation / RF Exposure

Product: DOG TRAINING DEVICE

Applicant: Dogtra Co., Ltd.

Model: 280C

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FCC ID: SWN-TD21UT

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 $[1 + \log(100/f(\text{MHz}))]$
- 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 $\frac{1}{2}$

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): $1185 + (50 - 50) \times (27.195/150) = 1185$ mW

Step 3a): $1185 \times [1 + \log(100/27.195)] = 1855.13$ 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	335.74 mW	532.11 mW	927.56 mW

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

Note: Measured maximum output power : 25.26 dBm / Tune-up tolerance : 25 dBm $\pm$ 2 dB