

MPE Calculation / RF Exposure

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

Antenna Type: Screwed helical antenna
Antenna Gain: 0.5 dBi
Nominal rated field strength: 43.40dB μ V/m at 3m
Maximum allowed field strength of production tolerance: +/- 3dB

According to the 4.3.1 of 447498 D01 General RF Exposure Guidance v06:

Based on the Maximum allowed field strength of production tolerance was 46.40 dB μ V/m at 3m in frequency 27.195 MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.000013$ mW

Conducted power = Radiated Power (EIRP) – Antenna Gain
So;

Conducted Power = 0.000012 mW.

The SAR Exclusion Threshold Level for 27.195MHz when the minimum test separation distance is < 50mm:

$$= [474 * (1 + \log(100/f(\text{MHz})))]/2$$
$$= 371.0 \text{ mW}$$

Since the above conducted output power is well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.