

MPE Calculation / RF Exposure

Product: PATHFINDER SE
Applicant: Dogtra Co., Ltd.
Model: PR10U
Address: #715-2(146BL-3L) Gojan-dong, Namdong-gu, Incheon, Korea
FCC ID: SWN-PR10U

According to §2.1091, §2.1093 and §1.1307(b), 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 guidelines.

$$S = ERP/4 \pi R^2$$

In other words, $R = \sqrt{ERP/4\pi \times S(Pd)}$

Where S = Power density
ERP = Effective Radiated Power
R = distance to the centre of radiation of the antenna

Calculation S = 0.2 mW/cm² for General population uncontrolled exposure (FCC Part 1.1310 Radiofrequency radiation exposure limits)

P = 32.10 dBm (1621.81 mW) : measured maximum output power including tune-up tolerance.*note

G = Antenna gain = 0 dBi (1 in linear terms)

ERP = P x G = 1 621.81 mW

$R = \sqrt{1\ 621.81/12.56 \times 0.2}$

R = 25 cm

Conclusion If it used at least 25 cm away from human body, RF exposure compliance is satisfied.

Note: Measured maximum output power : 31.10 dBm / Tune-up tolerance : 31 +/- 1 dB