MPE Calculation / RF Exposure

Product: Pathfinder mini
Applicant: Dogtra Co., Ltd.
Model: PM10U
Address: #715-2(146BL-3L) Gojan-dong, Namdong-gu, Incheon, Korea
FCC ID: SWN-PM10U

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/cm^2 for General population uncontrolled exposure (FCC Part 1.1310 Radiofrequency radiation exposure limits)

P = 32.52 dBm (1786 mW) : measured maximum output power including tune-up tolerance.*note

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

ERP = P x G = 1 786 mW

S = 1 786/12.56 x $(27)^2$

S = 0.195 mW/cm2

Conclusion **If it used at least 27 cm away from human body, RF exposure compliance is satisfied.**

Note: Measured maximum output power : 31.52 dBm / Tune-up tolerance : 32 +/- 1 dB