FCC ID: UMJ-SM RF Exposure evaluation

The EUT is a wireless device that transmits intraoral X-ray information to a PC. The transmitter is located at the opposite end of a cable > 20 cm long from the X-ray sensor, so that the transmitter is always $\geq$ 20 cm from users.

The maximum conducted power is 23.5 dBm; the antenna is a chip with 2 dBi gain. Therefore, to comply with RF Exposure Requirement, the MPE is calculated.

The maximum Peak EIRP calculated is 25.5 dBm or 355 mW. The Power Density can be calculated using the formula

$$S = EIRP/ 4\pi D^2$$

Where: S is Power Density in W/m^2
D is the distance from the antenna in meters.

At 0.2 m, S = 0.71 W/m^2, which is below the MPE Limit of 10 W/m^2;

or at 20 cm, S = 0.071 mW/m^2, compared to the MPE Limit of 1 mW/cm^2.