

Environmental evaluation and exposure limit according to FCC CFR 47 part 1, §1.310.

FCC §1.1310 limit of power density for general population/uncontrolled exposure is 1 mW/cm².

The power density calculation is $S = (P_t / 4\pi r^2)$.

Where:

P_t - The transmitted power EIRP (mW)

r - The distance from the unit. (cm)

The limit 1mW/cm² can be calculated from the above based on the following data:

P_t - the transmitted maximum EIRP power = 26.2 dBm = 417 mW.

Maximum allowed distance “ r ”, where RF exposure limits may not be exceeded = $\text{SQRT}(417/4\pi)$ and is more than 5.8 cm from the tested unit.

The EUT is defined as module inside portable device designed to be used so that the radiating structure(s) of the device may be used at 20 centimeters distance from the body of the user.

Peak power density for distance 20 cm is $P_t/4\pi r^2 = 417 \text{ mW}/4\pi * 0.2^2 = 0.083 \text{ mW}/\text{cm}^2$.

That is less than 1 mW/cm² power density limit.