RF Exposure

The minimum separation distance calculated following FCC OET Bulletin 65 is calculated as follows, where S is power density,

$$\text{Smeas (3m)} = -27.9 \text{ dBm/cm}^2 \text{ (pk; from Table 5.2, ave + duty factor)}$$
$$= 0.00162 \text{ mW/cm}^2$$
$$= 12.1 \text{ dBm/m}^2$$

$$\text{EIRP} = \text{Smeas (3m) x } 4pR^2 = 12.1 + 20.5 = 32.6 \text{ dBm}$$
$$= 1820 \text{ mW} = 1.82 \text{ W}$$

$$\text{ERP} = \text{EIRP} - 2.15 = 32.6 - 2.15 = 30.5 \text{ dBm}$$
$$= 1110 \text{ mW} = 1.11 \text{ W}$$

The power density at 20 cm is thus
$$S(\text{mW/cm}^2) = \text{EIRP(mW)}/(4p \ R(\text{cm})^2) = 0.36 \text{ mW/cm}^2$$

NOTE:
(1) Under no circumstances is the ERP of this device greater than 3W, as required by 2.1091 and the FCC mm-wave accepted test procedures,
(2) The DUT is only operating when the vehicle is in motion