

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

$$\begin{aligned} S_{\text{meas}}(3\text{m}) &= -27.8 \text{ dBm/cm}^2 \text{ (pk; from Table 5.2, ave + duty factor)} \\ &= 0.00166 \text{ mW/cm}^2 \\ &= 12.2 \text{ dBm/m}^2 \end{aligned}$$

$$\begin{aligned} \text{EIRP} &= S_{\text{meas}}(3\text{m}) \times 4\pi R^2 = 12.2 + 20.5 = 32.7 \text{ dBm} \\ &= 1862 \text{ mW} = 1.86 \text{ W} \end{aligned}$$

$$\begin{aligned} \text{ERP} &= \text{EIRP} - 2.15 = 32.7 - 2.15 = 30.55 \text{ dBm} \\ &= 1135 \text{ mW} = 1.14 \text{ W} \end{aligned}$$

Thus, the power density at 20 cm becomes $S(\text{mW/cm}^2) = \text{EIRP}(\text{mW}) / (4\pi R(\text{cm})^2) = 0.37 \text{ mW/cm}^2$

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