

## Maximum Permissible Exposure

### FCC, Part 90 Subpart C §90.1217 Industry Canada RSS-Gen 5.5

#### Calculations for Maximum Permissible Exposure Levels

$$\text{Power Density} = P_d \text{ (mW/cm}^2\text{)} = \text{EIRP}/(4\pi d^2)$$

$$\text{EIRP} = P * G$$

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

$$\text{Numeric Gain} = 10 ^ (G \text{ (dBi)}/10)$$

The Axxcelera EHD-CPE3320-C10 has a single transmitter. The calculated safe distance is computed using:

the highest conducted power measured (+25.35dBm) when used with the 11dBi antenna;

the calculated maximum conducted power (+23.4dBm) that can be used with the 16dBi antenna to meet EIRP requirements.

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is 1.0 mW/cm<sup>2</sup>

Freq. Band (GHz)	Antenna Gain (dBi)	Numeric Gain (numeric)	Max Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm <sup>2</sup> Limit(cm)	Minimum Separation Distance (cm)
3650	11	12.6	+25.35	342.8	18.5	20.0*
3650	16	39.8	+23.40	218.8	26.3	20.0*

\*Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if the calculations indicate the MPE distance to be lower.

## Specification

### Maximum Permissible Exposure Limits

**§90.1217** 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 levels in excess of the Commission's guidelines. See §1.1307 (b)(1) of this chapter.

Limit = 1mW / cm<sup>2</sup> from 1.310 Table 1

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.