

RF Exposure Compliance Requirements

Per 47 CFR 15.247 (b)(4), the EUT meets the requirement that it be operated in a manner that ensures the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines (ref. 47 CFR 1.1307, 1.1310, and 2.1093. See also OET Bulletin 65, Supplement C).

The EUT will be used in personal computers and peripherals and can therefore be considered a portable transmitter per 47 CFR 2.1093. The EUT supports the connection of only one antenna at a time.

The MPE estimates are as follows:

Table 1 in 47 CFR 1.1310 defines the maximum permissible exposure (MPE) for the general population as $1\text{mW}/\text{cm}^2$. The distance from the EUT's transmitting antenna where the exposure level reaches the maximum permitted level is calculated using the general equation: $S = (PG)/4\pi R^2$.

Where:

S = power density ($1\text{ mW}/\text{cm}^2$ maximum permitted level)

P = power input to the antenna (1.48 mW)

G = linear power gain relative to an isotropic radiator (2.9 dBi = numeric gain of 1.95)

R = distance to the center of the radiation of the antenna

Solving for R, the $1\text{ mW}/\text{cm}^2$ limit is reached 0.48 cm or closer to the transmitting antenna. Therefore, no warning labels, no RF exposure warnings in the user manual, or other protection measures will be used with the EUT. Installation instructions will include the following information:

“ This device generates and radiates radio-frequency energy. In order to comply with FCC radio-frequency radiation exposure guidelines for an uncontrolled environment, this device must be installed and operated while maintaining a minimum body to antenna distance of 0.48 cm (0.189 inch), based on an antenna gain of 2.9 dBi.”