Environmental evaluation and exposure limit according to FCC CFR 47part 1, §1.1307, §1.1310

The EasyST transceiver is classified as mobile, the calculation was done for power density at 20 cm distance.

Limit for power density for general population/uncontrolled exposure is 1 mW/cm^2 for 1500 -100000 MHz frequency range.

The power density $\mathbf{P\ (mW/cm^2) = P_T / 4\pi r^2}$, where

P_T is the transmitted power, which is equal to the peak transmitter output power plus maximum antenna gain. The maximum equivalent isotropically radiated power EIRP is

$$P_T = 22.5\ dBm + 9\ dBi = 31.5\ dBm = 1413\ mW, \text{ where}$$

22.5 dBm is the EUT maximum output power,
9 dBi – antenna gain.

The power density P at 20 cm (minimum safe distance, required for mobile devices), calculated as follows:

$$P = 1413\ mW / 4\pi\ (20\ cm)^2 = 0.28\ mW/cm^2 < 1\ mW/cm^2$$

General public cannot be exposed to dangerous RF level.