

Exposure limit according to §15.247(i) and RSS-102

The flood detector is classified as mobile device.

Limit for power density for general population/uncontrolled exposure is 1 mW/cm² for 1500 - 100000 MHz frequency range.

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

P_T is the transmitted power, which is equal to the peak transmitter output power 13.69 dBm plus maximum antenna gain -2 dBi, the maximum equivalent isotropically radiated power EIRP is

$$P_T = 13.69 \text{ dBm} - 2 \text{ dBi} = 11.69 \text{ dBm} = 14.8 \text{ mW}.$$

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

$$14.8 \text{ mW} / 4\pi (20 \text{ cm})^2 = 0.003 \text{ mW/cm}^2$$

General public cannot be exposed to dangerous RF level.