Exposure limit according to §15.247(i) and RSS-102, Safety Code 6

The glass break detector is classified as a mobile device.

The FCC limit for power density for general population/uncontrolled exposure is 1 mW/cm^2 for 2.4 GHz. The RSS-102 limit for power density for general population/uncontrolled exposure in 300 – 6000 MHz frequency range is 0.02619 x f$^{0.6834}$ W/m^2 = 0.02619 x 2412$^{0.6834}$ W/m^2 =0.536 mW/cm^2

The power density **P (mW/cm^2) = P$_T$ / 4π r^2**

P$_T$ is the transmitted power, which is equal to the peak transmitter output power 20.07 dBm plus maximum antenna gain 0 dBi, the maximum equivalent isotropically radiated power EIRP is

$$P_T = 20.07 \text{ dBm} = 102 \text{ mW}.$$

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

$$102 \text{ mW} / 4\pi \text{ (20 cm)}^2 = 0.02 \text{ mW/cm}^2 << 1 \text{ mW/cm}^2$$
$$102 \text{ mW} / 4\pi \text{ (20 cm)}^2 = 0.02 \text{ mW/cm}^2 << 0.536 \text{ mW/cm}^2$$

General public cannot be exposed to dangerous RF level.