

RF exposure limit according to FCC CFR 47part 1, §1.1307, §1.1310

The transceiver is classified as mobile.

Limit for power density for general population/uncontrolled exposure is $f/1500$ mW/cm² for 300 – 1500 MHz frequency range

$$\text{iDEN: } P = 851/1500 = \mathbf{0.567 \text{ mW/cm}^2}$$

$$\text{SMR: } P = 929/1500 = \mathbf{0.619 \text{ mW/cm}^2}$$

The transmitter maximum output power in IDEN mode is 74 mW, in SMR mode - 26 mW, total 100 mW (20 dBm).

The maximum antenna gain is 10 dBi (7.85 dBd).

Maximum composite ERP is 20 dBm + 7.85 dBd = 27.85 dBm = 0.61 W,
maximum composite EIRP is 20 dBm + 10 dBi = 30 dBm = 1 W.

The power density P (mW/cm²) = $P_T / 4\pi r^2$, where
 P_T is the maximum equivalent isotropically radiated power (EIRP).

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

$$P = 1000 \text{ mW} / 4\pi (20 \text{ cm})^2 = \mathbf{0.2 \text{ mW/cm}^2} < \mathbf{0.567 \text{ mW/cm}^2}$$

General public cannot be exposed to dangerous RF level.