

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

The calculation was completed to confirm the required safe distance for fixed device.

Based on the calculated r in 2) below, General public cannot be exposed to harmful RF level in the case of a fixed device is located at least 2 m safe distance from the persons.

Limit for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields for general population/uncontrolled exposure is 1.0 mW/cm^2 (**P**) for 1,500 - 100,000 MHz frequency range:

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

1) In the transmit mode of 2 carriers with all 4 ports in transmission, the peak output power of 35.83 dBm with 9 dBi total antenna gain (please refer to Test A.1/A.2 of the test report 2477ERM.001)

$$PT = 35.83 \text{ dBm} + 9.00 \text{ dBi} = 44.83 \text{ dBm}, \text{ which is equal to } 30,409 \text{ mW}$$

The minimum safe distance “ r ”, where RF exposure does not exceed FCC permissible limit, is

$$r = \sqrt{PT / (P \times 4\pi)} = \sqrt{30,409 / 12.56} = 49.2 \text{ cm}$$