

RF EXPOSURE TEST

Portable device

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to KDB 447498 (2)(a)(i)

For portable device, the power limit is $60/f$ (in GHz) mW

For limit $60/f$ is equal:

$60/2.402=24.97$ mW

$60/2.432=24.67$ mW

$60/2.472=24.27$ mW

According to the following transmitter output power (P_t) formula:

$$P_t = (E \times d)^2 / (30 \times g_t)$$

P_t = transmitter output power in watts

g_t = numeric gain of the transmitting antenna (unitless)

E = electric field strength in V/m

d = measurement distance in meters (m)

Maximum measured transmitter power

| Frequency (MHz) | Max EIRP (dbuv/m) | Reading (E) | Antenna Gain (g_t) | measurement distance (d)(m) | EIRP (dBm) | EIRP (mw) (P_t) |
|-----------------|-------------------|-------------|------------------------|-----------------------------|------------|---------------------|
| 2402 | 94.23 | 0.0514 | 1.78(2.5dBi) | 3 | -3.52 | 0.445 |
| 2432 | 96.29 | 0.0652 | 1.78(2.5dBi) | 3 | -1.45 | 0.716 |
| 2472 | 91.07 | 0.0357 | 1.78(2.5dBi) | 3 | -6.70 | 0.214 |

The max. output power E.I.R.P is 0.716mW < 24.67mW

Conclusion: No SAR is required.