

RF Exposure Calculations:

The minimum separation distance is calculated from FCC OET 65 Appendix B, Table 1B “Guidelines for General Population/Uncontrolled Exposure.” This calculation is based on the highest EIRP possible from the system, considering maximum power and antenna gain.

RF Power Measurement

The RF power measurements were calculated from the maximum field strength. See NCEE Labs report R041511-01C. This is based on a worse-case peak measurement with no duty cycle or averaging correction.

Frequency (MHz)	Output Power dBm	Output Power mW
2405	13.47	22.23
2440*	14.64	29.11
2480	9.28	8.47

*Highest power measurement. This was used for RF exposure calculations

Exposure Limit (mW/cm²) = F/1200	1.00 mW/ cm ²
Frequency (MHz)	2440.00
Maximum peak output power (mW)	29.11
Antenna Gain (max)	1.50
Antenna type	PCB Trace

$$P_d = (P_{out} \times G) / (4\pi \times R^2)$$

$$R = \sqrt{(P_{out} \times G) / (4 \pi \times P_d)}$$

P_d = Power density limit, mW/cm²

P_{out} = Peak power output, mW

G = Numeric Antenna Gain

R = Distance from antenna, cm

P _{out} mW	G Numeric	P _d mW/cm ²	R cm	Frequency MHz	Calculation
29.11	1.5	0.0087	20.00	2440	Power density at 20 cm

References:

1. FCC OET Bulletin 65, Edition 97-01
2. FCC Supplement C to OET Bulletin 65, edition 01-01
3. IEEE C95.1, 1999