Maximum Permissible Exposure

FCC, Part 15 Subpart C §15.247(i)
Industry Canada RSS-Gen §5.6

Calculations for Maximum Permissible Exposure Levels

Power Density = Pd (mW/cm^2) = EIRP/(4πd^2)

EIRP = P * G

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

Numeric Gain = 10 ^ (G (dBi)/10)

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is 1.0 mW/cm^2

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

Specification
Maximum Permissible Exposure Limits

§15.247(i) 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 levels in excess of the Commission's guidelines. **FCC §1.1310** Limit = 1mW / cm^2 from 1.310 Table 1 **RSS-Gen §5.6** Category I and Category II equipment shall comply with the applicable requirements of RSS-102.

Laboratory Measurement Uncertainty for Power Measurements

Measurement uncertainty	±1.33 dB

2400 – 2483.5 MHz 2x2 Operation Point to Point operation.

Antenna Model	Type	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm^2 Limit(cm)	Power Density @ 20cm (mW/cm^2)
RW-9612-2427	Flat Panel Dual Pole Cross Polarized External	20	100.0	25.33	341.19	52.11	6.79
MT0073320	Flat Panel Dual Pole Cross Polarized Integrated	17.5	56.2	26.17	414.00	43.04	4.63

2400 – 2483.5 MHz 2x2 Operation

Antenna Model	Type	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm^2 Limit(cm)	Power Density @ 20cm (mW/cm^2)
RW-9462-0827	Sector Dual Pole Cross Polarized 80 Deg	9	7.9	27.00	501.19	17.80	0.79
MT0129070	Omni Directional Antenna	8	6.3	28.00	630.96	17.80	0.79
RW-9463-0825	Omni Directional Antenna	6.3	4.3	29.70	933.25	17.80	0.79
RW-9461-0827	Omni Directional Antenna	4	2.5	30.00	1000.00	14.14	0.50

2400 – 2483.5 MHz 3X3 Operation

Antenna Model	Type	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm^2 Limit(cm)	Power Density @ 20cm (mW/cm^2)
RW-9461-0827	Omni Directional Antenna	4	2.5	30.00	1000.00	14.14	0.50
MT0129070	Omni Directional Antenna	8	6.3	28.00	630.96	17.80	0.79
RW-9463-0825	Omni Directional Antenna	6.3	4.3	29.70	933.25	17.80	0.79