

Appendix A: FCC Part 1.1307, 1.1310, 2.1091, 2.1093; IC RSS-Gen: RF Exposure

MPE Calculation

Using FCC 1.1310 Table 1B as guidance, the maximum permissible RF exposure for an uncontrolled environment is 0.6 mW/cm² for the frequencies used in this device (903 to 927 MHz). The worst case power is used for the calculation below.

The actual power density for the EUT calculated as shown below.

$$S = (P \times G) / (4 \times \pi \times d^2)$$

where:

S = power density

P = transmitter conducted power in (W)

G = antenna numeric gain

d = distance to radiation center (m)

Per the manufacturer, the worst-case maximum average conducted power, including production tolerances, is 21.5 dBm (141 mW).

Frequency (MHz)	Antenna Gain (dBi)	Average Conducted Power (mW)	Separation Distance (cm)	Calculated Power Density (mW/cm ²)	FCC Power Density Limit (mW/cm ²)
903 – 927	11	141	20	0.35	0.6

Frequency (MHz)	Antenna Gain (dBi)	Average Conducted Power (mW)	Separation Distance (cm)	Calculated Power Density (mW/cm ²)	ISED Power Density Limit (mW/cm ²)
903 – 927	11	141	23	0.267	0.27

NOTICE:

FCC Radiation Exposure Statement

The calculated power density is below the limit. Nonetheless, the recommended separation distance for this equipment is 20 cm.

ISED Radiation Exposure Statement

The calculated power density is below the limit. Nonetheless, the required separation distance for this equipment is 23 cm.