

Appendix A: RF Exposure Compliance

FCC Rules and Regulations Part 1.1307, 1.1310, 2.1091, 2.1093:

Using FCC 1.1310 Table 1B as guidance, the maximum permissible RF exposure is 1 mW/cm² for an uncontrolled environment and 5 mW/cm² for a controlled environment for the frequencies used in this device (8,750 to 10,038 MHz). The worst case power at the center frequency of the band of operation is used for the calculation below.

Environment: Occupational/Controlled Exposure

Device category: Mobile per Part 2.1091

Modulation Type/Mode: Pulsed

Antenna Type(s):

Antenna	Type	Gain (dBi)	Numeric Gain
9.1 to 9.5 GHz Mini Splashplate	14" reflector	27.9	617

The actual power density for the EUT calculated as shown below, using the manufacturer's peak rated power:

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

where:

S = power density

P = transmitter conducted power in (W)

G = antenna numeric gain

d = distance to radiation center (m)

Frequency (MHz)	Antenna Gain (dBi)	Peak Conducted Power (mW)	Separation Distance (cm)	Power Density (mW/cm ²)
9,394	27.9	1,000	100	1
9,394	27.9	1,000	222	5

Conclusion:

For uncontrolled environments, the device must use a 222 cm separation distance to comply with the MPE requirements of 1 mW/cm² exposure to the end user.

For controlled environments, the device must use a 100 cm separation distance to comply with the MPE requirements of 5 mW/cm² exposure to the end user. The manufacturer has selected a more conservative safe distance of 120 cm.

Notice:

Radiation Exposure Statement

For controlled environments, the required separation distance for this equipment is 120 cm. All users that meet the definition of occupational users must be kept 120 cm away from the antenna.

For uncontrolled environments, the required separation distance for this equipment is 222 cm. All users must be kept 222 cm away from the antenna.