

Appendix A: RF Exposure FCC Part 1.1307, 1.1310, 2.1091, 2.1093

MPE Co-location Calculations

The maximum permissible RF exposure for an uncontrolled environment is specified in FCC 1.1310 table 1B.

From OET 65, $S = \text{EIRP} / 4\pi R^2$

where:

S = Power density (mw/cm²)

EIRP = Equivalent Isotropic Radiated Power

R = 20 cm separation distance

Power Density

Conducted power is 0.087 W

Maximum antenna gain for this frequency range of operation is 1.2 dBi (1.32 numeric)

$S = 0.023 \text{ mW/cm}^2 =$ at 20 cm separation

Co-location - Summary of MPE

Transmitter	Frequency (MHz)	MPE Result (mW/cm ²)	FCC Limit (mW/cm ²)	Ratio
TX1	915 - 923	0.023	0.6	0.04
TX2	915 - 923	0.023	0.6	0.04
			Sum of Ratios	0.08

Sum of ratios = 0.08 < 1, therefore compliant.

Thus, the EUT meets the uncontrolled exposure limit at 20 cm when both transmitters are transmitting simultaneously.