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Client: Airorlite Communications, Inc.
Model: 50289 Bi-Directional Booster
Standards: FCC Part 90
FCC ID: UT650289BA8470DL
Report Number: 2007151A

Appendix A: RF Exposure Compliance

Using FCC 1.1310 Table 1B as guidance, the maximum permissible RF exposure for an uncontrolled environment is 0.32 mW/cm^2 for the center of the frequencies used in this device (470 to 480 MHz). The worst case power at the center frequency of the band of operation 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)

The antenna used with this device is a leaky coax with 60 dB coupling. The manufacturer states that the gain of a discrete antenna would be some 30 dB over the radiating cable. Assuming a typical discrete antenna gain of 10 dBi, the radiating cable is estimated to have a gain of -20 dBi.

Frequency (MHz)	Antenna Gain (dBi)	Conducted Power* (W)	Separation Distance (cm)	Power Density (mW/cm^2)
475	-20	1.26	0.018	0.32

* max composite conducted power

NOTICE:

Radiation Exposure Statement

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