Wednesday 31st January 2007

EXLT13-A1 - Exalt Communications Inc, Model EX 4.9i

Maximum Permissible Exposure Calculations

FCC, Part 90 Subpart C §90.1217

Calculations for Maximum Permissible Exposure Levels

Power Density = Pd (mW/cm^2) = $EIRP/(4\pi d^2)$

EIRP = P * G

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

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

Max Antenna Gain (dBi)	Max Power (dBm)	Reduction in Power (dBm)	Peak Output Power Setting (dBm)
44.5	+31.99	44.5 – 26 = 18.5	+31.99 – 18.5 = +13.49

High power point-to-point or point-to-multipoint operation (both fixed and temporary-fixed rapid deployment) may employ transmitting antennas with directional gain up to 26 dBi without any corresponding reduction in the transmitter power or spectral density. Corresponding reduction in the peak transmit power and peak power spectral density should be the amount in decibels that the directional gain of the antenna exceeds 26 dBi. **Ref FCC Part §90.1215(a)**

4.9 GHz 64 QAM 20 MHz Channel Peak Output Pwr Setting = +13.49 dBm **numeric** 22.336

Max. Antenna Gain = 44.5 dBi, **numeric** 28,183.83

The EUT belongs to the Occupational/Controlled Exposure class of devices; power density limit is $5.0mW/cm^2$

Maximum Gain Antenna – Calculated Safe Distance @ 5 mW/cm^2

Antenna Gain (Numeric)	Peak Output Power (mW)	Calculated Safe Distance at 5 mW/cm^2 (cm)	Limit (mW/cm^2)
28,183.83	22.336	100.09	5.0