Friday, 7th July 2006

EXLT03-A5 Exalt Communications Inc , Model EX-5r

Maximum Permissible Exposure Calculations

FCC, Part 15 Subpart C §15.407(f)
Industry Canada RSS-Gen §5.5

Calculations for Maximum Permissible Exposure Levels

Power Density = Pd (mW/cm^2) = EIRP/(4πd^2)

EIRP = P * G

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

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

For 20 dBi (100 num.) antenna P (worst case) = +10 dBm (10 num)

For 28 dBi (631 num.) antenna P (worst case) = +2 dBm (1.585 num)

For 37.5 dBi (5623 num.) antenna P(worst case) = -7.5 dBm (0.178 num)

Because the EUT belongs to the General Population / Uncontrolled Exposure the limit of power density is 1mW/cm^2

Antenna Gain (dBi)	Single/ Dual Pole	Antenna Numeric Gain (numeric)	Peak Output Power (dBm)		Peak Output Power (mW)		Calculated Safe Distance @ 1mW/cm^2 Limit (cm)
			Ant Port #1	Ant Port #2	Ant Port #1	Ant Port #2	
20.0	Dual	100	+7.0	+7.0	5.0	5.0	8.9
28.0	Single	631	+2.0		1.6		8.9
37.5	Dual	5623	-10.5	-10.5	0.09	0.09	8.9