



Tuesday, February 08, 2005

TUVR48-A2 CISCO 74-3624, 802.11a/b/g

Calculation for lower 5GHz band i.e. 802.11a

Maximum Permissible Exposure

FCC, Part 15 Subpart C §15.407(f)

Industry Canada RSS-210 §6.2.2(q1)(iv)(g)

Calculations for Maximum Permissible Exposure Levels

Power Density = P_d (mW/cm²) = $EIRP / (4\pi d^2)$

$EIRP = P * G$

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

Numeric Gain = $10^{(G \text{ (dBi)} / 10)}$

P (worst case) = **+22.32 dBm (170.6mW)**, Antenna Gain = 6.0 dBi / **3.98 numeric**

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is 1.0 mW/cm²

Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated RF Exposure at d=20cm (mW/cm ²)	Limit (mW/cm ²)
3.98	+22.32	170.6	0.135	1