

Maximum Permissible Exposure

FCC, Part 15 Subpart C §15.247(i)
Industry Canada RSS-Gen §5.5

Calculations for Maximum Permissible Exposure Levels – Portable Device

Power Density = P_d (mW/cm²) = EIRP/(4πd²)

EIRP = P * G

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

Numeric Gain = 10^G (dBi)/10

FCC KDB 447498 item 4) c) iii) (3) - SAR required if device operates within 5 cm with source-based time-averaged power greater than 300 / sqrt (f in GHz). At 2.437 GHz power = 123mW (+20.9 dBm)

Client declared that the Ki Pro A/V Controller will be used no less than 10cm (4 in) from the head and exhibits a maximum peak output power of +19.21 dBm. System duty cycle will be a maximum of 0631 in any 100mS period. Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is 1.0 mW/cm²

Freq. Band (GHz)	Antenna Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)
2.4(g)	2	1.59	+19.21	83.37

Duty Cycle (100ms period) 100 No relaxation for duty cycle operation sought

Max. Peak Power Density (100%): 0.105 mW/cm²

From the above results the Ki Pro is one order of magnitude less than the 1 mW/cm² limit

Specification

Maximum Permissible Exposure Limits

§15.247(i) Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency levels in excess of the Commission's guidelines.

FCC §1.1310 Limit = 1mW / cm² from 1.310 Table 1

RSS-Gen §5.5 Before equipment certification is granted, the applicable requirements of RSS-102 shall be met.