



Engineering Solutions & Electromagnetic Compatibility Services

RF Exposure Exhibit

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FCC Part 1.1307, 1.1310, 2.1091, 2.1093: RF Exposure

MPE Calculation – Co-Location of Edimax Technology Co Ltd FCC ID: NDD9578111008 and FlightScope (Pty) Ltd FCC ID: QXP-HP244

Equation from page 18 of OET 65, Edition 97-01: $S = \text{EIRP} / (4\pi r^2)$

FCC ID: NDD9578111008

EUT operating frequency range: 2412 - 2462 MHz.

Therefore, limit for uncontrolled exposure: 1.0 mW/cm^2

Worst-case Conducted power = 264 mW

Antenna gain = 3.0 dBi = 1.995 (numeric)

$S = (264 * 1.995) / (4 * 3.14 * 20^2) = 0.1 \text{ mW/cm}^2$ at 20 cm separation

FCC ID: QXP-HP244

EUT operating frequency: 10,525 MHz.

Therefore, limit for uncontrolled exposure: 1.0 mW/cm^2

Peak field strength = 123.6 dBuV/m at 3 m

Converting field strength to EIRP = 687 mW

$S = (687) / (4 * 3.14 * 20^2) = 0.1 \text{ mW/cm}^2$ at 20 cm separation

MPE Summary

FCC ID	Frequency Range (MHz)	MPE (mW/cm^2)	Limit (mW/cm^2)
NDD9578111008	2412 – 2462	0.1	1.0
QXP-HP244	10,525	0.1	1.0

FCC requirement: $\text{MPE1} + \text{MPE2} < 1.0$

Combined MPE = 0.2 mW/cm^2

MPE as a fraction of the limit: $0.2 / 1.0 = 0.2$ (which is ≤ 1.0)

Therefore, the uncontrolled exposure limit is met at 20 cm when both transmitters are operating simultaneously.