



Prediction of MPE limit at a given distance

Applicant: ProSoft Technology Inc.

Product: Fast Industrial Hotspot

Model: RLX2-IHNF series C

Model Variants: RLX2-IHNF-W series C and RLX2-IHNF-WC series C

FCC ID: OQ7IHNF C

IC Registration Number: 5265A-IHNF C

Antenna Information: 2 dBi gain for both Bands

Manufactured by Nearson model: T145XX-2.4/4.9/5.X-S
(3x3 MIMO output, R-SMA connectors.)

Note.- Per ProSoft Technology Inc. declaration the product described above uses the VoxMicro LTD radio previously certified under FCC ID: 2AE3B-AEX-AR95X.

Max. Conducted power was obtained from the original test reports as follows:

2412MHZ	28.16dBm (0.655W)	Test Report EM-F160309
5825MHZ	22.24dBm (0.167W)	Test Report EM-F160311

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Prediction of MPE limit at a given distance for 2.4GHZ

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Maximum peak output power at device output terminal:	28.16 dBm
Cable and Jumper loss:	0.0 dB
Maximum peak output power at antenna input terminal:	28.16 dBm
	654.6361741 mW
Single Antenna gain (typical):	2 dBi
Number of Antennae:	1
Total Antenna gain (typical):	2 dBi
	1.584893192 (numeric)
Prediction distance:	20 cm
Prediction frequency:	2412 MHz
MPE limit for uncontrolled exposure at prediction frequency:	0.536601828 mW/cm ²
Power density at prediction frequency:	0.206410 mW/cm²
	2.064097 W/m ²
Tx On time:	1.000000 ms
Tx period time:	1.000000 ms
Average Factor:	100.000000 %
Average Power density at prediction frequency:	2.064097 W/m ²
Maximum allowable antenna gain:	6.14922003 dBi
Margin of Compliance:	4.14922003 dB

Prediction of MPE limit at a given distance for 5 GHz

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Maximum peak output power at device output terminal:	22.24 dBm
Cable and Jumper loss:	0.0 dB
Maximum peak output power at antenna input terminal:	22.24 dBm
	167.4942876 mW
Single Antenna gain (typical):	2 dBi
Number of Antennae:	1
Total Antenna gain (typical):	2 dBi
	1.584893192 (numeric)
Prediction distance:	20 cm
Prediction frequency:	5825 MHz
MPE limit for uncontrolled exposure at prediction frequency:	0.980254256 mW/cm ²
Power density at prediction frequency:	0.052812 mW/cm²
	0.528117 W/m ²
Tx On time:	1.000000 ms
Tx period time:	1.000000 ms
Average Factor:	100.000000 %
Average Power density at prediction frequency:	0.528117 W/m ²
Maximum allowable antenna gain:	14.68608592 dBi
Margin of Compliance:	12.68608592 dB