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: OQ7IHNFC
IC Registration Number: 5265A-IHNFC
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 previusly 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/cm^2**
	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/cm^2**
	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**	