Ruckus Wireless, Inc. FCC ID: S9GZF7761CM

4 FCC §2.1091 & §15.407(f) -RF Exposure

4.1 Applicable Standard

According to FCC §15.407(f) and §1.1307(b)(1), 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 energy level in excess of the Commission's guidelines.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	* (100)	30
1.34-30	824/f	2.19/f	* (180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

4.2 MPE Prediction

Predication of MPE limit at a given distance, Equation from OET Bulletin 65, Edition 97-01

 $S = PG/4\pi R^2$

Where: S = power density

P = power input to 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

4.3 MPE Results

5.2 GHz band:

Maximum peak output power at antenna input terminal (dBm): 16.72

Maximum peak output power at antenna input terminal (mW): 46.98941

Prediction distance (cm): 20

Prediction frequency (MHz): 5190

Maximum Antenna Gain, typical (dBi): 5.5

Maximum Antenna Gain (numeric): 3.55

Power density of prediction frequency at 20.0 cm (mW/cm²): 0.03319

MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1.0

The device is compliant with the requirement MPE limit for uncontrolled exposure. The maximum power density at the distance of 20 cm is 0.03319 mW/cm². Limit is 1.0 mW/cm².

^{* =} Plane-wave equivalent power density

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5.8 GHz band:

Maximum peak output power at antenna input terminal (dBm): 27.21

Maximum peak output power at antenna input terminal (mW): 526.0173

Prediction distance (cm): 20

Prediction frequency (MHz): 5825

Maximum Antenna Gain, typical (dBi): 5.5

Maximum Antenna Gain (numeric): 3.55

Power density of prediction frequency at 20.0 cm (mW/cm²): 0.3715

MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1.0

The device is compliant with the requirement MPE limit for uncontrolled exposure. The maximum power density at the distance of 20 cm is $0.3715~\text{mW/cm}^2$. Limit is $1.0~\text{mW/cm}^2$.