

§ 15.247(b) Peak Power Output and RF Exposure

RF Exposure Requirements: §1.1307(b)(1) and §1.1307(b)(2): 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 levels in excess of the Commission’s guidelines.

RF Radiation Exposure Limit: §1.1310: As specified in this section, the Maximum Permissible Exposure (MPE) Limit shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in Sec. 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of Sec. 2.1093 of this chapter.

Test Results: The EUT was compliant with the requirements of this section. Radios are capable of simultaneous operation. The worst case power densities for all bands for a single radio are listed below (non –simultaneous operation).

DTS band		Unii 1 band	Unii 3 band
2.4 GHz	5.8 GHz		
8.77 dBi	8.77dbi	8.77dbi	8.77dbi
24.14 dBm	26dbm	12.77dbm	22.39dbm
0.388 mW/cm2	0.597mW/cm ²	0.028mW/cm ²	0.260mW/cm ²

When both radios operate at the same time, Meru Networks will lower the power of each radio by 3dB. The Power densities for this case are listed below:

DTS band		Unii 1 band	Unii 3 band
2.4 GHz	5.8 GHz		
8.77 dBi	8.77dbi	8.77dbi	8.77dbi
21.14 dBm	23dbm	9.77dbm	19.39dbm
0.195 mW/cm2	0.299 mW/cm ²	0.014mW/cm ²	0.130mW/cm ²

As can be seen from the second table above, the power densities do not exceed 100 % per OET 65 requirements when the spectral power density is calculated at least 20cm away from the unit when two bands may operate simultaneously.

Therefore, the EUTs meet the Uncontrolled Exposure limit.

Test Engineer(s): Jonathan Chao