§ 15.247(i) Maximum Permissible 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.

Highest Antenna gain in 2.4 & 5 GHz bands is 6 dBi
Directional gain since 3x3 MIMO = 6+10log(3) = 10.77 dBi

2.4 GHz Band	**5.8 GHz**	**5. 1 GHz**
$S = PG/4\pi R^2$	$S = PG/4\pi R^2$	$S = PG/4\pi R^2$
$\frac{(559.8\ mW)(10)}{4\pi(40)^2}$	$\frac{(453.9\ mW)(10)}{4\pi(40)^2}$	$\frac{(39.4\ mW)(10)}{4\pi(40)^2}$
$S1 = 0.278\ mW/cm^2$	$S2 = 0.226\ mW/cm^2$	$S3 = 0.02\ mW/cm^2$

All 3 radios operating in 2.4 GHz band:

S	Power density (mW/cm^2)	General Population Limit (mW/cm^2)	S as a fraction of the limit (%)
S1	0.278	1	27.8
S1	0.278	1	27.8
S1	0.278	1	27.8

Radios operating in each band:

S	Power density (mW/cm^2)	General Population Limit (mW/cm^2)	S as a fraction of the limit (%)
S1	0.278	1	27.8
S2	0.226	1	22.6
S3	0.02	1	2.0

The total percentages do not exceed 100 % per OET 65 requirements when the spectral power density is calculated at least 40cm away from the unit. Therefore, the EUTs meet the Uncontrolled Exposure limit.

Test Engineer(s): Ben Taylor