FCC MPE Calculation for Uncontrolled Environment

Formula 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

Power Density is calculated from Maximum Conducted Power and Antenna Gain at prediction distance
Maximum of Conducted and Radiated Output Power is used in the calculation.
None of the transmitters are operating Simultaneously.

RF Function	BT	BLE	WiFi 2.4	WiFi 5GHz	WiFi 6GHz
Frequency (MHz)	2460	2460	2462	5550	5950
Conducted Output Power (dBm)	11.00	11.00	27.00	18.00	14.00
Tune Up Tolerance (dB)	0.00	0.00	0.00	0.00	0.00
Output Power (W)	0.013	0.013	0.501	0.063	0.025
Antenna Gain (dBi)	5.50	5.50	8.00	8.50	7.20
Antenna Gain (Numeric)	3.55	3.55	6.31	7.08	5.25
Prediction Distance (cm)	20	20	20	20	20
Time Averaged Duty Cycle (%)	100	100	100	100	100
Calculated Power Density (W/m2)	**0.09**	**0.09**	**6.29**	**0.89**	**0.26**
Power Density Limit (W/m2)	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**

Power Density Limits from FCC Part 1.1310(e)(1) Table 1.
Source Based Time Averaged Duty Cycle is 100% in all calculation
All Power values are Average Power