RF EXPOSURE EVALUATION

MPE-Based Exemption

Applicable Standard

According to subpart 15.247 (i) and subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

According to KDB 447498 D04 v01 Interim General RF Exposure Guidance

MPE-Based Exemption:
General frequency and separation-distance dependent MPE-based effective radiated power(ERP) thresholds are in Table B.1 [Table 1 of § 1.1307(b)(3)(i)(C)] to support an exemptionfrom further evaluation from 300 kHz through 100 GHz.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1,920 R^2.
1.34-30	3,450 R^2/f^2.
30-300	3.83 R^2.
300-1,500	0.0128 R^2f.
1,500-100,000	19.2R^2.

Ris the minimum separation distance in meters
f = frequency in MHz

For multiple RF sources: Multiple RF sources are exempt if:

in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation:

$$\sum_{i=1}^{a} \frac{P_i}{P_{th,i}} + \sum_{j=1}^{b} \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^{c} \frac{Evaluated_k}{Exposure\ Limit_k} \leq 1$$

Result

Mode	Frequency (MHz)	Tune up conducted power# (dBm)	Antenna Gain#		ERP		Evaluation Distance (cm)	ERP Limit (mW)
			(dBi)	(dBd)	(dBm)	(mW)		
2.4G Wi-Fi	2412-2462	23	2.16	0.01	23.01	200	20	768
5G Wi-Fi	5180-5240	12	2.11	-0.04	11.96	15.70	20	768
	5260-5320	11	2.15	0.00	11.00	12.59	20	768
	5500-5720	13	2.35	0.20	13.20	20.89	20	768
	5745-5825	14	2.22	0.07	14.07	25.53	20	768

Note: The tune up conducted power and antenna gain was declared by the applicant.
Note: 2.4G and 5G Wi-Fi cannot synchronize transmission.

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliant