

FCC §15.247 (i) & §1.1307 (b) (3) & §2.1091- 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 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 exemption from 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	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.

R is the minimum separation distance in meters

f = frequency in MHz

Result

Mode	Frequency (MHz)	Tune up conducted power [#]	Antenna Gain [#]		ERP		Evaluation Distance (m)	ERP Limit (mW)
		(dBm)	(dBi)	(dBd)	(dBm)	(mW)		
BT	2402-2480	7.0	3.11	0.96	7.96	6.25	0.2	768
BLE	2402-2480	4.0	3.11	0.96	4.96	3.13	0.2	768
2.4G Wi-Fi	2412-2462	19.5	3.11	0.96	20.46	111.17	0.2	768
5.2G Wi-Fi	5180-5240	17.0	1.02	-1.13	15.87	38.64	0.2	768
5.3G Wi-Fi	5260-5320	18.5	1.02	-1.13	17.37	54.58	0.2	768
5.6G Wi-Fi	5500-5700	18.0	1.02	-1.13	16.87	48.64	0.2	768
5.8G Wi-Fi	5745-5825	14.5	1.02	-1.13	13.37	21.73	0.2	768

Note: 1. The tune up conducted power and antenna gain was declared by the applicant.

2. The BT, 2.4G Wi-Fi and 5G Wi-Fi cannot transmit at same time.

3. 0dBd=2.15dBi

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

Result: Compliant.