

## 4 FCC §15.407(f), §1.1310, §2.1091 - Maximum Permissible Exposure (MPE)

### 4.1 Applicable Standard

According to §15.407(f) and §1.1310, U-NII devices are subject to the radio frequency radiation exposure requirements specified in §§ 1.1307(b), and 2.1091 of this chapter, as appropriate. All equipment shall be considered to operate in a "general population/uncontrolled" environment. Applications for equipment authorization of devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for this statement must be submitted to the Commission upon request

### 4.2 RF Exposure Evaluation Result

#### MPE evaluation for single transmission:

Mode	Frequency Range (MHz)	Antenna Gain		Target Power		Evaluation Distance (cm)	Power Density (mW/cm <sup>2</sup> )	MPE Limit (mW/cm <sup>2</sup> )
		(dBi)	(numeric)	(dBm)	(mW)			
2.4G WIFI	2412-2462	2.18	1.65	23.5	223.87	20	0.07	1.0
5G WIFI B1	5180-5240	4.45	1.65	21.0	125.89	20	0.07	1.0
5G WIFI B4	5745-5825	4.45	2.79	24.0	251.19	20	0.14	1.0
WCDMA B V	826.4-846.6	2.13	1.63	23.5	223.87	20	0.07	0.551
WCDMA B II	1852.4-1907.6	3.42	2.20	23.5	223.87	20	0.10	1.0
LTE B II	1850.7-1909.3	3.42	2.20	24.0	251.19	20	0.11	1.0
LTE B IV	1710.7-1754.3	3.68	2.33	24.0	251.19	20	0.17	1.0
LTE B XII	699.7-715.3	0.35	1.08	24.0	251.19	20	0.05	0.466

#### MPE evaluation for simultaneous transmission:

2.4G WIFI, 5G WIFI and 3G&4G can transmit at the same time, MPE evaluation is as below formula:

PD1/Limit1+PD2/Limit2+.....<1, PD (Power Density)

#### MPE evaluation=

$$\text{MPE of 2.4G WIFI}/1 + \text{MPE of 5G WIFI}/1 + \text{MPE of 3G&4G}/0.564 \\ = 0.07/1 + 0.14/1 + 0.07/0.551 = 0.34 < 1.0$$

**Result:** MPE evaluation of single and simultaneous transmission meet the requirement of standard.