FCC ID:2A4A7-PTM-20A1

Maximum Permissible Exposure (MPE)
According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)
According to KDB447498 D01 General RF Exposure Guidance V06

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	$*900/f^2$	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	$*180/f^2$	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

MPE Calculation Method

E (V/m) = $\frac{\sqrt{30 * P * G}}{d}$ Power Density: *Pd* (W/m²) = $\frac{E^2}{377}$

E = Electric field (V/m)

P = Average RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$Pd = \frac{30 * P * G}{377 * D^2}$

From the EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

BT:

Measurement Result

Operation Frequency: 2402MHz~2480MHz

Power density limited: 1mW/ cm^2

Antenna Type: PCB antenna

Antenna gain: 2.54 dBi;

R=20cm

mW=10^(dBm/10)

antenna gain Numeric=10^(dBi/10)

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm2)	Power density (mW/cm2)
				tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
2402	GFSK	3.06	3.5±1	4.5	2.818	2.54	1.79	0.0010	1
2440		3.58	3.5±1	4.5	2.818	2.54	1.79	0.0010	1
2480		3.33	3.5±1	4.5	2.818	2.54	1.79	0.0010	1

2.4G WIFI:

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,

WIFI 802.11n HT40:2422-2452MHz

Power density limited: 1mW/ cm^2

Antenna Type: PCB antenna

Antenna gain: 2.54 dBi;

R=20cm

mW=10^(dBm/10)

antenna gain Numeric=10^(dBi/10)

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm2)	Power density (mW/cm2)
				tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
2412	802.11b	16.66	16.5±1	17.5	56.234	2.54	1.79	0.0201	1
2437		15.92	16.5±1	17.5	56.234	2.54	1.79	0.0201	1
2462		16.04	16.5±1	17.5	56.234	2.54	1.79	0.0201	1
2412	802.11g	14.21	14±1	15	31.623	2.54	1.79	0.0113	1
2437		14.37	14±1	15	31.623	2.54	1.79	0.0113	1
2462		14.35	14±1	15	31.623	2.54	1.79	0.0113	1
2412	802.11n H20	12.62	13±1	14	25.119	2.54	1.79	0.0090	1
2437		12.59	13±1	14	25.119	2.54	1.79	0.0090	1
2462		12.85	13±1	14	25.119	2.54	1.79	0.0090	1

Note:

1. NO simultaneous transmissions are possible for this device of Wi-Fi 2.4G + BT.

Signature:

Date: 2025-07-20

NAME AND TITLE (Please print or type): alex li/Manager

COMPANY (Please print or type): No. 24 Xinfa East Road, Xiangshan Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong, People's Republic of China