

FCC ID:2BSBT-FINERVS1600

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)

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

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

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: $1\text{mW}/\text{cm}^2$

Antenna Type: FPC antenna

Antenna gain: 3.29dBi;

R=20cm

$\text{mW}=10^{(\text{dBi}/10)}$

antenna gain Numeric= $10^{(\text{dBi}/10)}=10^{(3.29/10)}=2.13$

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2402	DH5	4.56	4±1	5	3.162	3.29	2.13	0.0013	1
2441		4.81	4±1	5	3.162	3.29	2.13	0.0013	1
2480		4.35	4±1	5	3.162	3.29	2.13	0.0013	1
2402	2DH5	5.64	5±1	6	3.981	3.29	2.13	0.0017	1
2441		5.9	5±1	6	3.981	3.29	2.13	0.0017	1
2480		5.45	5±1	6	3.981	3.29	2.13	0.0017	1
2402	3DH5	6.21	6±1	7	5.012	3.29	2.13	0.0021	1
2441		6.48	6±1	7	5.012	3.29	2.13	0.0021	1
2480		6	6±1	7	5.012	3.29	2.13	0.0021	1

2.4G WIFI:

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,
WIFI 802.11n HT40:2422-2452MHz
Power density limited: 1mW/ cm²

Antenna Type: FPC antenna

Antenna gain1: 3.29dBi

R=20cm

$mW=10^{(dBm/10)}$

antenna gain Numeric= $10^{(dBi/10)}=10^{(3.29/10)}=2.13$

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2412	802.11b	15.45	15±1	16	39.811	3.29	2.13	0.0169	1
2437		15.14	15±1	16	39.811	3.29	2.13	0.0169	1
2462		14.83	15±1	16	39.811	3.29	2.13	0.0169	1
2412	802.11g	15.5	15±1	16	39.811	3.29	2.13	0.0169	1
2437		15.1	15±1	16	39.811	3.29	2.13	0.0169	1
2462		14.92	15±1	16	39.811	3.29	2.13	0.0169	1
2412	802.11n H20	14.54	14±1	15	31.623	3.29	2.13	0.0134	1
2437		14.33	14±1	15	31.623	3.29	2.13	0.0134	1
2462		13.92	14±1	15	31.623	3.29	2.13	0.0134	1
2422	802.11n(H T40)	15.29	15±1	16	39.811	3.29	2.13	0.0169	1
2437		15.12	15±1	16	39.811	3.29	2.13	0.0169	1
2452		14.93	15±1	16	39.811	3.29	2.13	0.0169	1

5G WIFI:

Operation Frequency: WIFI 802.11a/ac/n(HT20): 5180-5240MHz;WIFI 802.11ac/n(HT40): 5190-5230MHz;WIFI 802.11ac80:5210-5210MHz;

Power density limited: 1mW/cm

Antenna Type: FPC antenna

Antenna gain:2.39dBi

R=20cm

$mW=10^{(dBm/10)}$

antenna gain Numeric= $10^{(dBi/10)}=10^{(2.39/10)}=1.73$

5.2G

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density
		(dBm)		tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric	(mW/cm2)	(mW/cm2)
5180	802.11a	11.01	12±1	13	19.953	2.39	1.73	0.0069	1
5200		11.31	12±1	13	19.953	2.39	1.73	0.0069	1
5240		12.84	12±1	13	19.953	2.39	1.73	0.0069	1
5180	802.11n20	10.64	12±1	13	19.953	2.39	1.73	0.0069	1
5200		11.36	12±1	13	19.953	2.39	1.73	0.0069	1
5240		12.54	12±1	13	19.953	2.39	1.73	0.0069	1
5190	802.11n40	11.27	12±1	13	19.953	2.39	1.73	0.0069	1
5230		12.94	12±1	13	19.953	2.39	1.73	0.0069	1
5210	802.11ac80	10.63	10±1	11	12.589	2.39	1.73	0.0043	1
5180	802.11ac20	11.31	12±1	13	19.953	2.39	1.73	0.0069	1
5200		12.97	12±1	13	19.953	2.39	1.73	0.0069	1
5240		11.36	12±1	13	19.953	2.39	1.73	0.0069	1
5190	802.11ac40	12.76	12±1	13	19.953	2.39	1.73	0.0069	1
5230		12.45	12±1	13	19.953	2.39	1.73	0.0069	1

Signature:

Date: 2025-09-28



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