

FCC ID:2BMJO-JT079H-A03W

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

$$E \text{ (V/m)} = \frac{\sqrt{30 * P * G}}{d}$$

$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

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.

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: PCB Antenna

Antenna gain: 3.93dBi;

R=20cm

mW=10^(dBm/10)

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)
2412	802.11b	16.53	16±1	17	50.119	3.93	2.47	0.0246	1
2437		16.29	16±1	17	50.119	3.93	2.47	0.0246	1
2462		16.16	16±1	17	50.119	3.93	2.47	0.0246	1
2412	802.11g	14	14±1	15	31.623	3.93	2.47	0.0155	1
2437		13.29	14±1	15	31.623	3.93	2.47	0.0155	1
2462		13.22	14±1	15	31.623	3.93	2.47	0.0155	1
2412	802.11n HT20	13.87	14±1	15	31.623	3.93	2.47	0.0155	1
2437		13.4	14±1	15	31.623	3.93	2.47	0.0155	1
2462		13.22	14±1	15	31.623	3.93	2.47	0.0155	1
2422	802.11n(H T40)	13.55	14±1	15	31.623	3.93	2.47	0.0155	1
2437		13.11	14±1	15	31.623	3.93	2.47	0.0155	1
2452		13.37	14±1	15	31.623	3.93	2.47	0.0155	1
2412	802.11 ax20	13.95	14±1	15	31.623	3.93	2.47	0.0155	1
2437		13.34	14±1	15	31.623	3.93	2.47	0.0155	1
2462		13.23	14±1	15	31.623	3.93	2.47	0.0155	1
2422	802.11 ax40	13.42	14±1	15	31.623	3.93	2.47	0.0155	1
2437		13.17	14±1	15	31.623	3.93	2.47	0.0155	1
2452		13.37	14±1	15	31.623	3.93	2.47	0.0155	1

5G WIFI:

Operation Frequency: WIFI 802.11a/ac/n(HT20): 5180-5240MHz;5260-5320MHz,5500-5700MHz,5745-5825MHz;WIFI 802.11ac/n(HT40): 5190-5230MHz;5270-5310MHz,5510-5670MHz5755-5795MHz; WIFI 802.11ac80:5210-5210MHz;5290-5290MHz;5530-5610MHz; 5775-5775MHz

Power density limited: 1mW/cm

Antenna Type: PCB antenna

Antenna gain: 3.92dBi;

R=20cm

mW=10^(dBm/10)

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	a	12.531	12±1	13	19.953	3.93	2.47	0.0098	1
5200	a	12.342	12±1	13	19.953	3.93	2.47	0.0098	1
5240	a	11.725	12±1	13	19.953	3.93	2.47	0.0098	1
5180	ac20	12.459	12±1	13	19.953	3.93	2.47	0.0098	1
5200	ac20	12.119	12±1	13	19.953	3.93	2.47	0.0098	1
5240	ac20	11.737	12±1	13	19.953	3.93	2.47	0.0098	1
5190	ac40	12.318	12±1	13	19.953	3.93	2.47	0.0098	1
5230	ac40	11.704	12±1	13	19.953	3.93	2.47	0.0098	1
5180	ax20	12.342	12±1	13	19.953	3.93	2.47	0.0098	1
5200	ax20	12.105	12±1	13	19.953	3.93	2.47	0.0098	1
5240	ax20	11.597	12±1	13	19.953	3.93	2.47	0.0098	1
5190	ax40	12.288	12±1	13	19.953	3.93	2.47	0.0098	1
5230	ax40	11.714	12±1	13	19.953	3.93	2.47	0.0098	1
5180	n20	12.458	12±1	13	19.953	3.93	2.47	0.0098	1
5200	n20	12.341	12±1	13	19.953	3.93	2.47	0.0098	1
5240	n20	11.663	12±1	13	19.953	3.93	2.47	0.0098	1
5190	n40	12.285	12±1	13	19.953	3.93	2.47	0.0098	1
5230	n40	11.687	12±1	13	19.953	3.93	2.47	0.0098	1

5.3G

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)
5260	802.11a	11.884	11.5±1	12.5	17.783	3.92	2.47	0.0087	1
5280		11.229	11.5±1	12.5	17.783	3.92	2.47	0.0087	1
5320		10.084	10.5±1	11.5	14.125	3.92	2.47	0.0069	1
5260	802.11ac20	11.297	11±1	12	15.849	3.92	2.47	0.0078	1
5280		11.063	11±1	12	15.849	3.92	2.47	0.0078	1
5320		9.99	10	11	12.589	3.92	2.47	0.0062	1
5270	802.11ac40	11.168	11±1	12	15.849	3.92	2.47	0.0078	1
5310		10.095	10±1	11	12.589	3.92	2.47	0.0062	1
5260	802.11ax20	11.335	11±1	12	15.849	3.92	2.47	0.0078	1
5280		11.101	11±1	12	15.849	3.92	2.47	0.0078	1
5320		9.968	10±1	11	12.589	3.92	2.47	0.0062	1
5270	802.11ax40	11.069	11±1	12	15.849	3.92	2.47	0.0078	1
5310		10.2	10±1	11	12.589	3.92	2.47	0.0062	1
5260	802.11n H20	11.317	11±1	12	15.849	3.92	2.47	0.0078	1
5280		11.181	11±1	12	15.849	3.92	2.47	0.0078	1
5320		10.033	10	11	12.589	3.92	2.47	0.0062	1
5270	802.11n H40	10.979	11±1	12	15.849	3.92	2.47	0.0078	1
5310		10.589	11±1	12	15.849	3.92	2.47	0.0078	1

5.6G

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)
5500	802.11a	11.513	12±1	13	19.953	3.92	2.47	0.0098	1
5600		12.447	12±1	13	19.953	3.92	2.47	0.0098	1
5700		12.174	12±1	13	19.953	3.92	2.47	0.0098	1
5500	802.11ac20	11.428	12±1	13	19.953	3.92	2.47	0.0098	1
5600		12.294	12±1	13	19.953	3.92	2.47	0.0098	1
5700		12.222	12±1	13	19.953	3.92	2.47	0.0098	1
5510	802.11ac40	11.465	11±1	12	15.849	3.92	2.47	0.0078	1
5590		12.397	12±1	13	19.953	3.92	2.47	0.0098	1
5670		10.842	11±1	12	15.849	3.92	2.47	0.0078	1
5500	802.11ax20	11.657	12±1	13	19.953	3.92	2.47	0.0098	1
5600		12.787	12.5±1	13.5	22.387	3.92	2.47	0.0110	1
5700		12.398	12±1	13	19.953	3.92	2.47	0.0098	1
5510	802.11ax40	11.973	12±1	13	19.953	3.92	2.47	0.0098	1
5590		10.654	11±1	12	15.849	3.92	2.47	0.0078	1
5670		10.462	11±1	12	15.849	3.92	2.47	0.0078	1
5500	802.11n20	11.456	12±1	13	19.953	3.92	2.47	0.0098	1
5600		12.215	12±1	13	19.953	3.92	2.47	0.0098	1
5700		12.116	12±1	13	19.953	3.92	2.47	0.0098	1
5510	802.11n40	11.278	11±1	12	15.849	3.92	2.47	0.0078	1
5590		12.268	12±1	13	19.953	3.92	2.47	0.0098	1
5670		12.543	12.5±1	13.5	22.387	3.92	2.47	0.0110	1

5.8G

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm2)	Power density (mW/cm2)
		(dBm)		tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
5745	a	9.331	9.5±1	10.5	11.220	3.92	2.47	0.0055	1
5785	a	10.324	10±1	11	12.589	3.92	2.47	0.0062	1
5825	a	9.049	9.5±1	10.5	11.220	3.92	2.47	0.0055	1
5745	ac20	9.353	9.5±1	10.5	11.220	3.92	2.47	0.0055	1
5785	ac20	10.328	10±1	11	12.589	3.92	2.47	0.0062	1
5825	ac20	9.121	9.5±1	10.5	11.220	3.92	2.47	0.0055	1
5755	ac40	7.235	8±1	9	7.943	3.92	2.47	0.0039	1
5795	ac40	8.693	8.5±1	9.5	8.913	3.92	2.47	0.0044	1
5745	ax20	9.139	9±1	10	10.000	3.92	2.47	0.0049	1
5785	ax20	8.737	9±1	10	10.000	3.92	2.47	0.0049	1
5825	ax20	9.009	9±1	10	10.000	3.92	2.47	0.0049	1
5755	ax40	7.2	7.5±1	8.5	7.079	3.92	2.47	0.0035	1
5795	ax40	7.93	7.5±1	8.5	7.079	3.92	2.47	0.0035	1
5745	n20	9.253	9.5±1	10.5	11.220	3.92	2.47	0.0055	1
5785	n20	10.311	10±1	11	12.589	3.92	2.47	0.0062	1
5825	n20	9.048	9.5±1	10.5	11.220	3.92	2.47	0.0055	1
5755	n40	7.489	8±1	9	7.943	3.92	2.47	0.0039	1
5795	n40	8.362	8.5±1	9.5	8.913	3.92	2.47	0.0044	1

Note: NO simultaneous transmissions are possible for this device of Wi-Fi 5G + Wi-Fi 2.4G.

Signature:

Date: 2024-11-30



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

COMPANY (Please print or type): Shenzhen NTEK Testing Technology Co., Ltd./ 1/F, Building E,
Fenda Science Park, Sanwei Community, Xixiang Street Bao'an District, Shenzhen P.R. China.