FCC ID:2AJRK-FSP6

RF EXPOSURE EVALUATION

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)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	**--**	**--**	**F/300**	**6**
1500-100000	**--**	**--**	**5**	**6**
(B) Limits for General Population/Uncontrol Exposures				
300-1500	**--**	**--**	**F/1500**	**6**
1500-100000	**--**	**--**	**1**	**30**

11.1 Friis transmission formula: $Pd= (Pout*G)\ (4*pi*R^2)$

Where
Pd= Power density in mW/cm^2
Pout=output power to antenna in mW
G= Numeric gain of the antenna relative to isotropic antenna
Pi=3.1416
R= distance between observation point and center of the radiator in cm(20cm)
Pd the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.
mW=10^(dBm/10)

11.2 Measurement Result

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,
Power density limited: 1mW/ cm^2
Antenna Type: FPCB Antenna
Antenna gain: 1.0dBi,
R=20cm
mW=10^(dBm/10)
802.11b/g/n:

Channel Freq. (MHz)	modulation	conducted power (mW)	conducted power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
2412	802.11b	22.54	13.53	14±1	15	1.26	0.005646	1
2437	802.11b	21.53	13.33	14±1	15	1.26	0.005392	1
2462	802.11b	29.65	14.72	14±1	15	1.26	0.007425	1
2412	802.11g	10.84	10.35	11±1	12	1.26	0.002715	1
2437	802.11g	11.80	10.72	11±1	12	1.26	0.002956	1
2462	802.11g	14.29	11.55	11±1	12	1.26	0.003579	1
2412	802.11n H20	10.16	10.07	11±1	12	1.26	0.002545	1
2437	802.11n H20	13.03	11.15	11±1	12	1.26	0.003264	1
2462	802.11n H20	14.89	11.73	11±1	12	1.26	0.003730	1

Operation Frequency: 2402MHz~2480MHz
Power density limited: 1mW/ cm^2
Antenna Type: FPCB Antenna
Antenna gain: 1.0dBi,
R=20cm
mW=10^(dBm/10)
Bluetooth DTS:

Channel Freq. (MHz)	modulation	conducted power (mW)	conducted power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
2402	GFSK	1.02	0.10	1.5±1	2.5	1.26	0.000256	1
2440		1.59	2.02	1.5±1	2.5	1.26	0.000399	1
2480		1.37	1.37	1.5±1	2.5	1.26	0.000343	1

Bluetooth DSS:

Channel Freq. (MHz)	modulation	conducted power (mW)	conducted power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
2402	GFSK	3.07	4.87	5.5±1	6.5	1.26	0.000769	1
2441		4.28	6.31	5.5±1	6.5	1.26	0.001071	1
2480		3.39	5.30	5.5±1	6.5	1.26	0.000849	1
2402	π/4-DQPSK	1.93	2.86	3.5±1	4.5	1.26	0.000484	1
2441		2.85	4.55	3.5±1	4.5	1.26	0.000714	1
2480		1.94	2.87	3.5±1	4.5	1.26	0.000485	1
2402	8DPSK	2.04	3.10	4±1	5	1.26	0.000511	1
2441		2.94	4.69	4±1	5	1.26	0.000737	1
2480		3.53	2.02	4±1	5	1.26	0.000508	1

Operation Frequency: 802.11a/n(HT20)/AC20 for 5180-5240MHz, 802.11n(HT40)/AC40 for 5190-5230MHz

Power density limited: 1mW/ cm^2
Antenna Type: FPCB Antenna
Antenna gain: 1.0dBi,
R=20cm
mW=10^(dBm/10)
802.11a/n/ac:

Channel Freq. (MHz)	modulation	conducted power (mW)	conducted power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
5180	802.11a	7.11	8.52	8±1	9	1.26	0.001415	1
5200	802.11a	7.69	8.86	8±1	9	1.26	0.001530	1
5240	802.11a	7.89	8.97	8±1	9	1.26	0.001569	1
5180	802.11n H20	7.31	8.64	8.5±1	9.5	1.26	0.001455	1
5200	802.11n H20	7.87	8.96	8.5±1	9.5	1.26	0.001566	1
5240	802.11n H20	8.17	9.12	8.5±1	9.5	1.26	0.001625	1
5190	802.11n H40	6.67	8.24	8±1	9	1.26	0.001327	1
5230	802.11n H40	7.50	8.75	8±1	9	1.26	0.001492	1
5180	802.11ac20	6.90	8.39	8±1	9	1.26	0.001373	1
5200	802.11ac20	7.69	8.86	8±1	9	1.26	0.001530	1
5240	802.11ac20	7.91	8.98	8±1	9	1.26	0.001573	1
5190	802.11ac40	6.98	8.44	8±1	9	1.26	0.001389	1
5230	802.11ac40	7.55	8.78	8±1	9	1.26	0.001502	1

Operation Frequency: 802.11a/n(HT20)/AC20 for 5745-5825MHz, 802.11n(HT40)/AC40 for 5755-5795MHz

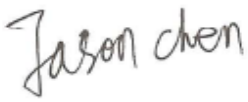
Power density limited: 1mW/ cm^2
Antenna Type: FPCB Antenna
Antenna gain: 1.0dBi,
R=20cm
mW=10^(dBm/10)
802.11a/n/ac:

Channel Freq. (MHz)	modulation	conducted power (mW)	conducted power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
5745	802.11a	6.49	8.12	8±1	9	1.26	0.001290	1
5785	802.11a	6.85	8.36	8±1	9	1.26	0.001364	1
5825	802.11a	6.97	8.43	8±1	9	1.26	0.001386	1
5745	802.11n H20	6.65	8.23	8±1	9	1.26	0.001323	1
5785	802.11n H20	7.16	8.55	8±1	9	1.26	0.001425	1
5825	802.11n H20	7.31	8.64	8±1	9	1.26	0.001455	1
5755	802.11n H40	7.35	8.66	8±1	9	1.26	0.001461	1
5795	802.11n H40	7.48	8.74	8±1	9	1.26	0.001488	1
5745	802.11ac20	6.65	8.23	8±1	9	1.26	0.001323	1
5785	802.11ac20	7.16	8.55	8±1	9	1.26	0.001425	1
5825	802.11ac20	7.31	8.64	8±1	9	1.26	0.001455	1
5755	802.11ac40	7.00	8.45	8±1	9	1.26	0.001392	1
5795	802.11ac40	7.11	8.52	8±1	9	1.26	0.001415	1

simultaneous emission

Power density Limits (mW/cm2) 2.4G WIFI	Power density Limits (mW/cm2) BT3.0	Power density Limits (mW/cm2) BT4.0	Power density Limits (mW/cm2) 5G WIFI	Calculate Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
0.007425	0.001071	0.000399	0.001625	0.01052	1

Conclusion:
For the max result : 0.01052≤ 1.0 for 1g SAR, No SAR is required.



Signature: **Date:** 2016-11-3

NAME AND TITLE (Please print or type): Jason Chen/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.