

MPE ESTIMATION  
 FCC ID: 2AGN7-X9S

**1,Limit for General Population/ Uncontrolled Exposures**

Frequency	Power density (mW/ cm <sup>2</sup> )	Averaging time(minutes)
300MHz----1.5GHz	F/1500	30
1.5GHz---100GHz	1.0	30

Note: F= Frequency in MHz

**2, Estimation Result**

For 2.4G WIFI:

Mode	Max PK Output power(dBm)	Tune Up Power(dBm)	Max Tune Up power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm <sup>2</sup> )
11b	16.14	16±1(17)	50.12	1	1.2589	0.01255
11g	14.19	14±1(15)	31.62	1	1.2589	0.00792
11n/HT20	13.58	14±1(15)	31.62	1	1.2589	0.00792
11n/HT40	11.59	12±1(13)	19.95	1	1.2589	0.005

$$Pd = \frac{P_{out} * G}{4\pi r^2};$$

Note:

Note: The estimation distance is 20cm

Note: PK Output power= conducted power.

Conducted power see the test report HK1600920035-E, antenna gain=1dBi.

Mode	CH	PK Output power(dBm)	Output power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm <sup>2</sup> )
11b	CH1	16.14	41.11	1	1.2589	0.0103
	CH6	15.83	38.28	1	1.2589	0.00959
	CH11	15.72	37.33	1	1.2589	0.00935
11g	CH1	14.19	26.24	1	1.2589	0.00657
	CH6	14.06	25.47	1	1.2589	0.00638
	CH11	14.01	25.18	1	1.2589	0.00631
11n/HT20	CH1	13.58	22.80	1	1.2589	0.00571
	CH6	13.27	21.23	1	1.2589	0.00532
	CH11	13.34	21.58	1	1.2589	0.0054
11n/HT40	CH1	11.73	14.89	1	1.2589	0.00373
	CH4	11.62	14.52	1	1.2589	0.00364
	CH7	11.59	14.42	1	1.2589	0.00361
$Pd = \frac{P_{out} * G}{4\pi r^2};$						
Note:						
Note: The estimation distance is 20cm						
Note: PK Output power= conducted power. Conducted power see the test report HK1600920035-E, antenna gain=1dBi.						

For BT:

Mode	Max PK Output power(dBm)	Tune Up Power(dBm)	Max Tune Up power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm <sup>2</sup> )
GFSK	2.75	2±1(3)	2.00	1	1.2589	0.0005
8-DPSK	0.16	0±1(1)	1.26	1	1.2589	0.00032

$$Pd = \frac{P_{out} * G}{4\pi r^2};$$

Note:

Note: The estimation distance is 20cm

Note: PK Output power= conducted power.

Conducted power see the test report HK1600920034-E, antenna gain=1dBi.

Mode	CH	PK Output power(dBm)	Output power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm <sup>2</sup> )
GFSK	CH1	2.75	1.88	1	1.2589	0.00047
	CH6	2.12	1.63	1	1.2589	0.00041
	CH11	2.48	1.77	1	1.2589	0.00044
8-DPSK	CH1	0.16	1.04	1	1.2589	0.00026
	CH6	0.11	1.03	1	1.2589	0.00026
	CH11	0.13	1.03	1	1.2589	0.00026

$$Pd = \frac{P_{out} * G}{4\pi r^2};$$

Note:

Note: The estimation distance is 20cm

Note: PK Output power= conducted power.

Conducted power see the test report HK1600920034-E, antenna gain=1dBi.

For 5.2G WIFI:

Mode	Max PK Output power(dBm)	Tune Up Power(dBm)	Max Tune Up power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm <sup>2</sup> )
11a	15.75	16±1(17)	50.12	1	1.2589	0.01255
11n/HT20	15.39	16±1(17)	50.12	1	1.2589	0.01255
11n/HT40	15.54	16±1(17)	50.12	1	1.2589	0.01255
11ac	15.28	16±1(17)	50.12	1	1.2589	0.01255

$$Pd = \frac{P_{out} * G}{4\pi r^2};$$

Note:

Note: The estimation distance is 20cm

Note: PK Output power= conducted power.

Conducted power see the test report HK1600920036-E, antenna gain=1dBi.

Mode	CH	PK Output power(dBm)	Output power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm <sup>2</sup> )
11a	CH36	15.46	35.16	1	1.2589	0.00881
	CH40	15.75	37.58	1	1.2589	0.00941
	CH48	15.68	36.98	1	1.2589	0.00926
11n/HT20	CH36	15.37	34.43	1	1.2589	0.00862
	CH40	15.35	34.28	1	1.2589	0.00859
	CH48	15.39	34.59	1	1.2589	0.00866
11n/HT40	CH38	15.42	34.83	1	1.2589	0.00872
	CH46	15.54	35.81	1	1.2589	0.00897
11ac	CH42	15.28	33.73	1	1.2589	0.00845

$$Pd = \frac{P_{out} * G}{4\pi r^2};$$

Note:

Note: The estimation distance is 20cm

Note: PK Output power= conducted power.

Conducted power see the test report HK1600920036-E, antenna gain=1dBi.

For 5.8G WIFI:

Mode	Max PK Output power(dBm)	Tune Up Power(dBm)	Max Tune Up power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm <sup>2</sup> )
11a	19.71	20±1(21)	125.89	1	1.2589	0.03153
11n/HT20	19.84	20±1(21)	125.89	1	1.2589	0.03153
11n/HT40	19.62	20±1(21)	125.89	1	1.2589	0.03153
11ac	19.18	20±1(21)	125.89	1	1.2589	0.03153

$$Pd = \frac{P_{out} * G}{4\pi r^2} ;$$

Note:

Note: The estimation distance is 20cm

Note: PK Output power= conducted power.

Conducted power see the test report HK1600920036-E, antenna gain=1dBi.

Mode	CH	PK Output power(dBm)	Output power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm <sup>2</sup> )
11a	CH149	19.71	93.54	1	1.2589	0.02343
	CH157	19.63	91.83	1	1.2589	0.023
	CH165	19.25	84.14	1	1.2589	0.02107
11n/HT20	CH149	19.43	87.70	1	1.2589	0.02197
	CH157	19.29	84.92	1	1.2589	0.02127
	CH165	19.84	96.38	1	1.2589	0.02414
11n/HT40	CH151	19.62	91.62	1	1.2589	0.02295
	CH159	19.55	90.16	1	1.2589	0.02258
11ac	CH155	19.18	82.79	1	1.2589	0.02074

$$Pd = \frac{P_{out} * G}{4\pi r^2} ;$$

Note:

Note: The estimation distance is 20cm

Note: PK Output power= conducted power.

Conducted power see the test report HK1600920036-E, antenna gain=1dBi.

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