MPE ESTIMATION

Test report
On Behalf of
Shenzhen Four Seas Global Link Network Technology Co., Ltd
For
Wireless AP
Model No.: CF-EW72, CF-EW71, CF-EW73, CF-EW74, CF-EW75, CF-E5, CF-E7, CF-WA900 V2, CF-E313AC, CF-WR754AC, CF-WR755AC

FCC ID: OYR-CF-EW72

Prepared for :	**Shenzhen Four Seas Global Link Network Technology Co., Ltd.** **Room 607-610, Block B, TAOJINDI Electronic Business Incubation Base, Tenglong Road, Longhua District, Shenzhen, China**
Prepared By :	**Shenzhen HUAK Testing Technology Co., Ltd.** **1F, B2 Building, Junfeng Zhongcheng Zhizao Innovation Park, Fuhai Street, Bao'an District, Shenzhen City, China**
Date of Test:	**Aug. 02, 28, 2019 ~Aug. 13, 2019**
Date of Report:	**Aug. 13, 2019**
Report Number:	**HK1907291852-4E**

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

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

Note: F= Frequency in MHz

2, Estimation Result

For antenna 1:

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^2)
11b	14.32	14±1(15)	31.62	1	1.2589	0.00792
11g	13.23	13±1(14)	25.12	1	1.2589	0.00629
11n/HT20	10.36	10±1(11)	12.59	1	1.2589	0.00315
11n/HT40	9.58	10±1(11)	12.59	1	1.2589	0.00315

Note: $Pd = \frac{Pout * G}{4\pi r^2}$;

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1907291852-1E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi,MIMO gain=4.01dBi

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/cm²)
11a	10.35	10±1(11)	12.59	1	1.2589	0.00315
11n(HT20)	10.28	10±1(11)	12.59	1	1.2589	0.00315
11n(HT40)	9.56	9±1(10)	10.00	1	1.2589	0.00251
11ac(HT20)	10.37	10±1(11)	12.59	1	1.2589	0.00315
11ac(HT40)	9.26	9±1(10)	10.00	1	1.2589	0.00251
11ac(HT80)	9.21	9±1(10)	10.00	1	1.2589	0.00251

Note: $Pd = \frac{Pout * G}{4\pi r^2}$;

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1907291852-2E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi,MIMO gain=4.01dBi

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/cm²)
11a	10.25	10±1(11)	12.59	1	1.2589	0.00315
11n(HT20)	10.56	10±1(11)	12.59	1	1.2589	0.00315
11n(HT40)	10.12	10±1(11)	12.59	1	1.2589	0.00315
11ac(HT20)	11.41	11±1(12)	15.85	1	1.2589	0.00397
11ac(HT40)	10.41	10±1(11)	12.59	1	1.2589	0.00315
11ac(HT80)	9.39	9±1(10)	10.00	1	1.2589	0.00251

Note: $Pd = \frac{Pout * G}{4\pi r^2}$;

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1907291852-3E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi,MIMO gain=4.01dBi

For antenna 2:

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/cm²)
11b	14.34	14±1(15)	31.62	1	1.2589	0.00792
11g	12.63	12±1(13)	19.95	1	1.2589	0.00500
11n/HT20	10.63	10±1(11)	12.59	1	1.2589	0.00315
11n/HT40	10.43	10±1(11)	12.59	1	1.2589	0.00315
Note: $Pd = \frac{Pout * G}{4\pi r^2}$;						
Note: The estimation distance is 20cm						
Note: PK Output power= conducted power. Conducted power see the test report HK1907291852-1E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi,MIMO gain=4.01dBi						

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/cm²)
11a	10.47	10±1(11)	12.59	1	1.2589	0.00315
11n(HT20)	9.69	9±1(10)	10.00	1	1.2589	0.00251
11n(HT40)	9.55	9±1(10)	10.00	1	1.2589	0.00251
11ac(HT20)	9.56	9±1(10)	10.00	1	1.2589	0.00251
11ac(HT40)	8.53	8±1(9)	7.94	1	1.2589	0.00199
11ac(HT80)	9.26	9±1(10)	10.00	1	1.2589	0.00251
Note: $Pd = \frac{Pout * G}{4\pi r^2}$;						
Note: The estimation distance is 20cm						
Note: PK Output power= conducted power. Conducted power see the test report HK1907291852-2E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi,MIMO gain=4.01dBi						

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/cm²)
11a	10.54	10±1(11)	12.59	1	1.2589	0.00315
11n(HT20)	10.19	10±1(11)	12.59	1	1.2589	0.00315
11n(HT40)	10.20	9±1(10)	10.00	1	1.2589	0.00251
11ac(HT20)	10.55	10±1(11)	12.59	1	1.2589	0.00315
11ac(HT40)	10.28	10±1(11)	12.59	1	1.2589	0.00315
11ac(HT80)	9.39	9±1(10)	10.00	1	1.2589	0.00251

Note: $Pd = \frac{Pout * G}{4\pi r^2}$;

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1907291852-3E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi,MIMO gain=4.01dBi

For MIMO:

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/cm²)
11b	--	--	--	--	--	--
11g	--	--	--	--	--	--
11n/HT20	13.43	13±1(14)	25.12	4.01	2.518	0.01256
11n/HT40	13.02	13±1(14)	25.12	4.01	2.518	0.01256

Note: $Pd = \frac{Pout * G}{4\pi r^2}$;

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1907291852-1E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi, MIMO gain=4.01dBi

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/cm²)
11b	--	--	--	--	--	--
11n(HT20)	13.01	13±1(14)	25.12	4.01	2.518	0.01256
11n(HT40)	12.48	12±1(13)	19.95	4.01	2.518	0.00998
11ac(HT20)	12.99	12±1(13)	19.95	4.01	2.518	0.00998
11ac(HT40)	11.84	12±1(13)	19.95	4.01	2.518	0.00998
11ac(HT80)	12.25	12±1(13)	19.95	4.01	2.518	0.00998

Note: $Pd = \frac{Pout * G}{4\pi r^2}$;

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1907291852-2E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi, MIMO gain=4.01dBi

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/cm²)
11b	--	--	--	--	--	--
11n(HT20)	13.37	13±1(14)	25.12	4.01	2.518	0.01256
11n(HT40)	13.17	13±1(14)	25.12	4.01	2.518	0.01256
11ac(HT20)	13.68	13±1(14)	25.12	4.01	2.518	0.01256
11ac(HT40)	13.36	13±1(14)	25.12	4.01	2.518	0.01256
11ac(HT80)	12.59	12±1(13)	19.95	4.01	2.518	0.00998

Note: $Pd = \frac{Pout * G}{4\pi r^2}$;

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1907291852-3E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi, MIMO gain=4.01dBi

Note: the device could not transmit simultaneously in 2.4G and 5G.

when the minimum test separation distance is >20 cm, a distance of 20 cm is applied to determine SAR test exclusion. The test exclusion threshold is 0.01256mW/cm² which is< 1.0mW/cm², SAR testing is not required.

-------The End-------