



MPE ESTIMATION

**Test report
On Behalf of
MINIX TECHNOLOGY LIMITED
For
MINIX NEO X39
Model No.: NEO X39**

FCC ID: 2ADAC-NEOX39

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Report Number: HK1905130997-5E



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	10.56	10±1(11)	12.59	1	1.2589	0.00315
11n/HT40	9.86	10±1(11)	12.59	1	1.2589	0.00315

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

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1905130997-1E, 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/cm ²)
11a	10.50	10±1(11)	12.59	1	1.2589	0.00315
11n(HT20)	10.05	10±1(11)	12.59	1	1.2589	0.00315
11n(HT40)	9.80	9±1(10)	10.00	1	1.2589	0.00251
11ac(HT20)	10.03	10±1(11)	12.59	1	1.2589	0.00315
11ac(HT40)	9.01	9±1(10)	10.00	1	1.2589	0.00251
11ac(HT80)	9.00	8±1(9)	7.94	1	1.2589	0.00199

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

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1905130997-4E, 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/cm ²)
11a	10.56	10±1(11)	12.59	1	1.2589	0.00315
11n(HT20)	10.78	10±1(11)	12.59	1	1.2589	0.00315
11n(HT40)	10.36	10±1(11)	12.59	1	1.2589	0.00315
11ac(HT20)	11.17	11±1(12)	15.85	1	1.2589	0.00397
11ac(HT40)	10.25	10±1(11)	12.59	1	1.2589	0.00315
11ac(HT80)	9.11	9±1(10)	10.00	1	1.2589	0.00251

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

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1905130997-3E, 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/cm ²)
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	10.86	10±1(11)	12.59	1	1.2589	0.00315
11n/HT40	10.38	10±1(11)	12.59	1	1.2589	0.00315

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

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1905130997-1E, 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/cm ²)
11a	10.67	10±1(11)	12.59	1	1.2589	0.00315
11n(HT20)	9.93	9±1(10)	10.00	1	1.2589	0.00251
11n(HT40)	9.89	9±1(10)	10.00	1	1.2589	0.00251
11ac(HT20)	9.76	9±1(10)	10.00	1	1.2589	0.00251
11ac(HT40)	8.79	8±1(9)	7.94	1	1.2589	0.00199
11ac(HT80)	9.07	9±1(10)	10.00	1	1.2589	0.00251

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

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1905130997-4E, 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/cm ²)
11a	10.67	10±1(11)	12.59	1	1.2589	0.00315
11n(HT20)	10.36	10±1(11)	12.59	1	1.2589	0.00315
11n(HT40)	10.00	9±1(10)	10.00	1	1.2589	0.00251
11ac(HT20)	10.70	10±1(11)	12.59	1	1.2589	0.00315
11ac(HT40)	10.34	10±1(11)	12.59	1	1.2589	0.00315
11ac(HT80)	9.95	9±1(10)	10.00	1	1.2589	0.00251

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

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1905130997-3E, 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/cm ²)
11b	--	--	--	--	--	--
11g	--	--	--	--	--	--
11n/HT20	13.63	13±1(14)	25.12	4.01	2.518	0.01259
11n/HT40	13.05	13±1(14)	25.12	4.01	2.518	0.01259

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

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1905130997-1E, 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/cm ²)
11b	--	--	--	--	--	--
11n(HT20)	13.00	12±1(13)	19.95	4.01	2.518	0.00998
11n(HT40)	12.76	12±1(13)	19.95	4.01	2.518	0.00998
11ac(HT20)	12.91	12±1(13)	19.95	4.01	2.518	0.00998
11ac(HT40)	11.93	12±1(13)	19.95	4.01	2.518	0.00998
11ac(HT80)	12.05	12±1(13)	19.95	4.01	2.518	0.00998

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

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1905130997-4E, 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/cm ²)
11b	--	--	--	--	--	--
11n(HT20)	13.59	13±1(14)	25.12	4.01	2.518	0.01259
11n(HT40)	13.19	13±1(14)	25.12	4.01	2.518	0.01259
11ac(HT20)	13.65	13±1(14)	25.12	4.01	2.518	0.01259
11ac(HT40)	13.31	13±1(14)	25.12	4.01	2.518	0.01259
11ac(HT80)	12.56	12±1(13)	19.95	4.01	2.518	0.00998

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

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1905130997-3E, 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 $0.01259\text{mW}/\text{cm}^2$ which is $< 1.0\text{mW}/\text{cm}^2$, SAR testing is not required.

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