

MPE ESTIMATION

FCC ID: 2A8NQ-RE431F-FA-01

1, According to §1.1310, 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

	Max PK Output power(dBm)	Tune Up Power(dBm)	Max Tune Up power(mW)	Antenna Gain(dBi)	Antenna Gain (numerical)	MPE (mW/cm ²)
2.4GWiFi ANT1	14.78	14±1(15)	31.62	2.22	1.67	0.01049
2.4GWiFi ANT2	14.59	14±1(15)	31.62	2.22	1.67	0.01049
MIMO	17.49	17±1(18)	63.10	5.23	3.33	0.04187
5.8GWiFi ANT1	10.30	10±1(11)	12.59	2.51	1.78	0.00447
5.8GWiFi ANT2	9.81	9±1(10)	10.00	2.51	1.78	0.00355
MIMO	12.91	12±1(13)	19.95	5.52	3.56	0.01416

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

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power in mW.

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna in cm

Conducted power see the test report **HK2510115580-1E/2E**.

2.4G antenna 1 gain=2.22dBi, 5.2G antenna 2 gain=2.22dBi;

5.8G antenna 1 gain=2.51dBi, 5.8G antenna 2 gain=2.51dBi.

2.4GWIFI + 5.8GWIFI MPE (max)= 0.04187/1+0.01416/1=0.05603<1

When the minimum test separation distance is >20 cm, a distance of 20 cm is applied to determine RF Exposure test exclusion. The test exclusion threshold is 0.05603 which is< 1.0, RF Exposure testing is not required.

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