

FCC RF EXPOSURE REPORT

FCC ID: YJYKE2P

Project No. : 1710C189
Equipment : AC1300 Dual Band Gigabit Wireless Router
Model : KE 2P
Applicant : Phicomm (Shanghai) Co., Ltd
Address : No.3666, Sixian Rd., Songjiang District,
Shanghai, China

According: : FCC Guidelines for Human Exposure IEEE
C95.1 & FCC Part 2.1091

B T L I N C .

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MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the antenna

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

Table for Filed Antenna

2.4G WiFi

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Dipole	N/A	5	N/A
2	N/A	N/A	Dipole	N/A	5	N/A

Note: The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=5.

Operating Mode	2TX
TX Mode	
802.11b	V (ANT 1 + ANT 2)
802.11g	V (ANT 1 + ANT 2)
802.11n(20MHz)	V (ANT 1 + ANT 2)
802.11n(40MHz)	V (ANT 1 + ANT 2)
802.11ac (20MHz)	V (ANT 1 + ANT 2)
802.11ac (40MHz)	V (ANT 1 + ANT 2)

5G WiFi

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Dipole	N/A	5	N/A
2	N/A	N/A	Dipole	N/A	5	N/A

Note: The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}** , that is Directional gain=5.

Operating Mode	2TX
TX Mode	
802.11a	V (ANT 1+ANT 2)
802.11n(20MHz)	V (ANT 1+ANT 2)
802.11n(40MHz)	V (ANT 1+ANT 2)
802.11ac (20MHz)	V (ANT 1+ANT 2)
802.11ac (40MHz)	V (ANT 1+ANT 2)
802.11ac (80MHz)	V (ANT 1+ANT 2)

TEST RESULTS

2.4G WIFI

EUT :	AC1300 Dual Band Gigabit Wireless Router	Model Name :	KE 2P
Temperature :	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	29.25	841.3951	0.52960	1	Complies

5G Band UNII-1

EUT :	AC1300 Dual Band Gigabit Wireless Router	Model Name :	KE 2P
Temperature :	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	23.82	240.9905	0.15169	1	Complies

5G Band UNII-3

EUT :	AC1300 Dual Band Gigabit Wireless Router	Model Name :	KE 2P
Temperature :	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	27.12	515.2286	0.32430	1	Complies

For 2.4G+5G simultaneous transmission MPE:

$$0.52960/1+0.32430/1=0.8539$$

Note: the calculated distance is 20 cm.