RF Exposure Report

FCC ID: 2BHRQ-CUBELITE

The EUT is a Projector in the 2402-2480MHz、2412-2462MHz and 5180-5240MHz frequency band.

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz

MPE calculation method

Calculation Method of RF Safety Distance:

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

S: power density mW/ cm^2;
P: power input to the antenna in mW;
g: numeric gain of antenna;
r: distance to centre of radiation in cm

Unit dbuv/m@3m to mW calculation method

E=EIRP-20log(d)+104.8

E: is the electric field strength in dBuv/m;

EIRP: is the equivalent is otropically radiated power in dBm;

d: is the specified measurement distance in m

Calculated result

Mode	Max. Peak output power (dBm)	Max. Peak output power (mW)	Antenna Gain (numeric)	Power Density (S) (mW/ cm^2)	Limit of Power Density (S) (mW/ cm^2)
BT	-10.26	0.094	1.468	0.000027	1
802.11b	9.834	9.624	1.468	0.002812	1
802.11g	10.982	12.537	1.468	0.003663	1
802.11n20	11.763	15.007	2.937	0.008773	1
802.11n40	11.755	14.979	2.937	0.008756	1
802.11a	7.91	6.180	1.655	0.002035	1
5G Wi-Fi 802.11 n20	11.32	13.551	2.937	0.007923	1
5G Wi-Fi 802.11 n40	10.79	11.994	2.937	0.007011	1
5G Wi-Fi 802.11 ac80	9.69	9.311	2.937	0.005443	1

For BT mode

-- The max. field strength of fundamental frequency is 86.61 dBuv/m.

EIRP[dBm] = E[dBμV/m] - 95.2 = 86.61 - 95.2 = -8.59dBm,

conducted power = EIRP - ANT gain = -8.59 - (1.67) = -10.26dBm(0.094mW).

Note1: the antenna gain is 1.67dBi for BT; 1.67dBi for 2.4G WIFI;2.19dBi for 5G WIFI.

The 2.4G WIFI 802.11n20, 802.11n40 can MIMO model,

then the antenna gain as below:

Directional gain=1.67dBi+10×log(2/1)dB=4.68dBi

The 5G WIFI 802.11n20, 802.11n40 802.11ac80 can MIMO model,

then the antenna gain as below:

Directional gain=1.55dBi+10×log(2/1)dB=4.56dBi

Note2: Calculated distance is 20cm, which is declared by the manufacture.