FCC ID : 2AG8JT6

RF EXPOSURE EVALUATION

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)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm^2)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

11.1 Friis transmission formula: Pd= (Pout*G)\ (4*pi*R^2)

Where

Pd= Power density in mW/cm^2

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1416

R= distance between observation point and center of the radiator in cm

Pd the limit of MPE, 1mW/cm^2,If we know the maximum gain of the nd total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

11.2 Measurement Result

Wifi mode：AP6212
Antenna gain: 4.93dBi

modulation	Channel Freq. (MHz)	Measured power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
	2412	14.50	13 to 15	15	3.11	0.020	1
11b	2437	15.02	14 to 16	16	3.11	0.025	1
	2462	16.09	15 to 17	17	3.11	0.031	1
	2412	13.24	12 to 14	14	3.11	0.016	1
11g	2437	14.70	13 to 15	15	3.11	0.020	1
	2462	15.70	14 to 16	16	3.11	0.025	1
	2412	13.34	12 to 14	14	3.11	0.016	1
11n HT20	2437	14.24	13 to 15	15	3.11	0.020	1
	2462	15.11	14 to 16	16	3.11	0.025	1

Wifi mode：RTL8188EUS
Antenna gain: 4.93dBi

modulation	Channel Freq. (MHz)	Measured power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
11b	2412	14.26	13 to 15	15	3.11	0.020	1
	2437	15.01	14 to 16	16	3.11	0.025	1
	2462	16.06	15 to 17	17	3.11	0.031	1
11g	2412	13.22	12 to 14	14	3.11	0.016	1
	2437	14.69	13 to 15	15	3.11	0.020	1
	2462	15.67	14 to 16	16	3.11	0.025	1
11n HT20	2412	13.23	12 to 14	14	3.11	0.016	1
	2437	14.14	13 to 15	15	3.11	0.020	1
	2462	15.10	14 to 16	16	3.11	0.025	1

CONCLUSION of simultaneous transmitter
Both of the module 1 and module 2 can transmit simultaneously, the formula of calculated the MPE is:

CPD1/LPD1+CPD2/LPD2+······etc. < 1
CPD = Calculation power density
LPD = Limit of power density

Therefore the worst-case situation is 0.031 /1.00+0.031 /1.00 = 0.062, which is less than "1",
This confirmed that the device comply with FCC 1.1310 MPE limit.