

FCC ID : 2ACWI32FXC4TA

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: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = Power density in mW/cm²

P_{out} =output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π =3.1416

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

Pd the limit of MPE, $1\text{mW}/\text{cm}^2$. 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 :

Channel Freq. (MHz)	modulation	conducted power (mW)	conducted power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm ²)	Power density Limits (mW/cm ²)
2.412	11b	202.77	23.07	22dBm to 24dBm	24	1.58	0.05024	1
2.437	11b	211.35	23.25	22dBm to 24dBm	24	1.58	0.05024	1
2.462	11b	171.79	22.35	22dBm to 24dBm	24	1.58	0.05024	1
2.412	11g	295.80	24.71	24dBm to 26dBm	26	1.58	0.07962	1
2.437	11g	302.69	24.81	24dBm to 26dBm	26	1.58	0.07962	1
2.462	11g	263.03	24.20	24dBm to 26dBm	26	1.58	0.07962	1
2.412	11n HT20	316.96	25.01	24dBm to 26dBm	26	1.58	0.07962	1
2.437	11n HT20	319.15	25.04	24dBm to 26dBm	26	1.58	0.07962	1
2.462	11n HT20	264.85	24.23	24dBm to 26dBm	26	1.58	0.07962	1
2.422	11n HT40	292.42	24.66	24dBm to 26dBm	26	1.58	0.07962	1
2.437	11n HT40	282.49	24.51	24dBm to 26dBm	26	1.58	0.07962	1
2.452	11n HT40	261.22	24.17	24dBm to 26dBm	26	1.58	0.07962	1