

FCC ID : 2AG8JPBOX150

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: $P_d = \frac{P_{out} * G}{4 * \pi * R^2}$

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

Pi=3.1416

R= distance between observation point and center of the radiator in 20 cm

Pd the limit of MPE, 1mW/cm². 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

Channel Freq. (MHz)	modulation	conducted power (mW)	ERP (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	52.36	17.19	17dBm to 19dBm	19	1.995	0.03169	1
2.437	11b	43.15	16.35	15dBm to 17dBm	17	1.995	0.02000	1
2.462	11b	38.19	15.82	15dBm to 17dBm	17	1.995	0.02000	1
2.412	11g	73.62	18.67	17dBm to 19dBm	19	1.995	0.03169	1
2.437	11g	56.23	17.50	17dBm to 19dBm	19	1.995	0.03169	1
2.462	11g	67.14	18.27	17dBm to 19dBm	19	1.995	0.03169	1
2.412	11n HT20	73.45	18.66	17dBm to 19dBm	19	1.995	0.03169	1
2.437	11n HT20	71.78	18.56	17dBm to 19dBm	19	1.995	0.03169	1
2.462	11n HT20	66.07	18.20	17dBm to 19dBm	19	1.995	0.03169	1
2.422	11n HT40	67.45	18.29	18dBm to 20dBm	20	1.995	0.03990	1
2.437	11n HT40	71.61	18.55	18dBm to 20dBm	20	1.995	0.03990	1
2.452	11n HT40	81.28	19.10	18dBm to 20dBm	20	1.995	0.03990	1