

FCC ID : 2AHKA-MOVEITWIFIV1

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

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, 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

11.2 Measurement Result

BT DSS

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)
2402	GFSK	0.30	-5.260	-6dBm to -4dBm	-4	1	0.00008	1
2441	GFSK	0.73	-1.380	-3dBm to -1dBm	-1	1	0.00016	1
2480	GFSK	0.86	-0.664	-2dBm to 0dBm	0	1	0.00020	1
2402	$\pi/4$ -DQPSK	0.17	-7.677	-8dBm to -6dBm	-6	1	0.00005	1
2441	$\pi/4$ -DQPSK	0.45	-3.471	-5dBm to -3dBm	-3	1	0.00010	1
2480	$\pi/4$ -DQPSK	0.56	-2.539	-3dBm to -1dBm	-1	1	0.00016	1
2402	8DPSK	0.20	-7.075	-8dBm to -6dBm	-6	1	0.00005	1
2441	8DPSK	0.51	-2.927	-3dBm to -1dBm	-1	1	0.00016	1
2480	8DPSK	0.63	-1.976	-3dBm to -1dBm	-1	1	0.00016	1

WIFI 2.4G

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	50.23	17.01	16dBm to 18dBm	18	1	0.01262	1
2.437	11b	51.40	17.11	16dBm to 18dBm	18	1	0.01262	1
2.462	11b	51.29	17.10	16dBm to 18dBm	18	1	0.01262	1
2.412	11g	29.17	14.65	13dBm to 15dBm	15	1	0.00632	1
2.437	11g	28.31	14.52	13dBm to 15dBm	15	1	0.00632	1
2.462	11g	31.26	14.95	13dBm to 15dBm	15	1	0.00632	1
2.412	11n HT20	23.17	13.65	12dBm to 14dBm	14	1	0.00502	1
2.437	11n HT20	22.39	13.50	12dBm to 14dBm	14	1	0.00502	1
2.462	11n HT20	20.99	13.22	12dBm to 14dBm	14	1	0.00502	1
2.422	11n HT40	50.23	13.12	12dBm to 14dBm	14	1	0.00502	1
2.437	11n HT40	51.40	13.26	12dBm to 14dBm	14	1	0.00502	1
2.452	11n HT40	51.29	13.08	12dBm to 14dBm	14	1	0.00502	1