

FCC ID : SSMMEFVMI20

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 (R=20cm)

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

WIFI DTS

Channel Freq. (MHz)	modulation	conducted power (mW)	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	20.51	20.0dBm to 22.0dBm	22.0	1.58	0.0500	1
2.437	11b	21.50	20.0dBm to 22.0dBm	22.0	1.58	0.0500	1
2.462	11b	20.51	20.0dBm to 22.0dBm	22.0	1.58	0.0500	1
2.412	11g	26.18	25.0dBm to 27.0dBm	27.0	1.58	0.1580	1
2.437	11g	26.83	25.0dBm to 27.0dBm	27.0	1.58	0.1580	1
2.462	11g	25.87	25.0dBm to 27.0dBm	27.0	1.58	0.1580	1
2.412	11n HT20	24.47	24.0dBm to 26.0dBm	26.0	1.58	0.1255	1
2.437	11n HT20	25.31	24.0dBm to 26.0dBm	26.0	1.58	0.1255	1
2.462	11n HT20	24.47	24.0dBm to 26.0dBm	26.0	1.58	0.1255	1
2.422	11n HT40	24.05	23.0dBm to 25.0dBm	25.0	1.58	0.0997	1
2.437	11n HT40	23.63	23.0dBm to 25.0dBm	25.0	1.58	0.0997	1
2.452	11n HT40	23.18	23.0dBm to 25.0dBm	25.0	1.58	0.0997	1

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