FCC ID : 2ANH7MEFCR25

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 Antenna gain: 1.53dBi

2.4G WIFI

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	2.412	20.77	19 to 21	21	1.422328787	0.03562	1
	2.437	21.02	20 to 22	22	1.422328787	0.04485	1
	2.462	22.86	21 to 23	23	1.422328787	0.05646	1
11g	2.412	25.21	24 to 26	26	1.422328787	0.11265	1
	2.437	25.23	24 to 26	26	1.422328787	0.11265	1
	2.462	26.91	25 to 27	27	1.422328787	0.14182	1
11n HT20	2.412	24.61	23 to 25	25	1.422328787	0.08948	1
	2.437	24.81	23 to 25	25	1.422328787	0.08948	1
	2.462	26.59	25 to 27	27	1.422328787	0.14182	1
11n HT40	2.422	23.95	22 to 24	24	1.422328787	0.07108	1
	2.437	24.27	23 to 25	25	1.422328787	0.08948	1
	2.452	24.23	23 to 25	25	1.422328787	0.08948	1

BT Antenna gain: 1.7dBi

Bluetooth DSS

modulation	Channel Freq. (MHz)	conducted power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
GFSK	2402	0.905	-1 to 1	1	1.48	0.00037	1
	2441	1.220	0 to 2	2	1.48	0.00047	1
	2480	1.191	0 to 2	2	1.48	0.00047	1
pi/4-DQPSK	2402	1.891	0 to 2	2	1.48	0.00047	1
	2441	**2.207**	1 to 3	3	1.48	0.00059	1
	2480	2.133	1 to 3	3	1.48	0.00059	1