FCC ID : 2AH9Q-BLUETOOTH01

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 (R=20cm)

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

BT DSS

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
2402	GFSK	**1.55**	1dBm to 2dBm	2	0	0.0003	1
2441	GFSK	0.78	0dBm to 1dBm	1	0	0.0002	1
2480	GFSK	-0.84	-1dBm to 0dBm	0	0	0.0002	1
2402	π /4 - DQPSK	1.33	1dBm to 2dBm	2	0	0.0003	1
2441	π /4- DQPSK	0.68	0dBm to1dBm	1	0	0.0002	1
2480	π /4- DQPSK	-0.96	-1dBm to 0dBm	0	0	0.0002	1
2402	8DPSK	0.10	0dBm to 1dBm	1	0	0.0002	1
2441	8DPSK	-0.57	-1dBm to 0dBm	0	0	0.0002	1
2480	8DPSK	-2.20	-3dBm to -2dBm	-2	0	0.0001	1

BT DTS

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
2402	GFSK	0.15	0dBm to1dBm	1	0	0.0002	1
2441	GFSK	-0.58	-1dBm to 0dBm	0	0	0.0002	1
2480	GFSK	-2.43	-3dBm to -2dBm	-2	0.	0.0001	1