

## FCC ID : WLQXBAR

### 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 <sup>2</sup> )	Average Time
<b>(A) Limits for Occupational/Control Exposures</b>				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
<b>(B) Limits for General Population/Uncontrol Exposures</b>				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

#### **11.1 Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$**

Where

Pd= Power density in mW/cm<sup>2</sup>

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<sup>2</sup>. 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**

Operation Frequency: Bluetooth: 2402-2480MHz,

Power density limited: 1mW/ cm<sup>2</sup>

Antenna GAIN: Bluetooth: 1dBi

Bluetooth:

Output Peak power (dBm) max	Output Peak power (mW)	Antenna Gain (dBi) Numeric	Power density at 20cm (mW/ cm <sup>2</sup> )	Power density Limits (mW/cm <sup>2</sup> )
4.61	2.89	1.26	0.0007	1