FCC ID: 2AE6H-ACCM

MPE Calculation : BLE

RF function or Mode	Frequency range (MHz)			Max Target Power (dBm)	ANT Gain (dBi)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Maximum power density (mW/cm^2)	Requriment (mW/cm^2)
BLE	2402.00	~	2480.00	2.00	1.00	3.00	1.996	0.0004	1.000
		~							
		~							
		~							
		~							
		~							
		~							
		~							

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.

The MPE sample calculation for this exposure is shown below.

▪ **S** = EIRP / (4 R^2 π)

= 1.996 / (4 X 20^2 X π)

= 0.0004 mW/cm^2

- Note

S= Maximum power density(mW/cm^2)

EIRP= Equivalent Isotropic Radiated Power(mW)

R= Distance to the center of the radiation of the antenn

▪ **Limits for Maximum Permissible Exposure (MPE)**

Frequency range (MHz)			Electric Field strength (V/m)	Magnetic field strength (A/m)	Power Density (mW/cm^2)	Averageing time (minutes)
0.3	~	1.34	614	1.63	*100	30
1.34	~	30	824/f	2.19 / f	*180 / f^2	30
30	~	300	27.5	0.073	0.2	30
300	~	1,500			f / 1500	30
1,500	~	100,000			1.0	30

Conclusion : The exposure condition of this device is compliant with FCC

FCC ID: 2AE6H-ACCM

MPE Calculation : LTE

RF function or Mode	Frequency range (MHz)			Max Target Power (dBm)	ANT Gain (dBi)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Maximum power density (mW/cm^2)	Requriment (mW/cm^2)
LTE(Band 12)	699.70	~	715.30	21.00	2.14	23.14	206.063	0.0410	0.466
LTE(Band 4)	1710.70	~	1754.30	22.00	2.73	24.73	297.167	0.0592	1.000
LTE(Band 2)	1850.70	~	1909.30	20.00	2.74	22.74	187.932	0.0374	1.000
		~							
		~							
		~							
		~							
		~							

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.

The MPE sample calculation for this exposure is shown below.

▪ **S** = EIRP / (4 R^2 π)

= 206.063 / (4 X 20^2 X π)

= 0.041 mW/cm^2

- Note

S= Maximum power density(mW/cm^2)

EIRP= Equivalent Isotropic Radiated Power(mW)

R= Distance to the center of the radiation of the antenn

▪ **Limits for Maximum Permissible Exposure (MPE)**

Frequency range (MHz)			Electric Field strength (V/m)	Magnetic field strength (A/m)	Power Density (mW/cm^2)	Averageing time (minutes)
0.3	~	1.34	614	1.63	*100	30
1.34	~	30	824/f	2.19 / f	*180 / f^2	30
30	~	300	27.5	0.073	0.2	30
300	~	1,500			f / 1500	30
1,500	~	100,000			1.0	30

Conclusion : The exposure condition of this device is compliant with FCC

RF Exposure Compliance for simultaneous operations

▪ **Configurations for simultaneous operations**

- **Configuration 1:** LTE + BLE

▪ **Configurations for simultaneous operations(LTE, BLE Module)**

– LTE Band 12 + BLE
– LTE Band 4 + BLE
– LTE Band 2 + BLE

Note: Above configuration was declared from applicant.

▪ **Configurations for simultaneous operatior**

RF function or mode	BLE	LTE			-	-		Σ of MPE ratios
Band	2.4GHz	Band 12	Band 4	Band 2	-	-	-	
Power Density (mW/cm2)	0.0004	0.0410	0.0592	0.0374				
Requirement (mW/cm2)	1.0000	0.4660	1.0000	1.0000				
MPE ratio (Power Density/Requirement)	0.0004	0.0880	0.0592	0.0374				
Configuration 1 (MPE ratio)	0.0004	0.0880		0.0374				**0.1258**
	0.0004		0.0592	0.0374				0.0970
	0.0004		0.0592		0.0000			0.0596
	0.0004	0.0880			0.0000			0.0884

Note: The maximum power density in each RF function was used for above table.

▪ **Requirment = Σ of MPE ratios ≤ 1**

Conclusion : The exposure condition of this device is compliant with FCC rules.