

Method: KDB447498 D01v06

RF feature	Frequency range (MHz)			Max Target Power (dBm) ^{Note 1}	ANT Gain (dBi)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Maximum power density (mW/cm ²)	Requirement (mW/cm ²)
Zigbee-Transmitter 1(Controller Port)	2405.0	~	2405.0	-1.50	8.40	6.90	4.898	0.0010	1.000
Zigbee-Transmitter 2(Light Stick Port)	2480.0	~	2480.0	-12.00	8.40	-3.60	0.437	0.0001	1.000
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Note 1: Please refer to the Operation description for Max tune-up power.									

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.

$$\begin{aligned} \bullet S &= \text{EIRP} / (4 R^2 \pi) \\ &= 4.898 / (4 \times 20^2 \times \pi) \\ &= 0.001 \text{ mW/cm}^2 \end{aligned}$$

- Note

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

EIRP= Equivalent Isotropic Radiated Power(mW)

R= Distance to the center of the radiation of the antenna(20cm)

Part 1.1310

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

Frequency range (MHz)	Electric Field strength (V/m)	Magnetic field strength (A/m)	Power Density (mW/cm ²)	Averaging 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 rules.

RF Exposure Compliance for simultaneous operations

- Worst case for simultaneous operations
- Transmitter 1(Controller Port)_2405MHz + Transmitter 2(Light Stick Port)_2480MHz

RF feature or mode	Zigbee	Zigbee	-	-	-	-	-	Σ of MPE ratios
Band(Worst case)	2.4GHz_(2405)	2.4GHz_(2480)	-	-	-	-	-	
Power Density (mW/cm2)	0.001 0	0.000 1	-	-	-	-	-	
Requirement (mW/cm2)	1.000 0	1.000 0	-	-	-	-	-	
MPE ratio (Power Density/Requirement)	0.001 0	0.000 1	-	-	-	-	-	
Worst case(MPE ratio)	0.001 0	0.000 1	-	-	-	-	-	0.001 1

- Requirement = Σ of MPE ratios ≤ 1

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