

# Maximum Permissible Exposure Evaluation

## FCC ID: 2AJOS-GU10

### 1. Client Information

**Applicant** : GUANGZHOU ADVANSOLUTION TECHNOLOGY CO.,LTD  
**Address** : RM801, ZHONGMING BULIDING, LONGKOU WEST RD, TIANHE DISTRICT, GUANGZHOU, CHINA  
**Manufacturer** : GUANGZHOU ADVANSOLUTION TECHNOLOGY CO.,LTD  
**Address** : RM801, ZHONGMING BULIDING, LONGKOU WEST RD, TIANHE DISTRICT, GUANGZHOU, CHINA

### 2. General Description of EUT

<b>EUT Name</b>	:	GU10 LED SPOT LIGHT
<b>Models No.</b>	:	VKB-004-GU10, KP-GU10
<b>Brand Name</b>	:	KASA
<b>Model Difference</b>	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is model name for commercial.
<b>Product Description</b>	Operation Frequency:	Bluetooth 4.0(BLE): 2402MHz~2480MHz
	Number of Channel:	Bluetooth 4.0(BLE): 40 channels see note(3)
	RF Output Power:	7.062 dBm Conducted Power
	Antenna Gain:	2 dBi PCB Antenna
	Modulation Type:	GFSK
	Bit Rate of Transmitter:	1Mbps(GFSK)
<b>Power Rating</b>	:	AC 85~240V, 50/60Hz
<b>Connecting I/O Port(S)</b>	:	Please refer to the User's Manual

**Note:**More detail information about Equipment, please refer to User's manual, more information about the RF, please refer to test report.

## MPE Calculations

### 1. Antenna Gain:

Ant.	Brand	Model Name	Antenna Type	Gain (dBi)
1	N/A	N/A	PCB Ant.	2

### 2. EUT Operation Condition:

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

### 3. Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = (PG) / 4\pi R^2$$

Where

**S**: power density

**P**: max tune up power

**G**: power gain of the antenna in the direction of interest relative to an isotropic radiator.

**R**: distance to the center of radiation of the antenna

### 4. Test Result:

Worst Maximum MPE Result								
Mode	N <sub>TX</sub>	Freq. (MHz)	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm <sup>2</sup> ) [S]
GFSK	1	2402	7.062	7±1	8	2.0	20	0.00200
		2442	6.791	6±1	7	2.0	20	0.00158
		2480	6.907	6±1	7	2.0	20	0.00158

**Note:**

(1) N<sub>TX</sub>= Number of Transmit Antennas

(2) RF Output power specifies that Maximum Conducted Peak Output Power.

### 5. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

#### Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/ cm <sup>2</sup> )
300-1,500	F/1500
1,500-100,000	1.0

For : 2.4G: 2402MHz~2480MHz

MPE limit S: 1 mW/ cm<sup>2</sup>

The MPE is calculated as 0.00200mW / cm<sup>2</sup> < limit 1 mW / cm<sup>2</sup>.

So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091

(b)The RF Exposure Information page from the manual is included here for reference.

**Note**

For a more detailed features description, please refer to the RF Test Report.

-----END OF REPORT-----