RF Exposure Requirements

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	Shenzhen Shikeshu Photoelectric Co., Ltd.
Address of applicant:	Room 1808, Building 11, Tiedong Logistics District, No. 3 Ping'an Avenue, Pinghu Community, Pinghu Street, Longgang District, Shenzhen
Manufacturer:	Shenzhen Shikeshu Photoelectric Co., Ltd.
Address of manufacturer:	Room 1808, Building 11, Tiedong Logistics District, No. 3 Ping'an Avenue, Pinghu Community, Pinghu Street, Longgang District, Shenzhen

General Description of EUT	
Product Name:	Firework Led lamp
Brand Name:	/
Model No.:	SKS-JZ-02
Adding Model(s):	/
Rated Voltage:	DC 3.7V
Power Adapter:	/
Software Version:	/
Hardware Version:	/
Serial Number:	108939
FCC ID:	2A43SSKS-BT

Technical Characteristics of EUT	
Bluetooth Version:	V5.0 BLE
Frequency Range:	2402-2480MHz
RF Output Power:	-3.19dBm
Data Rate:	1Mbps
Modulation:	GFSK
Quantity of Channels:	40
Channel Separation:	2MHz
Type of Antenna:	PCB
Antenna Gain:	1 dBi

1.2 Standard Applicable

According to §1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, the following RF exposure evaluation shall to demonstrate RF exposure compliance.

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0

Where

-f(GHz) is the RF channel transmit frequency in GHz

-Power and distance are rounded to the nearest mW and mm before calculation

-The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

1.3 Calculation Method

Bluetooth

Tx frequency range: 2402~2480MHz
Min. test separation distance: 5mm
Maximum Conducted Output Power: -3.19dBm
Maximum Tune-up Conducted Output Power: -2dBm
RF channel transmit frequency: 2440MHz
Result: 0.197
Limit: 3.0

So the transmitter complies with the RF exposure requirements and the SAR is not required.