RF Exposure Requirements

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Kool Brands, LLC.

Address of applicant: 1450 Vassar Street, RENO, NV 89502, USA

Manufacturer: Shenzhen Auzmichain Electronic Co.,Ltd

Address of manufacturer: 3/F, Building 2, YongQi Science&Technology

industrial park, Xixiang, BaoAn, Shenzhen, China

General Description of EUT	
Product Name:	Switch Chromatic LED Wireless Controller
Brand Name:	1
Model No.:	KMD-NS-4763
Adding Model(s):	1
Rated Voltage:	DC 5V From USB or DC 3.7V From Battery
Power Adapter:	800mAh
Software Version:	1
Hardware Version:	
Serial Number:	67322ji87
FCC ID:	2A78RKMD-NS-4763

Technical Characteristics of EUT	
Bluetooth Version:	V5.0 BLE
Frequency Range:	2402-2480MHz
RF Output Power:	0.65dBm
Data Rate:	1Mbps
Modulation:	GFSK
Quantity of Channels:	40
Channel Separation:	2MHz
Type of Antenna:	PCB
Antenna Gain:	-1.42dBi

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)] \cdot [$\sqrt{f(GHz)}$] \leq 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:0.65dBm

Maximum Tune-up Conducted Output Power: 1dBm

RF channel transmit frequency: 2402MHz

Result: 0.390 Limit: 3.0

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