



## **FCC RF EXPOSURE REPORT**

### **CERTIFICATION TEST REPORT**

*For*

**Smart Ceiling Fan Control and Dimmer Switch**

**MODEL NUMBER: KS240**

**FCC ID: 2AXJ4KS240**

**REPORT NUMBER: 4790887647-1-RF-3**

**ISSUE DATE: March 29, 2023**

*Prepared for*

**TP-Link Corporation Limited  
Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha  
Tsui, Kowloon, Hong Kong**

*Prepared by*

**UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch**

**Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-  
Tech Development Zone Dongguan, 523808, People's Republic of China**

**Tel: +86 769 22038881**

**Fax: +86 769 33244054**

**Website: [www.ul.com](http://www.ul.com)**



Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V0	July 28, 2023	Initial Issue	



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# 1. ATTESTATION OF TEST RESULTS

## Applicant Information

Company Name: TP-Link Corporation Limited  
 Address: Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong

## Manufacturer Information

Company Name: TP-Link Corporation Limited  
 Address: Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong

## EUT Information

EUT Name: Smart Ceiling Fan Control and Dimmer Switch  
 Model: KS240  
 Brand: tp-link  
 Sample Received Date: June 8, 2023  
 Sample Status: Normal  
 Sample ID: 6163105  
 Date of Tested: June 16, 2023 to July 28, 2023

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47CFR§2.1091	PASS
KDB 447498 D01V06	

Prepared By:

Fanny Huang  
 Engineer Project Associate

Checked By:

Denny Huang  
 Senior Project Engineer

Approved By:

Stephen Guo  
 Operations Manager



## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 and KDB 447498 D01 General RF Exposure Guidance v06.

## 3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p><b>A2LA (Certificate No.: 4102.01)</b> UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p><b>FCC (FCC Designation No.: CN1187)</b> UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules</p> <p><b>ISED (Company No.: 21320)</b> UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046.</p> <p><b>VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)</b> UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B, the VCCI registration No. is C-20012 and T-20011</p>
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Note: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China.



#### 4. DESCRIPTION OF EUT

EUT Name	Smart Ceiling Fan Control and Dimmer Switch
Model	KS240

WIFI 2.4G	Frequency Range:	2412 MHz to 2462 MHz
	Radio Technology:	IEEE802.11b/g/n HT20
	Type of Modulation:	IEEE 802.11b: DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g/n: OFDM(64-QAM, 16-QAM, QPSK, BPSK)
BLE	Frequency Range:	2402 MHz to 2480 MHz
	Type of Modulation:	GFSK
	Data Rate:	1 Mbps
Normal Test Voltage:	Normal Test Voltage:	AC 120 V, 60 Hz



## 5. REQUIREMENT

### LIMIT AND CALCULATION METHOD

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

### RF EXPOSURE LIMIT

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (Minutes)
0.3 -- 1.34	614	1.63	(100)*	30
1.34 -- 30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30 -- 300	27.5	0.073	0.2	30
300 -- 1500	--	--	f/1500	30
1500 -- 100,000	--	--	1.0	30

### CALCULATION METHOD

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

Where:

S=power density

P=power input to antenna

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

**CALCULATED RESULTS**

Worst Case					
Mode	Output Power	Antenna Gain	Power Density	Power Density Limit	Test Result
	dBm	dBi	mW/cm <sup>2</sup>	mW/cm <sup>2</sup>	--
BLE	5	1.38	0.00086	1.0	Complies
WIFI 2.4G	24	1.38	0.06866	1.0	Complies

Note:

1. The Power comes from operation description.
2. The minimum separation distance of the device is greater than 20 cm.
3. Calculate by WORST-CASE mode.
4. The manufacturer declare that the EUT cannot support BLE&WIFI 2.4G simultaneous emission.

Therefor the maximum calculations of above situations are less than the "1" limit.

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**END OF REPORT**