



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

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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
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	

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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>A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p>FCC (FCC Designation No.: CN1187) 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>ISED (Company No.: 21320) 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>VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011) 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 ²)	Averaging Time E ² , H ² or S (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 -- 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/cm2	mW/cm2	--
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.

END OF REPORT