



FCC TEST REPORT

FCC ID: 2AQURWF31S

Product	:	Wi-Fi Dimmer Switch
Model Name	:	WF31S,WF31TS,MS10WS,MS13WS
Brand	:	EVA LOGIK
Report No.	:	PTC20092201703E-FC02
Prepared for		
NIE-TECH CO., LTD		
Jinlian commercial center 9001, Jinxiu road No.2, Changan Town,Dongguan City, Guangdong Province, China		
Prepared by		
Precise Testing & Certification Co., Ltd		
Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China		



TEST RESULT CERTIFICATION

Applicant's name : NIE-TECH CO., LTD

Address : Jinlian commercial center 9001, Jinxiu road No.2, Changan Town, Dongguan City, Guangdong Province, China

Manufacture's name : NIE-TECH CO., LTD

Address : Jinlian commercial center 9001, Jinxiu road No.2, Changan Town, Dongguan City, Guangdong Province, China

Product name : Wi-Fi Dimmer Switch

Model name : WF31S, WF31TS, MS10WS, MS13WS

Test procedure : KDB 447498 D01 General RF Exposure Guidance v06

Test Date : Sep. 24, 2020 to Oct. 12, 2020

Date of Issue : Oct. 12, 2020

Test Result : Pass

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Engineer:

A handwritten signature in black ink that reads "Leo Yang" with a long horizontal stroke extending to the right.

Leo Yang / Engineer

Technical Manager:

A handwritten signature in black ink that appears to read "Chris Du" in a stylized, cursive font.

Chris Du / Manager



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2 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS
Remark:		
N/A: Not Applicable		



3 General Information

3.1 General Description of E.U.T.

Product Name	:	Wi-Fi Dimmer Switch
Model Name	:	WF31S,WF31TS,MS10WS,MS13WS The exterior color is different, the others are the same, choose WF31S as the main test model
Specification	:	802.11b/g/n HT20
Operation Frequency	:	2412-2462MHz for 802.11b/g;/ n(HT20)
Number of Channel	:	11 channels for 802.11b/g; n(HT20)
Type of Modulation	:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
Antenna installation	:	PCB antenna
Antenna Gain	:	1 dBi
Power supply	:	Adapter model:N/A AC100-240V 50/60HZ Max 3.5A, 250W
Hardware Version	:	V1.0
Software Version	:	V1.0



4 RF Exposure

Test Requirement : FCC Part 1.1307(b)(1)

Evaluation Method : FCC Part 2.1091

4.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

4.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density



4.3 MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

4.4 Test Result

Item	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
WIFI	1.26	20.22	105.20	0.0263	1	Pass

*****THE END REPORT*****