

MPE Test Report

Report No.: PYU-ESH-P20092485B-3

FCC ID: 2AHGM-S-PFW01-U

Product: WIFI socket

Model: smart-PFW01-U

Received Date: Oct.10, 2020

Test Date: Oct.11,2020 to Jan.25, 2021

Issued Date: Jan.26, 2021

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Release Control Record

Issue No.	Description	Date Issued
PYU-ESH-P20092485B-3	Original release	Jan.26, 2021



1 Certificate of Conformity

Product: WIFI socket

Brand: --

Test Model: smart-PFW01-U

Applicant: NINGBO YUSING LIGHTING CO.,LTD

Test Date: Oct.11,2020 to Jan.25, 2021

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

The above equipment has been tested by **BUREAU VERITAS ADT (Shanghai) Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

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, Date:

Jan.26, 2021

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Jan.26, 2021

2 General Description of EUT

WIFI

Product	WIFI socket
Brand	--
Test Model	smart-PFW01-U
Model Difference	--
Power Rating	110-130V~,10A
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS, OFDM
Operating Frequency	802.11b, 802.11g and 802.11n (HT20):2412MHz~2462MHz
Number of Channel	802.11b, 802.11g and 802.11n (HT20):11
Antenna Type	PCB Antenna
Antenna Connector	--
Antenna Gain	-1.0 dBi

BLE

Product	WIFI socket
Brand	--
Test Model	smart-PFW01-U
Power Rating	110-130V~,10A
Modulation Type	GFSK
Modulation Technology	Bluetooth Low Energy 4.2
Operating Frequency	2402MHz ~ 2480MHz
Number of Channel	40
Antenna Type	PCB Antenna
Antenna Connector	--
Antenna Gain	-1.0 dBi

Note: For more details, please refer to the User's manual of the EUT.

3 RF Exposure

3.1 Limits For Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1,500	-	-	F/1500	30
1,500-100,000	-	-	1.0	30

F = Frequency in MHz

3.2 MPE Calculation Formula

Power density (S) is calculated according to the formula:

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

Where S = power density in mW/cm²

P = transmit power in mW

G = numeric gain of transmit antenna (numeric gain=Log-1(dB antenna gain/10))

R = distance (cm)

3.3 MPE Calculation Formula

The antenna of this product, under normal use condition, is at least 20cm from the body of the user. So the device is classified as Mobile Device.

3.4 Calculation Result of Maximum Permissible Exposure

Frequency Band (MHz)	Max. Conducted output power(dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WLAN 2.4GHz					
2412-2462	16.65	-1.00	20	0.007311	1
BLE					
2402-2480	1.92	-1.00	20	0.0002460	1

Conclusion:

The calculation result of MPE is less than the limit.



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