

Ningbo EverFlourish Smart Technology Corp., Ltd
MPE ASSESSMENT REPORT

Report Type:

FCC MPE assessment report

Model:

EW26-UL, EW26-UL1, EW26-2UL, EW26-2UL1

REPORT NUMBER:

210702452SHA-002

ISSUE DATE:

Mar 24, 2022

DOCUMENT CONTROL NUMBER:

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Applicant: Ningbo EverFlourish Smart Technology Corp., Ltd
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Manufacturer: Ningbo EverFlourish Smart Technology Corp., Ltd
77 Wuxiang East Road, Yinzhou, Ningbo, Zhejiang, 31511 China

FCC ID: VBA-EFEW26

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06
FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

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Revision History

| Report No. | Version | Description | Issued Date |
|------------------|---------|-------------------------|--------------|
| 210702452SHA-002 | Rev. 01 | Initial issue of report | Mar 24, 2022 |
| | | | |
| | | | |

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

| | |
|-----------------------|--|
| Product name: | indoor Wi-Fi outlet switch |
| Type/Model/PMN/HVIN: | EW26-UL, EW26-UL1, EW26-2UL, EW26-2UL1 |
| Description of EUT: | EUT is an indoor Wi-Fi outlet switch. EUT supports WIFI function. All models use the same WIFI modular. EW26-UL1 is same as EW26-UL except EW26-UL1 uses an extensional push button actuating member. EW26-2UL1 is same as EW26-2UL except EW26-2UL1 uses an extensional push button actuating member. |
| Rating: | 125V~, 60Hz, 15A/1875W resistive, 10A tungsten, 1/2 HP |
| Category of EUT: | Class B |
| EUT type: | <input checked="" type="checkbox"/> Table top <input type="checkbox"/> Floor standing |
| Software Version: | V1.0 |
| Hardware Version: | V1.0 |
| Sample No.: | 0210913-11-001/002/003/004 |
| Sample received date: | Aug 1, 2021 |
| Date of test: | Aug 2, 2021~Feb 25, 2022 |

1.2 Technical Specification

| | |
|----------------------|---|
| Frequency Range: | 2412MHz ~ 2462MHz |
| Support Standards: | IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40 |
| Type of Modulation: | IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK) |
| Channel Number: | 11 Channels for 802.11b, 802.11g and 802.11n(HT20) 7 Channels for 802.11n(HT40) |
| Data Rate: | IEEE 802.11b: Up to 11 Mbps IEEE 802.11g: Up to 54 Mbps IEEE 802.11n-HT20: Up to MCS7 IEEE 802.11n-HT40: Up to MCS7 |
| Channel Separation: | 5 MHz |
| Antenna Information: | 0dBi, PCB antenna |

1.3 Description of Test Facility

| | |
|------------|--|
| Name: | Intertek Testing Services Shanghai |
| Address: | Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China |
| Telephone: | 86 21 61278200 |
| Telefax: | 86 21 54262353 |

| | |
|---|---|
| The test facility is recognized, certified, or accredited by these organizations: | CNAS Accreditation Lab Registration No. CNAS L0139 |
| | FCC Accredited Lab Designation Number: CN0175 |
| | IC Registration Lab CAB identifier.: CN0051 |
| | VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252 |
| | A2LA Accreditation Lab Certificate Number: 3309.02 |

2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

| Frequency range | E-field strength (V/m) | H-field strength (A/m) | B-field (uT) | Equivalent plane wave power density S_{eq} (W/m ²) |
|-----------------|------------------------|------------------------|---------------------|--|
| 0-1 Hz | - | $3,2 \times 10^4$ | 4×10^4 | - |
| 1-8 Hz | 10 000 | $3,2 \times 10^4/f^2$ | $4 \times 10^4/f^2$ | - |
| 8-25 Hz | 10 000 | $4\,000/f$ | $5\,000/f$ | - |
| 0,025-0,8 kHz | $250/f$ | $4/f$ | $5/f$ | - |
| 0,8-3 kHz | $250/f$ | 5 | 6,25 | - |
| 3-150 kHz | 87 | 5 | 6,25 | - |
| 0,15-1 MHz | 87 | $0,73/f$ | $0,92/f$ | - |
| 1-10 MHz | $87/f^{1/2}$ | $0,73/f$ | $0,92/f$ | - |
| 10-400 MHz | 28 | 0,073 | 0,092 | 2 |
| 400-2 000 MHz | $1,375 f^{1/2}$ | $0,0037 f^{1/2}$ | $0,0046 f^{1/2}$ | $f/200$ |
| 2-300 GHz | 61 | 0,16 | 0,20 | 10 |

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

2.2 Assessment Results

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

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

Where S = power density in mW/cm²

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 210702452SHA-001:

The maximum radiated power = 20.78dBm = 119.67 mW;

Here R is chosen to be 20cm,

$$S = PG / (4\pi R^2) = 119.67 / (4 * 3.14 * 20 * 20) = 0.0238\text{mW/cm}^2 < 1 \text{ mW/cm}^2$$

Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer than this distance is not recommended.

***** END *****