



## MPE Test Report

**Report No.:** LDF-ESH-P23091838B-3

**FCC ID:** DWNSON2830ZB243

**Product:** SONESSE2 28 Zigbee HP

**Model:** 5175514

**Received Date:** Oct.16, 2023

**Test Date:** Oct.16, 2023 to Dec.21, 2023

**Issued Date:** Jan.24, 2024

**Applicant:** Somfy US, Inc.

**Address:** 121 Herrod Blvd, Dayton, NJ 08810

**Manufacturer:** Somfy US, Inc.

**Address:** 121 Herrod Blvd, Dayton, NJ 08810

**Issued By:** BUREAU VERITAS ADT (Shanghai) Corporation

**Lab Address:** No. 829, Xinzhuan Road, Shanghai, P.R.China (201612)



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### Release Control Record

Issue No.	Description	Date Issued
LDF-ESH-P23091838B-3	Original release	Jan.24, 2024



**1 Certificate of Conformity**

**Product:** DC tubular motor

**Brand:** **somfy**

**Model:** SONESSE2 28 Zigbee HP

**Applicant:** Somfy US, hc.

**Test Date:** Oct.16, 2023 to Dec.21, 2023

**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.

**Prepared by :**

**Date:**

Jan.24, 2024

Yan ZHOU

Project Engineer

**Approved by :**



**Date:**

Jan.24, 2024

Sean YU

RF Supervisor

## 2 General Information

### 2.1 General Description of EUT

For BLE

Product	SONESSE2 28 Zigbee HP
Brand	<b>somfy</b> <sup>®</sup>
Test Model	#5175514
Power Rating	12V===; 1,0A; Rated torque: 1,1Nm; Operating time: 4minutes for Sonesse 28 WF Zigbee, 6minutes for the others;
Modulation Type	GFSK
Modulation Technology	Bluetooth Low Energy 5.0
Operating Frequency	2402MHz ~ 2480MHz
Number of Channel	40
Antenna Type	External Antenna
Antenna Connector	--
Antenna Gain	1 dBi

Note:

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

For Zigbee

Product	DC tubular motor
Brand	<b>somfy</b>
Test Model	SONESSE2 28 Zigbee HP
Power Rating	12V===; 1,0A; Rated torque: 1,1Nm; Operating time: 4minutes for Sonesse 28 WF Zigbee, 6minutes for the others;
Modulation Type	O-QPSK
Modulation Technology	6LoWPAN
Operating Frequency	2405MHz to 2480MHz
Number of Channel	16
Antenna Type	External Antenna
Antenna Connector	--
Antenna Gain	1dBi

## 2.2 Test Facility

**Laboratory Name:** Bureau Veritas ADT (ShangHai) Corporation

**Laboratory Address:** No.829, Xin Zhuan Road, Song Jiang District, Shanghai, China

**Test Location:** No.829, Xin Zhuan Road, Song Jiang District, Shanghai, China

**A2LA Lab Code:** 2343.01

**FCC-Recognized Accredited Testing Lab:** CN1213

**ISED Recognized Lab:** 6392A

**FCC Accredited Test Site Number:** 176467

### 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 <sup>2</sup> )	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/cm<sup>2</sup>

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 <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2402-2480	7.23	1	20	0.0013	1
2405-2480	14.23	1	20	0.0066	1

#### Conclusion:

The calculation result of MPE is less than the limit.

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