



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, Xinzhuang Road, Shanghai, P.R.China (201612)



This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



Table of Contents

Release Control Record.....	3
1 General Information.....	5
1.1 General Description of EUT.....	5
2 RF Exposure	7
2.1 Limits For Maximum Permissible Exposure (MPE)	7
2.2 MPE Calculation Formula.....	7
2.3 MPE Calculation Formula.....	7
2.4 Calculation Result of Maximum Permissible Exposure.....	7



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	somfy®
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	somfy®
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 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)
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.

--- END ---