



MPE Test Report

Report No.: LDF-ESH-P23091836B-3

FCC ID: DWNSON2830ZB241

Product: SONESSE2 ULTA30 Zigbee HP LI & SONESSE2 28 Zigbee HP LI US

Model: 5175515 & 5176122 See Section 2.3

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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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.....	8
2.3 MPE Calculation Formula.....	8
2.4 Calculation Result of Maximum Permissible Exposure.....	8



Release Control Record

Issue No.	Description	Date Issued
LDF-ESH-P23091836B-3	Original release	Jan.24, 2024

2 General Information

2.1 General Description of EUT

For BLE

Product	SONESSE2 ULTA30 Zigbee HP LI & SONESSE2 28 Zigbee HP LI US
Brand	somfy [®]
Test Model	5175515 & 5176122 See Section 2.3
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 with adaptor
Brand	somfy
Test Model	Refer to model list
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

2.3 Model list

Description	Nm	V	A
SONESSE2 ULTRA30 Zigbee HP LI	2	12	1.5
SONESSE2 28 Zigbee HP LI-ION US	2	12	1.5

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
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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	9.34	1	20	0.0022	1
2405-2480	13.11	1	20	0.0051	1

Conclusion:

The calculation result of MPE is less than the limit.

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