MPE Test Report

Report No.: LDF-ESH-P24020363B-3

FCC ID: DWNSON40R2ZBWF

Product: DC tubular motor

Model: SONESSE2 40 Zigbee HP LI-ION

Received Date: Feb.18, 2024

Test Date: Feb.18 to Mar.21, 2024

Issued Date: Mar.25, 2024

Applicant: Somfy Systems

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

Manufacturer: Somfy Systems

Address:

Issued By: BUREAU VERITAS ADT (Shanghai) Corporation

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

Test Lab
Cert 2343.01

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Release Control Record

Issue No.	Description	Date Issued
LDF-ESH-P24020363B-3	Original release	Mar.25, 2024

1 Certificate of Conformity

Product: DC tubular motor

Brand: somfy

Model: SONESSE2 40 Zigbee HP LI-ION

Applicant: Somfy Systems

Test Date: Feb.18 to Mar.21, 2024

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:** Mar.25, 2024

Yan ZHOU

Project Engineer

Approved by : , **Date:** Mar.25, 2024

Sean YU

RF Supervisor

2 General Information

2.1 General Description of EUT

For BLE

Product	DC tubular motor
Brand	somfy
Test Model	SONESSE2 40 Zigbee HP LI-ION
Power Rating	12V⎓, 3,5A; Rated torque: 4Nm; Operating time: 5minutes.
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 40 Zigbee HP LI-ION
Power Rating	12V⎓, 3,5A; Rated torque: 4Nm; Operating time: 5minutes.
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/cm^2

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	3.13	1	20	0.0005	1
2405-2480	3.08	1	20	0.0005	1

Conclusion:

The calculation result of MPE is less than the limit.

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