



MPE Test Report

Report No.: LDF-ESH-P22120917B-3

FCC ID: DWN-S3024VZB

Product: DC tubular motor

Model: SONESSE 30 ZIGBEE HP 2/25 WEID

Received Date: Dec.28, 2022

Test Date: Dec.28, 2022 to Feb.09, 2023

Issued Date: Feb.09, 2023

Applicant: Zhejiang Lianda Science and Technology Co., Ltd.

Address: Technological and Industrial District, 2# Road, Nanxun, Huzhou, Zhejiang, China

Manufacturer: Somfy Activités SA

Address: 50 avenue du Nouveau Monde 74300 CLUSES - FRANCE

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-P22120917B-3	Original release	Feb.09, 2023

2 General Information

2.1 General Description of EUT

For BLE

Product	DC tubular motor
Brand	somfy [®]
Test Model	SONESSE 30 ZIGBEE HP 2/25 WEID
Power Rating	24V===; 0,7A; Rated torque: 2Nm; Operating time: 4minutes for SONESSE 30 ZIGBEE HP 2/25 WEID
Modulation Type	GFSK
Modulation Technology	Bluetooth Low Energy 5.0
Operating Frequency	2402MHz ~ 2480MHz
Number of Channel	40
Antenna Type	PCB Antenna
Antenna Connector	--
Antenna Gain	2dBi
Product SW/HW version	--
Radio SW/HW version	--
Test SW version	--
RF power setting in Test SW	--

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	SONESSE 30 ZIGBEE HP 2/25 WEID
Power Rating	24V $\overline{=}$; 0,7A; Rated torque: 2Nm; Operating time: 4minutes for SONESSE 30 ZIGBEE HP 2/25 WEID
Modulation Type	O-QPSK
Modulation Technology	6LoWPAN
Operating Frequency	2405MHz to 2480MHz
Number of Channel	16
Antenna Type	PCB Antenna
Antenna Connector	--
Antenna Gain	2dBi
Product SW/HW version	--
Radio SW/HW version	--
Test SW version	--
RF power setting in Test SW	--

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	6.66	2	20	0.001422	1
2405-2480	15.41	2	20	0.000431	1

Conclusion:

The calculation result of MPE is less than the limit.

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