



MPE Test Report

Report No.: LDF-ESH-P24111994B-3

FCC ID: DWNTDBU45ZB

Product: TDBU 45 WF ZIGBEE HP

Model: 5171025A

Received Date: Dec.02, 2024

Test Date: Dec.02, 2024 to Jan.03, 2025

Issued Date: Jan.09, 2025

Applicant: Somfy Systems, Inc.

Address: 121 Herrod Blvd. Dayton, NJ 08810

Manufacturer: Somfy System, 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)



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Release Control Record

Issue No.	Description	Date Issued
LDF-ESH-P24111994B-3	Original release	Jan.09, 2025



1 Certificate of Conformity

Product: TDBU 45 WF ZIGBEE HP

Brand: **somfy.**

Model: 5171025A

Applicant: Somfy Systems, Inc.

Test Date: Dec.02, 2024 to Jan.03, 2025

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.09, 2025

Yan ZHOU

Project Engineer

Approved by :

Sean YU

, Date:

Jan.09, 2025

RF Supervisor

2 General Information

2.1 General Description of EUT

For BLE

Product	TDBU 45 WF ZIGBEE HP
Brand	somfy®
Test Model	5171025A
Power Rating	40rpm 0.7 Nm 12V --- 2A 6min
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

For Zigbee

Product	TDBU 45 WF ZIGBEE HP
Brand	somfy®
Test Model	5171025A
Power Rating	40rpm 0.7 Nm 12V --- 2A 6min
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

Note:

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

2.2 Description of Support Unit

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.
Adaptor for EUT	DONGGUAN DONGSONG ELECTRONIC CO LTD	DYS625-120200W-1	NA
Adaptor for battery	SOMFY ACTIITES SA.	DST151-301U	NA
Battery	SOMFY ACTIITES SA.	9029224	NA

2.3 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	4.37	1	20	0.00068	1
2405-2480	13.97	1	20	0.0063	1

Conclusion:

The calculation result of MPE is less than the limit.

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