

**FCC RF Exposure Exemption report**  
**for**

**Bluetooth(R) Mouse**

**Model No.: M-XGXL31BBS**

**FCC ID: YWO-M-XGXL31BBS**

of

Applicant: ELECOM CO., LTD.

Address: Fushimimachi 4-1-1, Chuo-ku, Osaka City, Osaka Japan 541-8765

Tested and Prepared

by

**Worldwide Testing Services (Taiwan) Co., Ltd.**

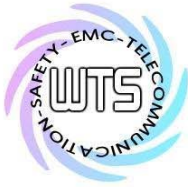
**FCC Registration No.: TW1477, TW1072**

**Industry Canada filed test laboratory Reg. No.: 20037, 5107A**



**Report No.: W6M22307-22851-EE**

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.  
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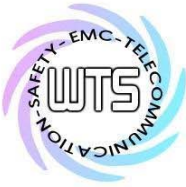
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# Worldwide Testing Services(Taiwan) Co., Ltd.

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## 1 General Information

### 1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems.

The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

Laboratory disclaimer-

1. The test results of this test report relate exclusively to the item tested as specified in 1.5.
2. The test report may only be reproduced or published in full.
3. Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.
4. Antenna gain is provided by applicant and laboratory issue relevant data and results.

### Tester:

August 21, 2023

Sora Kuo

Date

WTS-Lab.

Name

Signature

### Technical responsibility for area of testing:

August 21, 2023

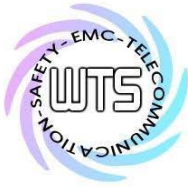
Kevin Wang

Date

WTS

Name

Signature



# **Worldwide Testing Services(Taiwan) Co., Ltd.**

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## **1.2 Testing laboratory**

### **1.2.1 Location**

10m OATS

No.5-1, Lishui, Shuang Sing Village, Wanli Dist.,  
New Taipei City 207, Taiwan (R.O.C.)

3 meter semi-anechoic chamber

No.35, Aly. 21, Ln. 228, Ankang Rd., Neihu Dist.,  
Taipei City 114, Taiwan (R.O.C.)

Tel: 886-2-6613-0228

Worldwide Testing Services (Taiwan) Co., Ltd.

6F., No. 58, Ln. 188, Ruiguang Rd., Neihu Dist.,  
Taipei City 114, Taiwan (R.O.C.)

Tel: 886-2-6606-8877

### **1.2.2 Details of accreditation status**

Accredited testing laboratory

FCC filed test laboratory Reg. No.: TW1477, TW1072

Industry Canada filed test laboratory Reg. No.: 20037, 5107A

**Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd. :**

Name: ./.

Accredited no.: ./.

Street: ./.

Town: ./.

Country: ./.

## **1.3 Application details**

### **Approval holder**

Name: ELECOM CO., LTD.

Street: Fushimimachi 4-1-1, Chuo-ku,

Town: Osaka City, Osaka

Country: Japan 541-8765

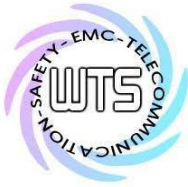
### **Manufacturer: (if applicable)**

Name: ./.

Street: ./.

Town: ./.

Country: ./.



Registration number: W6M22307-22851-EE  
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Date of receipt of test item: July 27, 2023  
Date of test: from July 28, 2023 to August 17, 2023

**1.4 General information of Test item**

Type of test item: Bluetooth(R) Mouse  
Model no.: M-XGXL31BBS  
Multi-listing model no.: M-XGL31BBS, M-XGM31BBS, M-XGS31BBS  
Brand name: ELECOM  
Power supply: Battery 1.5Vd.c.  
Type of antenna: PCB antenna  
Antenna gain: 0 dBi

Technical data

Mode	Channel	Conducted Power (dBm)
BLE 1M	Ch 0 : 2402 MHz	3.11
	Ch 19 : 2440 MHz	2.87
	Ch 39 : 2480 MHz	2.91

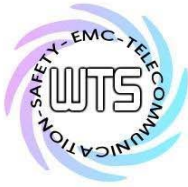
Operation modes: Duplex  
Modulation type: GFSK  
Sample no.: #04  
Special statement: ./.

Classification:

Fixed Device	<input type="checkbox"/>
Mobile Device (Human Body distance > 20cm)	<input type="checkbox"/>
Portable Device (Human Body distance < 20cm)	<input checked="" type="checkbox"/>

**1.7 Test standards**

47 CFR PART 15 SUBPART C § 15.247 (2021-10)



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## **2 Test configuration**

### **2.1 Test environment**

Relative humidity content: 20 ... 75 %

Air pressure: 86 ... 103 kPa

Extreme conditions parameters: ./.

### **2.2 Measurement uncertainty**

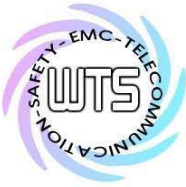
Test item Name	Uncertainty
Estimation Result of Uncertainty of Conducted Output Power Measurement (Peak Output Power (transmitter))	Expanded Uncertainty : 1.48 dB

The decision rule is: Measurement uncertainty is not included in the calculation of test results.

### **2.3 Test Equipment List**

#### **RF Conducted**

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2023/7/28	2024/7/27
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2023/2/17	2024/2/16
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2023/2/17	2024/2/16
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2023/2/17	2024/2/16
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2023/3/22	2024/3/21
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2023/2/17	2024/2/16
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2023/2/17	2024/2/16
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	T-0A023536	T-Power	Function test	
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2023/2/17	2024/2/16
ETSTW-RE 153	Signal Analyzer	FSV40	101929	R&S	2022/10/3	2023/10/2
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2022/9/2	2023/9/1
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2023/4/27	2024/4/26
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S_Cable 9)	279067	HUBER+SUHNER	2023/02/17	2024/2/16
ETSTW-Cable 045	Microwave Cable	SUCOFLEX 104	325536	HUBER+SUHNER	2022/10/21	2023/10/20
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2023/5/26	2024/5/25
WTSTW-SW 008	Signal studio	Agilent	None	AUDIX	Version 2.0.0.1	



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### **3 Equivalent Isotropic Radiated Power (EIRP)**

FCC Rule: 15.247

EIRP = max. conducted output power + antenna gain

EIRP = 3.11 dBm + (0 dBi [antenna gain claimed by manufacturer]) = 3.11 dBm = 2.05 mW

### **3.1 Exemption Limits for Routine Evaluation according to FCC KDB Publication**

#### **RESULT:**

Test standard : FCC KDB Publication  
447498 D01 General RF Exposure Guidance v06

### **3.3.1 Exemption Limits for Routine Evaluation – SAR Evaluation**

SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table .

Table: SAR evaluation — Exemption limits for routine evaluation based on frequency and separation distance

MHz	5	10	15	20	25	mm
2402	10.09	19.26	29.35	38.52	48.52	SAR Test Exclusion Threshold (mW)

MHz	30	35	40	45	50	mm
2402	57.70	67.79	77.87	87.05	97.13	SAR Test Exclusion Threshold (mW)

Output power level shall be the higher of the maximum conducted or equivalent isotropically radiated power (e.i.r.p.) source-based, time-averaged output power.

Established separation distance is 5 mm.

Operating frequency band : 2402-2480 MHz

Max. output power level at 5 mm separation distance at 2402 MHz according to table is: 10.09 mW

The product is exempt from SAR Evaluation/Testing because the output power of 2.05 mW is below the exemption limit of 10.09 mW.