



FCC Test Report

Application No.: DNT2504290726R4454-09833
Applicant: DGL Group LTD.
Address of Applicant: 2045 Lincoln Highway, 3rd Floor, Edison, NJ 08817, United States
EUT Description: WIRELESS MOUSE & CHARGING PAD COMBO
Model No.: BRK-MSPM-ASST
Additional Model(s): BRK-MSPM, BRK-MSPM-XXX, BRK-MSPM-BLK, BRK-MSPM-BLSH, BRK-MSPM-WHT
FCC ID: 2AANZMSPMM
Power Supply: DC 3V
Trade Mark: BREAKOUT
Standards: 47 CFR Part 2, Subpart J
47 CFR Part 15, Subpart C
ANSI C63.10: 2013
Date of Receipt: 2025/7/30
Date of Test: 2025/7/31 to 2025/8/10
Date of Issue: 2025/8/25
Test Result: **PASS**

Prepared By: Wayne Lin (Testing Engineer)

Reviewed By: Pengfei Chen (Project Engineer)

Approved By: Heise Chen (Manager)



Note: If there is any objection to the results in this report, please submit a written inquiry to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp, and is issued by the company in accordance with the requirements of the "Conditions of Issuance of Test Reports" printed in the attached page. Unless otherwise stated, the results presented in this report only apply to the samples tested this time. Partial reproduction of this report is not allowed unless approved by the company in writing.

Dongguan DN Testing Co., Ltd.

Add: No. 1, West Fourth Street, Xingfa South Road, Wusha Community, Chang 'an Town, Dongguan City, Guangdong P.R.China

Web: www.dn-testing.com

Tel: +86-769-88087383

E-mail: service@dn-testing.com



Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V2.0	/	Aug.25, 2025	Valid	Original Report



1 Test Summary

Test Item	Test Requirement	Test Method	Test Result	Result
Antenna Requirement	15.203/247(b)	--	Clause 3.1	PASS
Duty Cycle	--	--	Clause 3.2	PASS
DTS (6 dB) Bandwidth	15.247 (a)(2)	ANSI C63.10: 2013	Clause 3.3	PASS
Conducted Output Power	15.247 (b)(3)	ANSI C63.10: 2013	Clause 3.4	PASS
Power Spectral Density	15.247 (e)	ANSI C63.10: 2013	Clause 3.5	PASS
Band-edge for RF Conducted Emissions	15.247(d)	ANSI C63.10: 2013	Clause 3.6	PASS
RF Conducted Spurious Emissions	15.247(d)	ANSI C63.10: 2013	Clause 3.7	PASS
Radiated Spurious Emissions	15.247(d);15.205/15.209	ANSI C63.10: 2013	Clause 3.8	PASS
Restricted bands around fundamental frequency (Radiated Emission)	15.247(d);15.205/15.209	ANSI C63.10: 2013	Clause 3.9	PASS
AC Power Line Conducted Emission	15.207	ANSI C63.10: 2013	Clause 3.10	N/A

Note:

1. "N/A" denotes test is not applicable in this test report.



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2 General Information

2.1 Test Location

Company:	Dongguan DN Testing Co., Ltd
Address:	No. 1, West Fourth Street, South Xinfu Road, Wusha Liwu, Chang ' an Town, Dongguan City, Guangdong P.R.China
Test engineer:	Wayne Lin

2.2 General Description of EUT

Manufacturer:	DGL Group LTD.
Address of Manufacturer:	2045 Lincoln Highway, 3rd Floor, Edison, NJ 08817, United States
EUT Description:	WIRELESS MOUSE & CHARGING PAD COMBO
Model No.:	BRK-MSPM-ASST
Additional Model(s):	BRK-MSPM, BRK-MSPM-XXX, BRK-MSPM-BLK, BRK-MSPM-BLSH, BRK-MSPM-WHT
Power Supply:	DC 3V
Trade Mark:	BREAKOUT
Hardware Version:	V1.0
Software Version:	V1.0
Serial number:	PR2504290726R4454
Chip Type:	YC1011-T
Operation Frequency:	2402MHz to 2480MHz
Type of Modulation:	GFSK
Sample Type:	☒ Portable Device, ☐ Module, ☐ Mobile Device
Antenna Type:	☐ External, ☒ Integrated
Antenna Ports	☒ Ant 1, ☐ Ant 2, ☐ Ant 3
Antenna Gain*:	☒ Provided by applicant
	2.34dBi
RF Cable*:	☒ Provided by applicant
	0.5dB(0.6~1GHz); 0.8dB(1.4~2GHz); 1.0dB(2.1~2.7GHz); 1.5dB(3~4GHz); 1.8dB(4.4~6GHz);
Note:	
*Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.	
*Only the color of the product is different, everything else is completely consistent.	



2.3 Test Environment and Mode

Operating Environment:	
Temperature:	20~25.0 °C
Humidity:	45~56 % RH
Atmospheric Pressure:	101.0~101.30 KPa
Test mode:	
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.

2.4 Channel List

Operation Frequency of each channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
2	2406MHz	12	2426MHz	22	2446MHz	32	2466MHz
3	2408MHz	13	2428MHz	23	2448MHz	33	2468MHz
4	2410MHz	14	2430MHz	24	2450MHz	34	2470MHz
5	2412MHz	15	2432MHz	25	2452MHz	35	2472MHz
6	2414MHz	16	2434MHz	26	2454MHz	36	2474MHz
7	2416MHz	17	2436MHz	27	2456MHz	37	2476MHz
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz

Remark:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The Lowest channel	2402MHz
The Middle channel	2440MHz
The Highest channel	2480MHz



2.5 Power Setting of Test Software

Software Name	/		
Frequency(MHz)	2402	2440	2480
BLE 1M Setting	default	default	default
BLE 2M Setting	default	default	default

2.6 Assistant equipment used for test

Code	Equipment	Manufacturer	Model No.	Equipment No.
/	/	/	/	/

2.7 Description of Sport Units

The EUT has been tested independent unit.

2.8 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

Lab A:

• FCC, USA

Designation Number: CN1348

• A2LA (Certificate No. 7050.01)

DONGGUAN DN TESTING CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 7050.01.

• Innovation, Science and Economic Development Canada

DONGGUAN DN TESTING CO., LTD. EMC Laboratory has been recognized by ISED as an accredited testing laboratory. CAB identifier is CN0149.

IC#: 30755.



2.9 Equipment List

For Connect EUT Antenna Terminal Test					
Description	Manufacturer	Model	Serial Number	Cal date	Due date
Signal Generator	Keysight	N5181A-6G	MY48180415	2024-10-23	2025-10-22
Signal Generator	Keysight	N5182B	MY57300617	2024-10-23	2025-10-22
Power supply	Keysight	E3640A	ZB2022656	2024-10-23	2025-10-22
Radio Communication Tester	R&S	CMW500	105082	2024-10-23	2025-10-22
Spectrum Analyzer	Aglient	N9010A	MY52220200	2024-10-23	2025-10-22
BT/WIFI Test Software	Tonscend	JS1120 V3.1.83	NA	NA	NA
RF Control Unit	Tonscend	JS0806-2	22F8060581	NA	NA
Power Sensor	Anritsu	ML2495A	2129005	2024-10-23	2025-10-22
Pulse Power Sensor	Anritsu	MA2411B	1911397	2024-10-23	2025-10-22
temperature and humidity box	SCOTEK	SCD-C40-80PRO	6866682020008	2024-10-23	2025-10-22
RF Cable	ETS-LINDGREN	RFC-NMS-100-NMS-350-IN	NA	2024-10-23	2025-10-22

Test Equipment for Conducted Emission					
Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Receiver	R&S	ESCI3	101152	2024-10-23	2025-10-22
LISN	R&S	ENV216	102874	2024-10-23	2025-10-22
ISN	R&S	ENY81-CA6	1309.8590.03	2024-10-23	2025-10-22
RF Cable	ETS-LINDGREN	Cable-CE TS01	/	2024-10-23	2025-10-22

Test Equipment for Radiated Emission(30MHz-1000MHz)					
Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Receiver	R&S	ESR7	102497	2024-10-23	2025-10-22
Test Software	ETS-LINDGREN	TiLE-FULL	NA	NA	NA
RF Cable	ETS-LINDGREN	RE Cable-TS01	NA	2024-10-23	2025-10-22



Log periodic antenna	ETS-LINDGREN	VULB 9168	01475	2022-11-28	2025-11-27
Pre-amplifier	Schwarzbeck	BBV9743B	00423	2024-10-23	2025-10-22
Attenuator 1	Shanghai Huaxiang	TS2-6-18-A	22061803	2025-5-6	2026-5-5
Attenuator 2	Shanghai Huaxiang	TS2-6-6-A	230927163	2025-5-6	2026-5-5

Test Equipment for Radiated Emission(Above 1000MHz)					
Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Frequency analyser	Keysight	N9010A	MY52221458	2024-10-23	2025-10-22
RF Cable	ETS-LINDGREN	RE Cable-TS02	NA	2024-10-23	2025-10-22
Horn Antenna	ETS-LINDGREN	3117	00252567	2022-11-28	2025-11-27
Double ridged waveguide antenna	ETS-LINDGREN	3116C	00251780	2022-11-28	2025-11-27
Test Software	ETS-LINDGREN	TiLE-FULL	NA	NA	NA
Pre-amplifier	ETS-LINDGREN	3117-PA	252567	2024-10-23	2025-10-22
Pre-amplifier	ETS-LINDGREN	3116C-PA	251780	2024-10-23	2025-10-22

**2.10****Measurement Uncertainty (95% confidence levels, k=2)**

No.	Item	Measurement Uncertainty
1	DTS Bandwidth	$\pm 0.0196\%$
2	Maximum Conducted Output Power	$\pm 0.686 \text{ dB}$
3	Maximum Power Spectral Density Level	$\pm 0.743 \text{ dB}$
4	Band-edge Compliance	$\pm 1.328 \text{ dB}$
5	Unwanted Emissions In Non-restricted Freq Bands	9KHz-1GHz: $\pm 0.746 \text{ dB}$ 1GHz-26GHz: $\pm 1.328 \text{ dB}$

No.	Item	Measurement Uncertainty
1	Conduction Emission	$\pm 3.0 \text{ dB}$ (150kHz to 30MHz)
2	Radiated Emission	$\pm 4.8 \text{ dB}$ (Below 1GHz)
		$\pm 4.8 \text{ dB}$ (1GHz to 6GHz)
		$\pm 4.5 \text{ dB}$ (6GHz to 18GHz)
		$\pm 5.02 \text{ dB}$ (Above 18GHz)



3 Test results and Measurement Data

3.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203 /247(c)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. 15.247(b) (4) requirement: The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6dBi.	
The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 2.34dBi.	



3.2 Duty Cycle

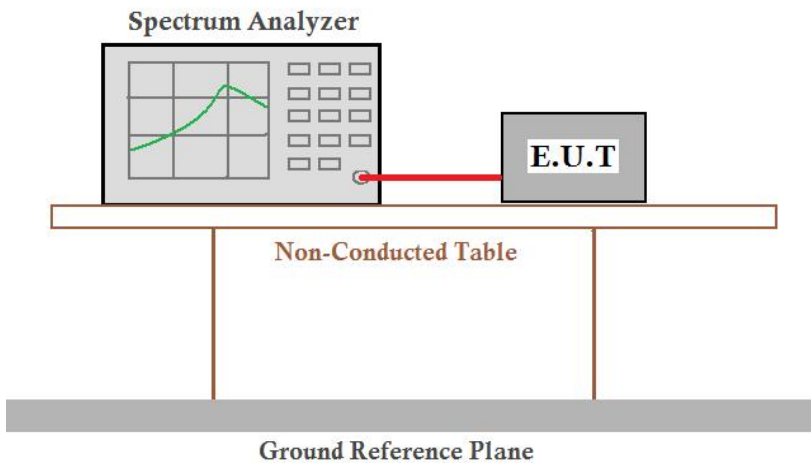
Refer to section : **Appendix A**

Note:

- 1.If duty cycle $< 98\%$, the conducted average output power and average power spectral density should be add duty factor.
- 2.If duty cycle $\geq 98\%$, the EUT is consider to be transmitting continuously, the conducted average output power and average power spectral density no need to add duty factor (consider to be zero).
- 3.The conducted peak output power and peak power spectral density no need to consider duty factor.
- 4.The on-time time is transmission duration (T).



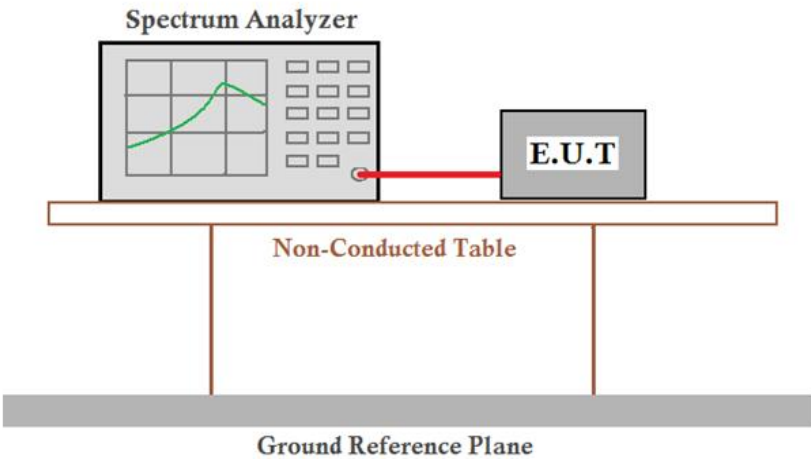
3.3 DTS (6 dB) Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(2)
Test Method:	ANSI C63.10: 2013 Section 11.8.1 Option 1
Test Setup:	
Instruments Used:	Refer to section 2.9 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the the worst case of GFSK
Limit:	≥ 500 kHz
Test Results:	Pass

The detailed test data see: **Appendix B**



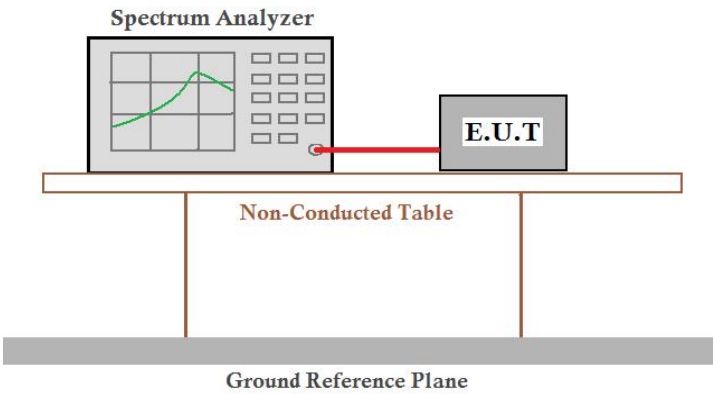
3.4 Conducted Output Power

Test Requirement:	47 CFR Part 15C Section 15.247 (b)(3)
Test Method:	ANSI C63.10: 2013 Section 11.9.1.3
Test Setup:	
Test Instruments:	Refer to section 2.9 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the the worst case of GFSK
Limit:	30dBm
Test Results:	Pass

The detailed test data see: **Appendix C**



3.5 Power Spectral Density

Test Requirement:	47 CFR Part 15C Section 15.247 (e)
Test Method:	ANSI C63.10: 2013 Section 11.10.2
Test Setup:	
Test Instruments:	Refer to section 2.9 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the the worst case of GFSK
Limit:	≤8.00dBm/3kHz
Test Results:	Pass

The detailed test data see: **Appendix D**