

# TEST REPORT

**Application No.:** HKEM2402000093AT  
**Applicant:** E. Gluck Corporation  
**Address of Applicant:** 6015 Little Neck Parkway, Little Neck New York 11362 USA  
**Equipment Under Test (EUT):**  
**EUT Name:** ECLIPSE  
**Model No.:** 42-1000DGBKWM, 42-1001DGGNWM, 42-1001BKG YWM  
**Additional Model:** Please refer to section 2 of this report which indicates which item was actually tested and which were electrically identical.  
**FCC ID:** 2BFCD421001ECL  
**Standard(s) :** 47 CFR Part 1.1307  
47 CFR Part 2.1093  
KDB447498 D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2024-02-20  
**Date of Test:** 2024-02-20 to 2024-02-27  
**Date of Issue:** 2024-02-27

|                     |                                                                    |
|---------------------|--------------------------------------------------------------------|
| <b>Test Result:</b> | The submitted sample was found to comply with the test requirement |
|---------------------|--------------------------------------------------------------------|



**Law Man Kit**  
EMC Manager

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

| Revision Record |      |                   |        |
|-----------------|------|-------------------|--------|
| Revision No.    | Date | Report superseded | Remark |
|                 |      |                   |        |
|                 |      |                   |        |
|                 |      |                   |        |

|                          |  |                                                                                   |  |                  |
|--------------------------|--|-----------------------------------------------------------------------------------|--|------------------|
| Authorized for issue by: |  |                                                                                   |  |                  |
|                          |  |  |  |                  |
|                          |  | Chan Chun Lok /Project Engineer                                                   |  | Date: 2024-02-27 |
|                          |  |  |  |                  |
|                          |  | Law Man Kit<br>/Reviewer                                                          |  | Date: 2024-02-27 |

## 2 Test Summary

| Radio Spectrum Technical Requirement |                                                          |              |              |        |
|--------------------------------------|----------------------------------------------------------|--------------|--------------|--------|
| Item                                 | Standard                                                 | Method       | Requirement  | Result |
| RF Exposure                          | 47 CFR Part 1.1307<br>47 CFR Part 2.1093<br>KDB447498D01 | KDB447498D01 | KDB447498D01 | PASS   |

### Declaration of EUT Family Grouping:

Item no.: 42-1000DGBKWM, 42-1001DGGNWM, 42-1001BKGWWM

According to the confirmation from the applicant, the above models are identical in all electrical aspects in relating to the circuitry design, PCB layout, electrical components used, internal wiring and functions. The difference is the colours of the bands.

Therefore, only the model 42-1000DGBKWM was tested in this report.

### Abbreviation:

Tx: In this whole report Tx (or tx) means Transmitter.  
Rx: In this whole report Rx (or rx) means Receiver.  
RF: In this whole report RF means Radiated Frequency.  
CH: In this whole report CH means channel.  
Volt: In this whole report Volt means Voltage.  
Temp: In this whole report Temp means Temperature.  
Humid: In this whole report Humid means humidity.  
Press: In this whole report Press means Pressure.  
N/A: In this whole report not application.

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## 4 General Information

### 4.1 Details of E.U.T.

|                      |                                                |
|----------------------|------------------------------------------------|
| Power supply:        | Battery Model: 552020<br>Output: DC 3.8 V      |
| Test voltage:        | DC 3.8 V                                       |
| Cable:               | Power Cable: 56 cm 2-wire unshielded USB cable |
| Antenna Gain:        | 0. 13 dBi                                      |
| Antenna Type:        | Monopole Antenna                               |
| Bluetooth Version:   | V5.4 Classic                                   |
| Channel Separation:  | 1MHz                                           |
| Modulation Type:     | GFSK, $\pi/4$ DQPSK, 8DQPSK                    |
| Number of Channels:  | 79                                             |
| Operation Frequency: | 2402MHz to 2480MHz                             |
| Series No.:          | N/A                                            |
| Firmware Version:    | V1                                             |
| Hardware Version:    | V1                                             |

Frequency List:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|---------|-----------------|
| 0       | 2402            | 26      | 2428            | 53      | 2455            |
| 1       | 2403            | 27      | 2429            | 54      | 2456            |
| 2       | 2404            | 28      | 2430            | 55      | 2457            |
| 3       | 2405            | 29      | 2431            | 56      | 2458            |
| 4       | 2406            | 30      | 2432            | 57      | 2459            |
| 5       | 2407            | 31      | 2433            | 58      | 2460            |
| 6       | 2408            | 32      | 2434            | 59      | 2461            |
| 7       | 2409            | 33      | 2435            | 60      | 2462            |
| 8       | 2410            | 34      | 2436            | 61      | 2463            |
| 9       | 2411            | 35      | 2437            | 62      | 2464            |
| 10      | 2412            | 36      | 2438            | 63      | 2465            |
| 11      | 2413            | 37      | 2439            | 64      | 2466            |
| 12      | 2414            | 38      | 2440            | 65      | 2467            |
| 13      | 2415            | 39      | 2441            | 66      | 2468            |
| 14      | 2416            | 40      | 2442            | 67      | 2469            |
| 15      | 2417            | 41      | 2443            | 68      | 2470            |
| 16      | 2418            | 42      | 2444            | 69      | 2471            |
| 17      | 2419            | 43      | 2445            | 70      | 2472            |
| 18      | 2420            | 44      | 2446            | 71      | 2473            |
| 19      | 2421            | 45      | 2447            | 72      | 2474            |
| 20      | 2422            | 46      | 2448            | 73      | 2475            |
| 21      | 2423            | 47      | 2449            | 74      | 2476            |
| 22      | 2424            | 48      | 2450            | 75      | 2477            |
| 23      | 2425            | 49      | 2451            | 76      | 2478            |
| 24      | 2426            | 50      | 2452            | 77      | 2479            |
| 25      | 2427            | 51      | 2453            | 78      | 2480            |
| 26      | 2428            | 52      | 2454            |         |                 |

The frequencies under test are bolded.

---

## 4.2 Description of Support Units

| Description             | Manufacturer         | Model No. | Serial No. |
|-------------------------|----------------------|-----------|------------|
| Laptop                  | DELL                 | P75F      | 475LXQ2    |
| FCC_assist_1.0.4(1).exe | E. Gluck Corporation | N/A       | N/A        |

Note: The laptop and the software FCC\_assist\_1.0.4(1).exe were for the control of the engineering mode.

## 4.3 Modulation Configuration

| RF software:                                                          | FCC_assist_1.0.4(1).exe |             |             |       |
|-----------------------------------------------------------------------|-------------------------|-------------|-------------|-------|
| Modulation                                                            | Packet                  | Packet Type | Packet Size | Power |
| GFSK                                                                  | DH1                     | Default     | Default     | 10    |
|                                                                       | DH3                     | Default     | Default     | 10    |
|                                                                       | DH5                     | Default     | Default     | 10    |
| $\pi/4$ DQPSK                                                         | 2DH1                    | Default     | Default     | 10    |
|                                                                       | 2DH3                    | Default     | Default     | 10    |
|                                                                       | 2DH5                    | Default     | Default     | 10    |
| 8DQPSK                                                                | 3DH1                    | Default     | Default     | 10    |
|                                                                       | 3DH3                    | Default     | Default     | 10    |
|                                                                       | 3DH5                    | Default     | Default     | 10    |
| Remark:                                                               |                         |             |             |       |
| 1. 10 value was set in test software as maximum output power setting. |                         |             |             |       |

#### 4.4 Test Location

All tests were performed at:

SGS Hong Kong Limited

Unit 2 and 3, G/F, Block A, Po Lung Centre,

11 Wang Chiu Road, Kowloon Bay, Kowloon, Hong Kong

Tel: +852 2305 2570 Fax: +852 2756 4480

No tests were sub-contracted.

#### 4.5 Test Facility

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

- **IAS Accreditation (Lab Code: TL-817)**

SGS Hong Kong Limited has met the requirements of AC89, IAS Accreditation Criteria for Testing Laboratories, and has demonstrated compliance with ISO/IEC Standard 17025:2017, General requirements for the competence of testing and calibration laboratories. This organization is accredited to provide the services specified in the scope of accreditation maintained on the IAS website ([www.iasonline.org](http://www.iasonline.org)).

The report must not be used by the client to claim product certification, approval, or endorsement by IAS, NIST, or any agency of the Federal Government.

- **FCC Recognized Accredited Test Firm(CAB Registration No.: 514599)**

SGS Hong Kong Limited has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: HK0015, Test Firm Registration Number: 514599.

- **Industry Canada (Site Registration No.: 26103; CAB Identifier No.: HK0015)**

SGS Hong Kong Limited has been recognized by Department of Innovation, Science and Economic Development (ISED) Canada as a wireless testing laboratory. The acceptance letter from the ISED is maintained in our files. CAB Identifier No: HK0015, Site Registration Number: 26103.

#### 4.6 Deviation from Standards

None

#### 4.7 Abnormalities from Standard Conditions

None

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## 5 Radio Spectrum Technical Requirement

### 5.1 RF Exposure

#### 5.1.1 Test Requirement:

KDB447498 D01

Limit:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$$\left[ \frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

- ☐  $f(\text{GHz})$  is the RF channel transmit frequency in GHz
- ☐ Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>
- ☐ The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion

### 5.1.1 EUT RF Exposure Evaluation

For FCC;

According to the formula. calculate the test exclusion thresholds:

*BT Classic:*

$$\text{General RF Exposure} = (2.2233\text{mW} / 5\text{ mm}) \times \sqrt{2.402\text{ GHz}} = 0.689 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

$$(1) < (2)$$

Thus, they are exempt from SAR testing.

Remark: 2.2233 mW (3.47dBm) was derived from the worst conducted output power of 3.3dBm and the antenna gain of 0.17dBi from report HKEM240200009302.

## **6 Photographs**

### **6.1 EUT Constructional Details (EUT Photos)**

Refer to the appendices external, internal and setup photos.

- End of the Report -