# FCC ID: 2A9Q9-M1026Q

| Product Name:      | Legion 3-in-1 Charging Station                             |
|--------------------|--|
| Product Model No.: | M1026Q-A<br>EAC-LG23                                       |
| Transmitting mode  | Keep the EUT in continuously wireless charging mode        |
|                    | Type C Input: DC 5V/3A, 9V/2A, 12V/1.5A                    |
| Power supply:      | Wireless Charging Output (Stand): 5W, 7.5W, 10W, 15W (Max) |
| i ower supply.     | Wireless Charging Output (Base): 5W                        |
|                    | Wireless Charging Output (Watch): 2W                       |
| Date of Receipt:   | May. 18, 2023  |
| Test Date:         | May. 18, 2023 - May. 24, 2023                              |
| Date of Report:    | May. 24, 2023  |

| Test Modes:  |                     |        |                      |  |  |
|--|---------------------|--------|----------------------|--|--|
| Mode1.   | Phone+Earphone Mode | Mode2. | lwatch+Earphone Mode |  |  |
| Mode3.   | Phone+Iwatch Mode   |        |                      |  |  |
| Mode4. Phone+Earphone+Iwatch Mode  |                     |        |                      |  |  |
| Note: We have evaluated 1%, 50% and 99% battery charging mode, and the worst mode8 (99%) is showed in this report. |                     |        |                      |  |  |

## **RF Exposure Evaluation**

## 1 Measuring Standard

KDB 680106 RF Exposure Wireless Charging Apps v03r01

## 2 Requirements

According to the item 5 of KDB 680106 v03r01:

Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF exposure evaluation.

| (1) Power transfer frequency is less than 1MHz.           | Yes; the device operate in the frequency range   |
|---|--|
|   | from 115 KHz to 205 KHz                          |
| (2) Output power from each primary coil is less than or   | Yes; the maximum output power of the primary     |
| equal to 15 watts.  | coil is 15W.                                     |
| (3) The system may consist of more than one source        | Yes; the transfer system includes only one       |
| primary coils, charging one or more clients. If more than | primary coils.                                   |
| one primary coil is present, the coil pairs may be        |  |
| powered on at the same time.                              |  |
| (4) Client device is placed directly in contact with the  | Yes; Client device is placed directly in contact |
| transmitter.  | with the transmitter.                            |
| (5) Mobile exposure conditions only (portable exposure    | Yes, mobile exposure conditions only.            |
| conditions are not covered by this exclusion).            |  |
| (6) The aggregate H-field strengths anywhere at or        | Yes, see test result in item 6.                  |
| beyond 15 cm surrounding the device, and 20 cm away       |  |

from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.

Remark: Meet all the above requirements.

#### Limits

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

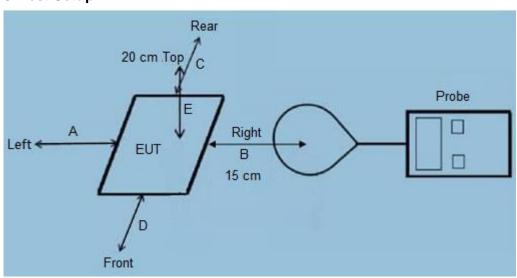
Limits for Maximum Permissible Exposure (MPE)

| Frequency range<br>(MHz)                                | Electric field strength (V/m)                    | Magnetic field strength (A/m) | Power density<br>(mW/cm²) | Averaging time (minutes) |  |  |
|---|--|-------------------------------|---------------------------|--------------------------|--|--|
|   | (A) Limits for Occupational/Controlled Exposures |                               |                           |                          |  |  |
| 0.3-3.0   | 614  | 1.63                          | *(100)                    | 6                        |  |  |
| 3.0-30  | 1842/f   | 4.89/f                        | *(900/f <sup>2</sup> )    | 6                        |  |  |
| 30-300  | 61.4   | 0.163                         | 1.0                       | 6                        |  |  |
| 300-1500  | /  | /                             | f/300                     | 6                        |  |  |
| 1500-100,000  | /  | 1                             | 5                         | 6                        |  |  |
| (B) Limits for General Population/Uncontrolled Exposure |  |                               |                           |                          |  |  |
| 0.3-1.34  | 614  | 1.63                          | *(100)                    | 30                       |  |  |
| 1.34-30   | 824/f  | 2.19/f                        | *(180/f <sup>2</sup> )    | 30                       |  |  |
| 30-300  | 27.5   | 0.073                         | 0.2                       | 30                       |  |  |
| 300-1500  | /  | /                             | f/1500                    | 30                       |  |  |
| 1500-100,000  | /  | 1                             | 1.0                       | 30                       |  |  |

F=frequency in MHz

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

#### 3 Test Setup



#### **4 Test Procedure**

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The measurement probe was placed at test distance (0 cm to 20 cm from all sides) which is between the edge of the charger and the geometric center of probe.
- 3) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E, F) were completed.
- 4) The EUT was measured according to the dictates of KDB 680106 v03r01.

Remark: The EUT's test position A, B, C, D, E,F is valid for the E and H field measurements.

<sup>=</sup>Plane-wave equivalent power density

## 5 Description of Support Units

Adapter (Provide by test lab):

Manufacturer: XIAOMI

Model: AD65G

Manufacturer: SAMSUNG

I/P: AC 100-240V 50/60Hz

O/P: DC 5V/3A, DC 9V/3A, DC 10V/5A, DC 12V/3A,

DC 15V/3A, DC 20V/3.25A

Watch (Provide by test lab):

Manufacturer: Apple

Model: Series 6

Mobile phone (Provide by test lab):

Manufacturer: SAMSUNG

Model: Galaxy S21 5G

Headset (Provide by test lab):

Manufacturer: Apple

Model: AirPods Pro

#### **6 Test Instruments list**

| Test Equipment        | Manufacturer | Model No                     | Model No. SN. | Cal.Date      | Cal.Due date  |
|-----------------------|--------------|------------------------------|---------------|---------------|---------------|
| Test Equipment        | Manuacturer  | wiodei No.                   |               | (mm-dd-yy)    | (mm-dd-yy)    |
| Exposure Level Tester | Narda        | ELT-400                      | N-0231        | June. 25 2022 | June. 26 2023 |
| Magnetic field probe  | Narda        | ELT probe 100cm <sup>2</sup> | M0675         | June. 25 2022 | June. 26 2023 |
| 100cm <sup>2</sup>    | Natua        | ELI probe roociii-           | 1010075       | June. 25 2022 | June. 20 2023 |
| Field Probe           | ETS          | HI-6105                      | /             | June. 25 2022 | June. 26 2023 |
| Laser Data Interface  | ETS          | HI-6113                      | /             | June. 25 2022 | June. 26 2023 |

## 7 Test Uncertainty

E-Filed Strength :  $\pm 0.08 \text{V/m}$ H-Filed Strength :  $\pm 0.02 \text{A/m}$ 

#### 8 Test Result

## E-Filed Strength at edges surrounding the EUT (V/m)

## Frequency Range 0.115-0.205 (MHz)

| Frequency Range | Test       | Test       | Test       | Test       | Limits |
|-----------------|------------|------------|------------|------------|--------|
| (MHz)           | Position A | Position B | Position C | Position D | (V/m)  |
| 0.115-0.205     | 0.23       | 0.14       | 0.16       | 0.15       | 614    |

## E-Filed Strength at 20 cm from the top of the EUT (V/m)

| Frequency Range | Test       | Limits |
|-----------------|------------|--------|
| (MHz)           | Position E | (V/m)  |
| 0.115-0.205     | 0.12       | 614    |

## H-Filed Strength at the edges surrounding the EUT (A/m)

Frequency Range 0.115-0.205 (MHz)

## H-Filed Strength at 15 cm from the edges surrounding the EUT

| Frequency Range | Test       | Test       | Test       | Test       | Unit |
|-----------------|------------|------------|------------|------------|------|
| (MHz)           | Position A | Position B | Position C | Position D |      |
| 0.115-0.205     | 0.119      | 0.103      | 0.143      | 0.095      | (ut) |

## H-Filed Strength at 20 cm from the top of the EUT

| Frequency Range<br>(MHz) | Test<br>Position E | Unit |
|--------------------------|--------------------|------|
| 0.115-0.205              | 0.111              | (ut) |

## H-Filed Strength at 15 cm from the edges surrounding the EUT (A/m)

| Frequency Range | Test       | Test       | Test       | Test       | Limits |
|-----------------|------------|------------|------------|------------|--------|
| (MHz)           | Position A | Position B | Position C | Position D | (A/m)  |
| 0.115-0.205     | 0.15       | 0.13       | 0.18       | 0.12       | 1.63   |

#### H-Filed Strength at 20 cm from the top of the EUT (A/m)

| Frequency Range | Test       | Limits |
|-----------------|------------|--------|
| (MHz)           | Position E | (A/m)  |
| 0.115-0.205     | 0.14       | 1.63   |

Note: 1A/m=1.26uT

## 9 Test Set-up Photo



