

## 1. GENERAL INFORMATION

### 1.1 CLIENT INFORMATION

|            |                              |
|------------|------------------------------|
| Applicant: | HANK ELECTRONICS VIETNAM LTD |
| FCC ID:    | 2A9G4HKWP21071-15L           |

### 1.2 EUT INFORMATION

|                            |                                          |
|----------------------------|------------------------------------------|
| Product Name:              | Snapstand Qi2 Wireless Charger           |
| Model No.:                 | HKWP21071-15L                            |
| Brand Name:                | Native Union                             |
| DUT Stage:                 | <i>Production Unit</i>                   |
| Operating Frequency Range: | 127kHz to 360kHz                         |
| Antenna Type:              | Coil Antenna                             |
| Power Supply               | 120VAC                                   |
| Sample Received Date:      | September 02, 2024                       |
| Sample Tested Date:        | September 02, 2024 to September 13, 2024 |

Prepared and Checked by:

Approved by:

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Assistant Engineer  
Date: October 29, 2024

Wong Cheuk Ho, Herbert  
Assistant Manager  
Date: October 29, 2024

## 1.3 OTHER INFORMATION

### Support Equipment

| Description                                                                                                                                                      | Remark               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| An AC adaptor (Model: RH-PD35W; Input: 100-240VAC 50/60Hz 0.8A(MAX); Provided by Intertek<br>Output: 5.0V 3.0A, 9.0V 3.0A, 12.0V 2.8A, 15.0V 2.33A, 20.0V 1.75A) |                      |
| iPhone                                                                                                                                                           | Provided by Intertek |
| 15W Loading                                                                                                                                                      | Provided by Intertek |

## 1.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

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The EUT is a RF product, according to the specifications of the manufacturers. It must comply with the requirements of the following standards:

According to KDB680106 D01 RF Exposure Wireless Charging Apps v04 (October 24, 2023), the requirement of RF exposure for the Wireless Charging device shall be met.

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## 2. EQUIPMENT LIST

| Test Equipment List |                                              |              |           |               |                         |                             |
|---------------------|----------------------------------------------|--------------|-----------|---------------|-------------------------|-----------------------------|
| Equipment No.       | Equipment                                    | Manufacturer | Model No. | Serial Number | Cal. date (mm dd, yyyy) | Cal. Due date (mm dd, yyyy) |
| EW-3412             | Electric and Magnetic Field Probe - Analyzer | NARDASAFETY  | EHP-200A  | 170WX91004    | Jul 20, 2022            | Oct 20, 2024                |

## 3. MPE EVALUATION

### 3.1 REFERENCE DOCUMENTS FOR EVALUATION

According to KDB680106 D01 RF Exposure Wireless Charging Apps v04 (October 24, 2023), the requirement of RF exposure for the Wireless Charging device shall be met.

### 3.2 MPE COMPLIANCE REQUIREMENT

#### 3.2.1 Limits

##### 3.2.1.1

According to §1.1310(e)(1), system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

#### Limits for Occupational / Controlled Exposure

| Frequency range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Times   E   <sup>2</sup> ,   H   <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------------|------------------------------------------------------------------------|
| 0.3-3.0               | 614                               | 1.63                              | (100)*                                  | 6                                                                      |
| 3.0-30                | 1842/f                            | 4.89/f                            | (900/f)*                                | 6                                                                      |
| 30-300                | 61.4                              | 0.163                             | 1.0                                     | 6                                                                      |
| 300-1500              | /                                 | /                                 | F/300                                   | 6                                                                      |
| 1500-100000           | /                                 | /                                 | 5                                       | 6                                                                      |

#### Limits for General Population/Uncontrolled Exposure

| Frequency range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Times   E   <sup>2</sup> ,   H   <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------------|------------------------------------------------------------------------|
| 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                                                                     |
| 300-1,500             | /                                 | /                                 | f/1500                                  | 30                                                                     |
| 1,500-100,000         | /                                 | /                                 | 1.0                                     | 30                                                                     |

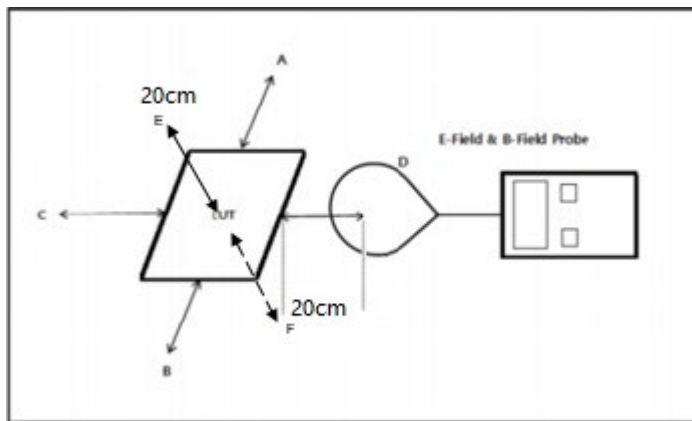
**Note:** f = frequency in MHz: \* = Plane-wave equivalents power density.

### 3.2.2 Test Procedure

Enabled the EUT to transmit and receive data continue

- The field strength of both E-field and H-field was measured at 20 cm surrounding the device and 20 cm above the top surface using the equipment list above for determining compliance with the MPE requirements of FCC Part 1.1310.
- For 15W wireless charging, specific loading is required for providing Max. output power for testing.
- Maximum E-field and H-field measurements were made 20cm from each side of the EUT. Along the side of the EUT and still 20cm away from the edge of the EUT, the field probes were positioned at the location where there is maximum field strength. The maximum E-field and H-field is reported below.
- This device uses a wireless charging circuit for power transfer operating at the frequency range of 127kHz to 360kHz. Thus, the 300 kHz limits were used: E-field Limit = 614 (V/m); H-field limit = 1.63 (A/m).

### 3.2.3 Test setup



Since this application applied short-term confidentiality, thus the outlook photos of the Coil Plates are saved with filename: setup photo.pdf

#### Note

- The RF exposure test is performed in the shield room
- The test distance is between the edge of the charger and the geometric center of probe
- The aggregate at 20 cm surrounding the device and 20 cm above the top surface from transmitting coil is demonstrated.
- Test Position: Rear, Right, Front, Left, Top, Bottom

### 3.3 TEST DATA

#### Charging with Full Load – Max. output power

##### E-Field Strength

| Test Mode               | Probe Position (V/m)<br>C-Rear | Probe Position (V/m)<br>B-Right | Probe Position (V/m)<br>D-Front | Probe Position (V/m)<br>A-Left | Probe Position (V/m)<br>E-Top | Probe Position (V/m)<br>F-Bottom | Limits (V/m) | Result   |
|-------------------------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|-------------------------------|----------------------------------|--------------|----------|
| Charging with Full Load | 1.0425                         | 0.9153                          | 1.1945                          | 1.2074                         | 1.5906                        | 0.8575                           | 614          | Complied |

##### H-Field Strength

| Test Mode               | Probe Position (A/m)<br>C-Rear | Probe Position (A/m)<br>B-Right | Probe Position (A/m)<br>D-Front | Probe Position (A/m)<br>A-Left | Probe Position (A/m)<br>E-Top | Probe Position (A/m)<br>F-Bottom | Limits (A/m) | Result   |
|-------------------------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|-------------------------------|----------------------------------|--------------|----------|
| Charging with Full Load | 0.0584                         | 0.0439                          | 0.0490                          | 0.0455                         | 0.2234                        | 0.1950                           | 1.63         | Complied |

### Standby Mode

#### E-Field Strength

| Test Mode | Probe Position (V/m)<br>C-Rear | Probe Position (V/m)<br>B-Right | Probe Position (V/m)<br>D-Front | Probe Position (V/m)<br>A-Left | Probe Position (V/m)<br>E-Top | Probe Position (V/m)<br>F-Bottom | Limits (V/m) | Result   |
|-----------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|-------------------------------|----------------------------------|--------------|----------|
| Standby   | 0.2645                         | 0.2197                          | 0.2192                          | 0.2310                         | 0.2678                        | 0.2639                           | 614          | Complied |

#### H-Field Strength

| Test Mode | Probe Position (A/m)<br>C-Rear | Probe Position (A/m)<br>B-Right | Probe Position (A/m)<br>D-Front | Probe Position (A/m)<br>A-Left | Probe Position (A/m)<br>E-Top | Probe Position (A/m)<br>F-Bottom | Limits (A/m) | Result   |
|-----------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|-------------------------------|----------------------------------|--------------|----------|
| Standby   | 0.0283                         | 0.0282                          | 0.0282                          | 0.0272                         | 0.1100                        | 0.0452                           | 1.63         | Complied |

Test Setup Photo:

Since this application applied short-term confidentiality, thus the setup photos of RF exposure test are saved with filename: setup photo.pdf

\*\*\* End of Report \*\*\*

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