

## RF EXPOSURE TEST REPORT

|           |                                                        |
|-----------|--------------------------------------------------------|
| Applicant | Belkin International, Inc.                             |
| Address   | 12045 East Waterfront Drive, Playa Vista, CA 90094 USA |

|                                     |                                                        |
|-------------------------------------|--------------------------------------------------------|
| Manufacturer or Supplier            | Belkin International, Inc.                             |
| Address                             | 12045 East Waterfront Drive, Playa Vista, CA 90094 USA |
| Product                             | BOOST↑CHARGE™ Wireless Charging Stand 10W              |
| Additional Product                  | Wireless Charging Stand 10W                            |
| Brand Name                          | belkin, playa                                          |
| Model                               | WIB001V2                                               |
| Additional Model & Model Difference | PW0005V2, see items 1.1                                |
| Date of tests                       | Feb. 09, 2021 ~ Mar. 16, 2021                          |

The submitted sample of the above equipment has been tested according to the requirements of the following standard:

- ☒ 47 CFR PART 1, Subpart I, Section 1.1310
- ☒ KDB 680106 D01

**CONCLUSION: The submitted sample was found to COMPLY with the test requirement**

|                                                                                     |                                                                                                             |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Tested by Lucas Chen<br>Project Engineer / EMC Department                           | Approved by Glyn He<br>Assistant Manager/ EMC Department                                                    |
|  | <br>Data: Mar. 26, 2021 |

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Test Report No.: FM2102WDG0030

## RELEASE CONTROL RECORD

| ISSUE NO.     | REASON FOR CHANGE | DATE ISSUED   |
|---------------|-------------------|---------------|
| FM2102WDG0030 | Original release  | Mar. 26, 2021 |

# 1. GENERAL INFORMATION

## 1.1. GENERAL DESCRIPTION OF EUT

|                                  |                                                                                                                              |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>FCC ID</b>                    | K7SWIB001V2                                                                                                                  |
| <b>PRODUCT</b>                   | BOOST↑CHARGE™ Wireless Charging Stand 10W                                                                                    |
| <b>ADDITIONAL PRODUCT</b>        | Wireless Charging Stand 10W                                                                                                  |
| <b>MODEL NO.</b>                 | WIB001V2                                                                                                                     |
| <b>ADDITIONAL MODEL</b>          | PW0005V2                                                                                                                     |
| <b>SAMPLE STATUS</b>             | Engineering sample                                                                                                           |
| <b>POWER SUPPLY</b>              | Input: 5.0VDC 2.0A, Output:5.0VDC 5.0W;<br>Input: 9.0VDC 2.0A, Output:9VDC 10.0W;<br>Input: 12.0VDC 1.5A, Output:12VDC 10.0W |
| <b>MODULATION TECHNOLOGY</b>     | FSK                                                                                                                          |
| <b>OPERATING FREQUENCY RANGE</b> | 111KHz ~ 145KHz                                                                                                              |
| <b>ANTENNA TYPE</b>              | Coil Antenna                                                                                                                 |
| <b>I/O PORTS</b>                 | Refer to user's manual                                                                                                       |
| <b>CABLE SUPPLIED</b>            | USB- A to Micro USB cable: Shielded, detachable 1.3m                                                                         |

### NOTES:

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- For the test results, the EUT had been tested with all conditions, but only the worst case was shown in test report.
- Please refer to the EUT photo document (Reference No.: 2102WDG0030-1) for detailed product photo.
- Additional model PW0005V2 is identical with test model WIB001V2 except the product name and model no. for trading purpose.
- The EUT was powered by the following adapter. (only worst case adapter 1 was shown in test report.)

|                  |                                   |
|------------------|-----------------------------------|
| <b>ADAPTER 1</b> |                                   |
| BRAND:           | N/A                               |
| MODEL:           | DSA-18QFB FUS A                   |
| INPUT:           | AC 100-240V, 50/60HZ, 0.8A        |
| OUTPUT:          | DC 3.6-6V 2A, 6-9V 2A, 9-12V 1.5A |
| DC LINE:         | N/A                               |
| <b>ADAPTER 2</b> |                                   |
| BRAND:           | belkin                            |
| MODEL:           | A138A-120150U-US5                 |
| INPUT:           | AC 100-240V, 50/60HZ, 0.5A        |
| OUTPUT:          | DC 5.0V 2.0A, 9V 2A, 12V 1.5A     |
| DC LINE:         | N/A                               |

## 2. RF EXPOSURE MEASUREMENT

### 2.1 LIMITS

§ 1.1310 The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency(RF) radiation as specified in § 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency range<br>(MHz)                                       | Electric field<br>strength<br>(V/m) | Magnetic field<br>strength<br>(A/m) | Power density<br>(mW/cm <sup>2</sup> ) | Averaging time<br>(minutes) |
|----------------------------------------------------------------|-------------------------------------|-------------------------------------|----------------------------------------|-----------------------------|
| <b>(A) Limits for Occupational/Controlled Exposures</b>        |                                     |                                     |                                        |                             |
| 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 .....                                             | .....                               | .....                               | 5                                      | 6                           |
| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                                     |                                     |                                        |                             |
| 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 .....                                             | .....                               | .....                               | 1.0                                    | 30                          |

f = frequency in MHz

\* = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

### Reference KDB 680106 D01 RF Exposure Wireless Charging App v03

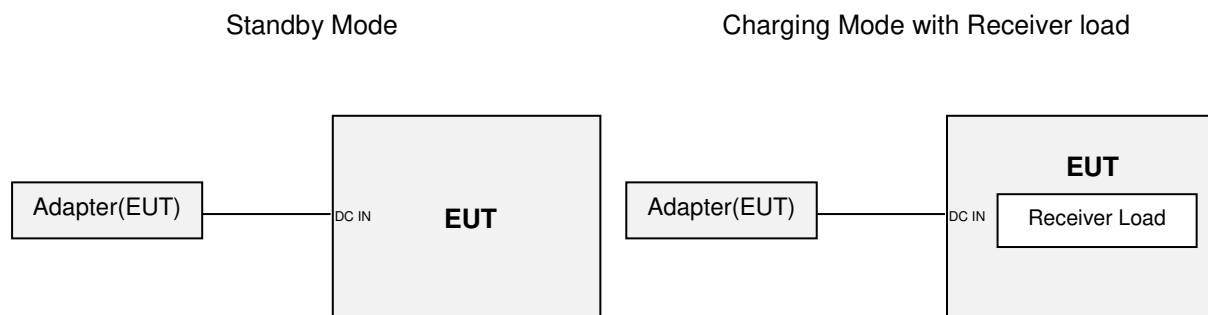
The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

### 2.2 DESCRIPTION OF SUPPORT UNITS

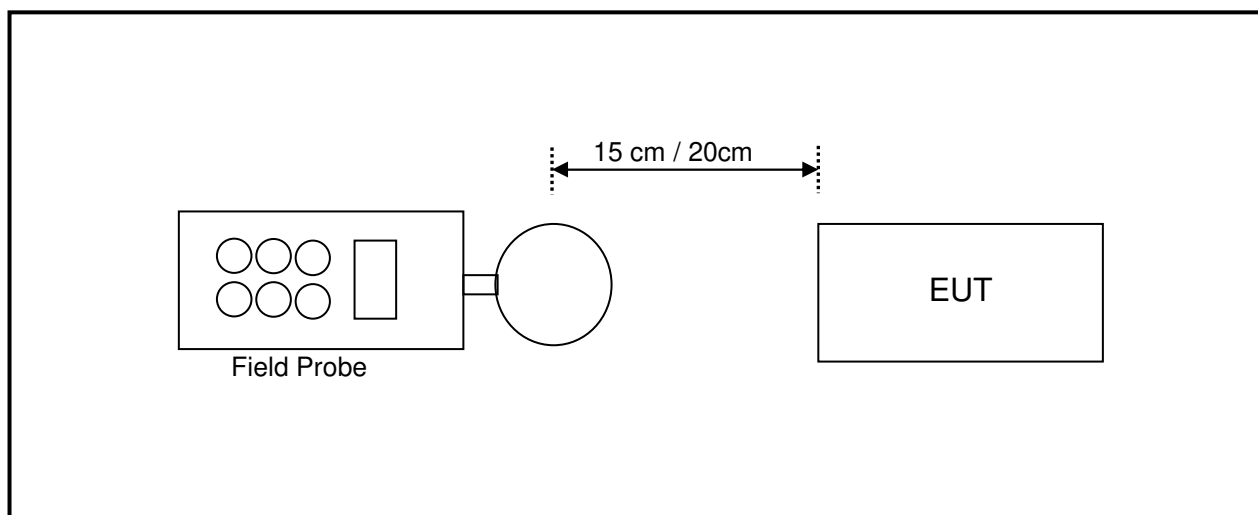
The EUT has been tested with associated equipment below

| NO. | PRODUCT       | BRAND | MODEL NO. | SERIAL NO. | FCC ID |
|-----|---------------|-------|-----------|------------|--------|
| 1   | Receiver load | N/A   | N/A       | N/A        | N/A    |

## 2.3 CONFIGURATION OF SYSTEM UNDER TEST



## 2.4 TEST SETUP FOR WPC



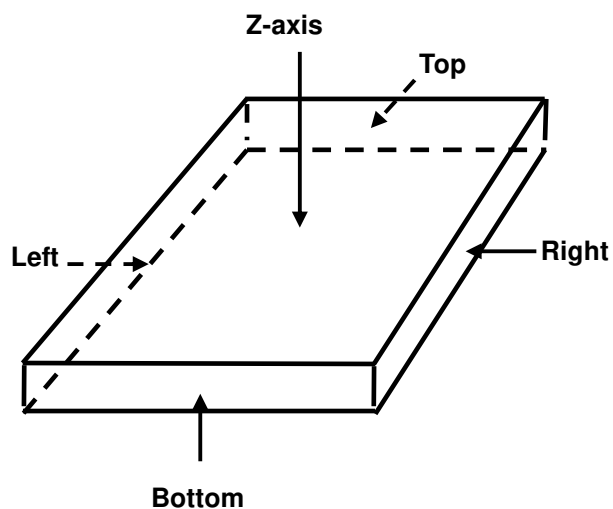
Note: Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device.

## 2.5 EQUIPMENTS USED DURING TEST

| Item | Test Equipment              | Manufacturer | Model No. | Frequency Range | Next Cal.  |
|------|-----------------------------|--------------|-----------|-----------------|------------|
| 1    | 3m Semi-Anechoic Chamber    | ETS-LINDGREN | 7m*4m*3m  | NSEMC003        | 2021-03-19 |
| 2    | Narda Broadband Field Meter | Narda        | NBM-520   | 100KHz-90GHz    | 2021-12-23 |
| 3    | E-Field probe               | Narda        | EF0691    | 100KHz-6GHz     | 2021-12-23 |
| 4    | Exposure Level Tester       | Narda        | ELT-400   | 1Hz-400KHz      | 2021-12-23 |

**NOTE:** 1. The test was performed in RS chamber.  
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

## 2.6 TEST POINT DESCRIPTION



## 2.7 TEST RESULTS

### Mode 1 USB-C port input + Standby

| E-Field Measurement |         |         |         |         |         |
|---------------------|---------|---------|---------|---------|---------|
| Distance            | 15cm    |         |         |         | 20cm    |
| EUT Side            | Left    | Right   | Top     | Bottom  | Z-axis  |
| Max E-field (V/m)   | 0.27    | 0.32    | 0.37    | 0.28    | 0.27    |
| Limit (V/m)         | 614     | 614     | 614     | 614     | 614     |
| Margin (V/m)        | -613.73 | -613.68 | -613.63 | -613.72 | -613.73 |
| 50% Limit (V/m)     | 307     | 307     | 307     | 307     | 307     |
| 50% Margin (V/m)    | -306.73 | -306.68 | -306.63 | -306.72 | -306.73 |

| H-Field Measurement |        |        |        |        |        |
|---------------------|--------|--------|--------|--------|--------|
| Distance            | 15cm   |        |        |        | 20cm   |
| EUT Side            | Left   | Right  | Top    | Bottom | Z-axis |
| Max H-field (uT)    | 0.225  | 0.224  | 0.229  | 0.224  | 0.235  |
| Max H-field (A/m)   | 0.179  | 0.178  | 0.182  | 0.178  | 0.187  |
| Limit (A/m)         | 1.63   | 1.63   | 1.63   | 1.63   | 1.63   |
| Margin (A/m)        | -1.451 | -1.452 | -1.448 | -1.452 | -1.443 |
| 50% Limit (A/m)     | 0.815  | 0.815  | 0.815  | 0.815  | 0.815  |
| 50% Margin (A/m)    | -0.636 | -0.637 | -0.633 | -0.637 | -0.628 |

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

### Charging Mode2 USB-C port input + Receiver load operating at center (100% Load)

| E-Field Measurement |         |         |         |         |         |
|---------------------|---------|---------|---------|---------|---------|
| Distance            | 15cm    |         |         |         | 20cm    |
| EUT Side            | Left    | Right   | Top     | Bottom  | Z-axis  |
| Max E-field (V/m)   | 1.15    | 1.27    | 4.17    | 1.07    | 2.68    |
| Limit (V/m)         | 614     | 614     | 614     | 614     | 614     |
| Margin (V/m)        | -612.85 | -612.73 | -609.83 | -612.93 | -611.32 |
| 50% Limit (V/m)     | 307     | 307     | 307     | 307     | 307     |
| 50% Margin (V/m)    | -305.85 | -305.73 | -302.83 | -305.93 | -304.32 |

| H-Field Measurement |        |        |        |        |        |
|---------------------|--------|--------|--------|--------|--------|
| Distance            | 15cm   |        |        |        | 20cm   |
| EUT Side            | Left   | Right  | Top    | Bottom | Z-axis |
| Max H-field (uT)    | 0.259  | 0.269  | 0.318  | 0.346  | 0.457  |
| Max H-field (A/m)   | 0.206  | 0.214  | 0.253  | 0.275  | 0.364  |
| Limit (A/m)         | 1.63   | 1.63   | 1.63   | 1.63   | 1.63   |
| Margin (A/m)        | -1.424 | -1.416 | -1.377 | -1.355 | -1.266 |
| 50% Limit (A/m)     | 0.815  | 0.815  | 0.815  | 0.815  | 0.815  |
| 50% Margin (A/m)    | -0.609 | -0.601 | -0.562 | -0.540 | -0.451 |

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



**Charging Mode3 USB-C port input + Receiver load operating at center (50% Load)**

| E-Field Measurement |         |         |         |        |         |
|---------------------|---------|---------|---------|--------|---------|
| Distance            | 15cm    |         |         |        | 20cm    |
| EUT Side            | Left    | Right   | Top     | Bottom | Z-axis  |
| Max E-field (V/m)   | 1.22    | 1.63    | 4.52    | 1.3    | 1.33    |
| Limit (V/m)         | 614     | 614     | 614     | 614    | 614     |
| Margin (V/m)        | -612.78 | -612.37 | -609.48 | -612.7 | -612.67 |
| 50% Limit (V/m)     | 307     | 307     | 307     | 307    | 307     |
| 50% Margin (V/m)    | -305.78 | -305.37 | -302.48 | -305.7 | -305.67 |

| H-Field Measurement |        |        |        |        |        |
|---------------------|--------|--------|--------|--------|--------|
| Distance            | 15cm   |        |        |        | 20cm   |
| EUT Side            | Left   | Right  | Top    | Bottom | Z-axis |
| Max H-field (uT)    | 0.246  | 0.246  | 0.247  | 0.272  | 0.279  |
| Max H-field (A/m)   | 0.196  | 0.196  | 0.197  | 0.217  | 0.222  |
| Limit (A/m)         | 1.63   | 1.63   | 1.63   | 1.63   | 1.63   |
| Margin (A/m)        | -1.434 | -1.434 | -1.433 | -1.413 | -1.408 |
| 50% Limit (A/m)     | 0.815  | 0.815  | 0.815  | 0.815  | 0.815  |
| 50% Margin (A/m)    | -0.619 | -0.619 | -0.618 | -0.598 | -0.593 |

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

**Charging Mode4 USB-C port input + Receiver load operating at center (10% Load)**

| E-Field Measurement |         |         |         |         |         |
|---------------------|---------|---------|---------|---------|---------|
| Distance            | 15cm    |         |         |         | 20cm    |
| EUT Side            | Left    | Right   | Top     | Bottom  | Z-axis  |
| Max E-field (V/m)   | 0.58    | 1.64    | 2.57    | 0.61    | 0.94    |
| Limit (V/m)         | 614     | 614     | 614     | 614     | 614     |
| Margin (V/m)        | -613.42 | -612.36 | -611.43 | -613.39 | -613.06 |
| 50% Limit (V/m)     | 307     | 307     | 307     | 307     | 307     |
| 50% Margin (V/m)    | -306.42 | -305.36 | -304.43 | -306.39 | -306.06 |

| H-Field Measurement |        |        |        |        |        |
|---------------------|--------|--------|--------|--------|--------|
| Distance            | 15cm   |        |        |        | 20cm   |
| EUT Side            | Left   | Right  | Top    | Bottom | Z-axis |
| Max H-field (uT)    | 0.245  | 0.257  | 0.298  | 0.283  | 0.376  |
| Max H-field (A/m)   | 0.195  | 0.205  | 0.237  | 0.225  | 0.299  |
| Limit (A/m)         | 1.63   | 1.63   | 1.63   | 1.63   | 1.63   |
| Margin (A/m)        | -1.435 | -1.425 | -1.393 | -1.405 | -1.331 |
| 50% Limit (A/m)     | 0.815  | 0.815  | 0.815  | 0.815  | 0.815  |
| 50% Margin (A/m)    | -0.620 | -0.610 | -0.578 | -0.590 | -0.516 |

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

**Charging Mode5 USB-C port input + Receiver load operating with 3 mm airgap at center (100% Load)**

| E-Field Measurement |         |         |         |         |         |
|---------------------|---------|---------|---------|---------|---------|
| Distance            | 15cm    |         |         |         | 20cm    |
| EUT Side            | Left    | Right   | Top     | Bottom  | Z-axis  |
| Max E-field (V/m)   | 1.11    | 1.36    | 3.78    | 1.12    | 2.61    |
| Limit (V/m)         | 614     | 614     | 614     | 614     | 614     |
| Margin (V/m)        | -612.89 | -612.64 | -610.22 | -612.88 | -611.39 |
| 50% Limit (V/m)     | 307     | 307     | 307     | 307     | 307     |
| 50% Margin (V/m)    | -305.89 | -305.64 | -303.22 | -305.88 | -304.39 |

| H-Field Measurement |        |        |        |        |        |
|---------------------|--------|--------|--------|--------|--------|
| Distance            | 15cm   |        |        |        | 20cm   |
| EUT Side            | Left   | Right  | Top    | Bottom | Z-axis |
| Max H-field (uT)    | 0.318  | 0.308  | 0.314  | 0.361  | 0.667  |
| Max H-field (A/m)   | 0.253  | 0.245  | 0.250  | 0.287  | 0.531  |
| Limit (A/m)         | 1.63   | 1.63   | 1.63   | 1.63   | 1.63   |
| Margin (A/m)        | -1.377 | -1.385 | -1.380 | -1.343 | -1.099 |
| 50% Limit (A/m)     | 0.815  | 0.815  | 0.815  | 0.815  | 0.815  |
| 50% Margin (A/m)    | -0.562 | -0.570 | -0.565 | -0.528 | -0.284 |

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

**Charging Mode6 USB-C port input + Receiver load operating with 3 mm airgap at center (50% Load)**

| E-Field Measurement |         |         |         |         |         |
|---------------------|---------|---------|---------|---------|---------|
| Distance            | 15cm    |         |         |         | 20cm    |
| EUT Side            | Left    | Right   | Top     | Bottom  | Z-axis  |
| Max E-field (V/m)   | 0.92    | 1.27    | 3.58    | 0.97    | 1.21    |
| Limit (V/m)         | 614     | 614     | 614     | 614     | 614     |
| Margin (V/m)        | -613.08 | -612.73 | -610.42 | -613.03 | -612.79 |
| 50% Limit (V/m)     | 307     | 307     | 307     | 307     | 307     |
| 50% Margin (V/m)    | -306.08 | -305.73 | -303.42 | -306.03 | -305.79 |

| H-Field Measurement |        |        |        |        |        |
|---------------------|--------|--------|--------|--------|--------|
| Distance            | 15cm   |        |        |        | 20cm   |
| EUT Side            | Left   | Right  | Top    | Bottom | Z-axis |
| Max H-field (uT)    | 0.286  | 0.275  | 0.285  | 0.324  | 0.348  |
| Max H-field (A/m)   | 0.228  | 0.219  | 0.227  | 0.258  | 0.277  |
| Limit (A/m)         | 1.63   | 1.63   | 1.63   | 1.63   | 1.63   |
| Margin (A/m)        | -1.402 | -1.411 | -1.403 | -1.372 | -1.353 |
| 50% Limit (A/m)     | 0.815  | 0.815  | 0.815  | 0.815  | 0.815  |
| 50% Margin (A/m)    | -0.587 | -0.596 | -0.588 | -0.557 | -0.538 |

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

**Charging Mode 7 USB-C port input + Receiver load operating with 3 mm airgap at center (10% Load)**

| E-Field Measurement |         |         |      |         |         |
|---------------------|---------|---------|------|---------|---------|
| Distance            | 15cm    |         |      |         | 20cm    |
| EUT Side            | Left    | Right   | Top  | Bottom  | Z-axis  |
| Max E-field (V/m)   | 0.49    | 1.29    | 2    | 0.44    | 0.94    |
| Limit (V/m)         | 614     | 614     | 614  | 614     | 614     |
| Margin (V/m)        | -613.51 | -612.71 | -612 | -613.56 | -613.06 |
| 50% Limit (V/m)     | 307     | 307     | 307  | 307     | 307     |
| 50% Margin (V/m)    | -306.51 | -305.71 | -305 | -306.56 | -306.06 |

| H-Field Measurement |        |        |        |        |        |
|---------------------|--------|--------|--------|--------|--------|
| Distance            | 15cm   |        |        |        | 20cm   |
| EUT Side            | Left   | Right  | Top    | Bottom | Z-axis |
| Max H-field (uT)    | 0.273  | 0.258  | 0.291  | 0.268  | 0.419  |
| Max H-field (A/m)   | 0.217  | 0.205  | 0.232  | 0.213  | 0.334  |
| Limit (A/m)         | 1.63   | 1.63   | 1.63   | 1.63   | 1.63   |
| Margin (A/m)        | -1.413 | -1.425 | -1.398 | -1.417 | -1.296 |
| 50% Limit (A/m)     | 0.815  | 0.815  | 0.815  | 0.815  | 0.815  |
| 50% Margin (A/m)    | -0.598 | -0.610 | -0.583 | -0.602 | -0.481 |

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

### 3. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

--- END ---