



TESTING LABORATORY  
CERTIFICATE#4323.01



# FCC PART 15C TEST REPORT

For

**Changzhou Kaidi Electrical Inc.**

Jiangcun,Henglin Town,Changzhou ,China

**FCC ID: 2AOTUKDDY101A**

|                                           |                                                                                                                                                                                                                            |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Report Type:</b><br>Original Report    | <b>Product Type:</b><br>Wireless charger                                                                                                                                                                                   |
| <b>Test Engineer:</b> Max Min             | <i>Max Min</i>                                                                                                                                                                                                             |
| <b>Report Number:</b> RSHA190305005-00B   |                                                                                                                                                                                                                            |
| <b>Report Date:</b> 2019-04-08            |                                                                                                                                                                                                                            |
| <b>Reviewed By:</b> Oscar Ye<br>RF Leader | <i>Oscar Ye</i>                                                                                                                                                                                                            |
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## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

|              |                                   |
|--------------|-----------------------------------|
| Applicant    | Changzhou Kaidi Electrical Inc.   |
| Tested Model | KDDY101A                          |
| Product Type | Wireless charger                  |
| Dimension    | 124.2mm(L)*122.2mm(W)* 104.5mm(H) |
| Power Supply | DC 29V                            |

*\*All measurement and test data in this report was gathered from production sample serial number: 20190305005. (Assigned by BACL, Kunshan). The EUT was received on 2019-03-05.*

### Objective

This report is prepared on behalf of Changzhou Kaidi Electrical Inc. in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207 and 15.209 rules.

### Related Submittal(s)/Grant(s)

No Related Submittal(s)/Grant(s).

### Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Kunshan). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

**Measurement Uncertainty**

| Item                               |            | Uncertainty |
|------------------------------------|------------|-------------|
| AC Power Lines Conducted Emissions |            | 3.19 dB     |
| Radiated emission                  | 9kHz~30MHz | 3.19dB      |
|                                    | 30MHz~1GHz | 6.11dB      |
| Temperature                        |            | 1.0°C       |
| Humidity                           |            | 6%          |

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

**Test Facility**

The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) Lab is accredited to ISO/IEC 17025 by A2LA (Lab code: 4323.01) and the FCC designation No. CN1185 under the FCC KDB 974614 D01 and CAB identifier CN0004 under the ISED requirement. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user)

### Equipment Modifications

No modification was made to the EUT tested.

### EUT Exercise Software

No Exercise Software was used.

### Support Equipment List and Details

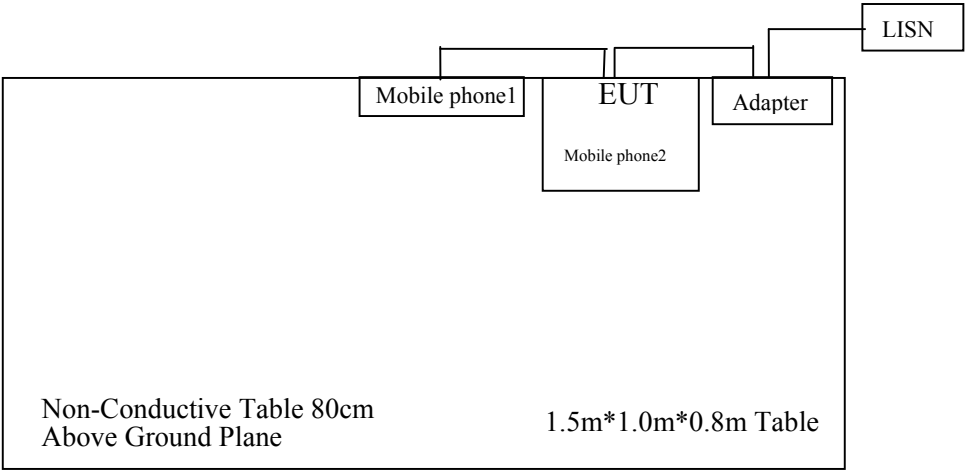
| Manufacturer                    | Description   | Model     | Serial Number |
|---------------------------------|---------------|-----------|---------------|
| Changzhou Kaidi Electrical Inc. | Adapter       | 1         | /             |
| Apple                           | Mobile phone1 | ML7J2CH/A | F4HR2B0TGRYD  |
| HUAWEI                          | Mobile phone2 | COR-AL10  | /             |
| Apple                           | Mobile Phone  | MQ8E2CH/A | FD3X40UEJCU0  |

### External I/O Cable

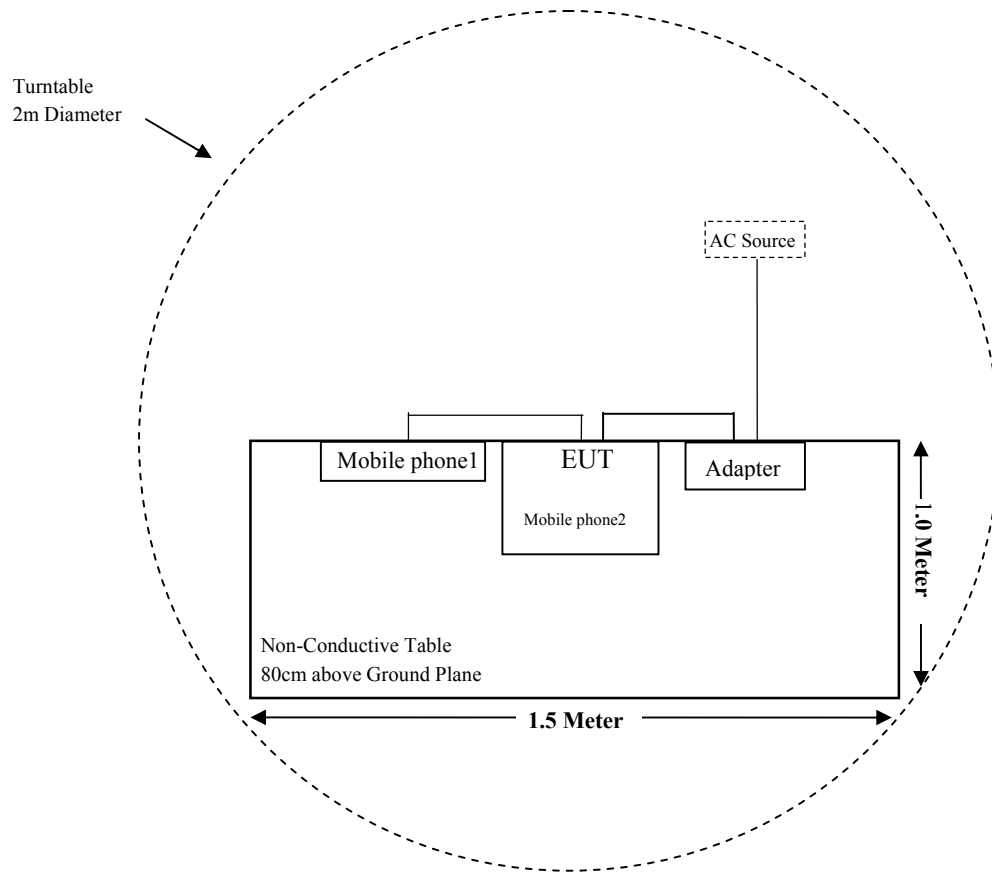
| Cable Description | Length (m) | From Port | To            |
|-------------------|------------|-----------|---------------|
| USB Cable         | 0.5        | EUT       | Mobile phone1 |
| Power Cable       | 0.6        | EUT       | Adapter       |
| Power Cable       | 1.0        | Adapter   | AC source     |

Block Diagram of Test Setup

For Conducted Emissions:



For Radiated Emissions(Below & Above 30MHz):



**SUMMARY OF TEST RESULTS**

| FCC Rules                 | Description of Test                | Result    |
|---------------------------|------------------------------------|-----------|
| §1.1307 & §1.1310&§2.1091 | Maximum Permissible Exposure (MPE) | Compliant |
| §15.203                   | Antenna Requirement                | Compliant |
| §15.207 (a)               | AC Line Conducted Emissions        | Compliant |
| §15.205, §15.209          | Spurious Emissions                 | Compliant |

**TEST EQUIPMENT LIST**

| Manufacturer                               | Description           | Model            | Serial Number | Calibration Date | Calibration Due Date |
|--------------------------------------------|-----------------------|------------------|---------------|------------------|----------------------|
| <b>Radiated Emission Test (Chamber 1#)</b> |                       |                  |               |                  |                      |
| Rohde & Schwarz                            | EMI Test Receiver     | ESCI             | 100195        | 2018-11-30       | 2019-11-29           |
| Sunol Sciences                             | Broadband Antenna     | JB3              | A090413-1     | 2016-12-26       | 2019-12-25           |
| Sonoma Instrument                          | Pre-amplifier         | 310N             | 171205        | 2018-08-14       | 2019-08-13           |
| Rohde & Schwarz                            | Auto test Software    | EMC32            | 100361        | /                | /                    |
| MICRO-COAX                                 | Coaxial Cable         | Cable-8          | 008           | 2018-08-15       | 2019-08-14           |
| MICRO-COAX                                 | Coaxial Cable         | Cable-9          | 009           | 2018-08-15       | 2019-08-14           |
| MICRO-COAX                                 | Coaxial Cable         | Cable-10         | 010           | 2018-08-15       | 2019-08-14           |
| <b>Radiated Emission Test (Chamber 2#)</b> |                       |                  |               |                  |                      |
| Rohde & Schwarz                            | EMI Test Receiver     | ESU40            | 100207        | 2018-08-27       | 2019-08-26           |
| ETS-LINDGREN                               | PASSIVE LOOP          | 6512             | 108100        | 2019-01-09       | 2022-01-08           |
| Sonoma Instrument                          | Pre-amplifier         | 310N             | 185700        | 2018-08-14       | 2019-08-13           |
| Rohde & Schwarz                            | Auto test Software    | EMC32            | 100361        | /                | /                    |
| MICRO-COAX                                 | Coaxial Cable         | Cable-6          | 006           | 2018-08-15       | 2019-08-14           |
| MICRO-COAX                                 | Coaxial Cable         | Cable-11         | 011           | 2018-08-15       | 2019-08-14           |
| MICRO-COAX                                 | Coaxial Cable         | Cable-12         | 012           | 2018-08-15       | 2019-08-14           |
| MICRO-COAX                                 | Coaxial Cable         | Cable-13         | 013           | 2018-08-15       | 2019-08-14           |
| <b>Conducted Emission Test</b>             |                       |                  |               |                  |                      |
| Rohde & Schwarz                            | EMI Test Receiver     | ESCS30           | 834115/007    | 2018-11-30       | 2019-11-29           |
| Rohde & Schwarz                            | LISN                  | ESH3-Z5          | 862770/011    | 2018-11-30       | 2019-11-29           |
| BACL                                       | Auto test Software    | BACL-EMC         | CE001         | /                | /                    |
| Narda                                      | Attenuator/6dB        | 10690812-2       | 26850-6       | 2019-01-10       | 2020-01-09           |
| MICRO-COAX                                 | Coaxial Cable         | Cable-15         | 015           | 2018-08-15       | 2019-08-14           |
| <b>RF Exposure</b>                         |                       |                  |               |                  |                      |
| Narda                                      | Exposure Level Tester | ELT-400          | N-0229        | 2017-11-15       | 2019-11-15           |
| Narda                                      | B Field Probe         | ELT Probe 100cm2 | M-0666        | 2017-11-15       | 2019-11-15           |
| Amplifier Research                         | Isotropic Field Probe | FP5000           | 301825        | 2018-11-22       | 2021-11-22           |

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

**FCC §1.1307& §1.1310& §2.1091 –Maximum Permissible Exposure (MPE)****Applicable Standard**

FCC §1.1307 &amp; 1.1310 &amp; §2.1091

According to the item 5(b) of KDB 680106 D01 RF Exposure Wireless Charging Apps v03: Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF evaluation.

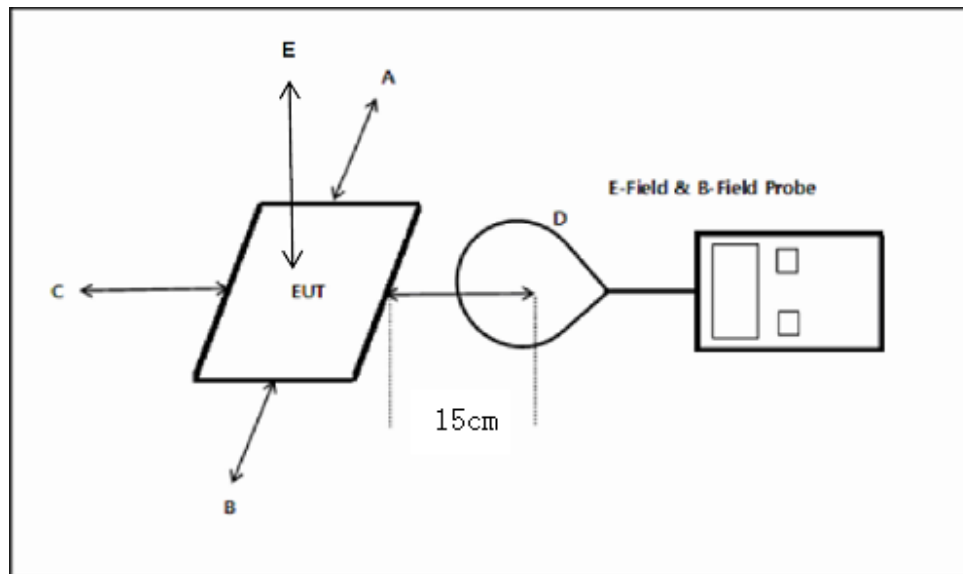
- a) Power transfer frequency is less than 1 MHz.
- b) Output power from each primary coil is less than or equal to 15 watts.
- c) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.
- d) Client device is placed directly in contact with the transmitter.
- e) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- f) 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.

**Limits for Maximum Permissible Exposure (MPE)**

| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                                      |                                      |                                          |                                 |
|----------------------------------------------------------------|--------------------------------------|--------------------------------------|------------------------------------------|---------------------------------|
| <b>Frequency Range (MHz)</b>                                   | <b>Electric Field Strength (V/m)</b> | <b>Magnetic Field Strength (A/m)</b> | <b>Power Density (mW/cm<sup>2</sup>)</b> | <b>Averaging Time (minutes)</b> |
| <b>(A) Limits for Occupational/Controlled Exposure</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                               |
| 300-1,500                                                      | /                                    | /                                    | f/300                                    | 6                               |
| 1,500-100,000                                                  | /                                    | /                                    | 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;

## EUT Setup



## Result

a) Power transfer frequency is less than 1 MHz.

Yes, the device operates in the frequency 110 kHz-148 kHz.

b) Output power from each primary coil is less than or equal to 15 watts.

Yes, the maximum output power of the primary coil is  $10W < 15W$ .

c) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.

Yes, the transfer system includes a charging system with three coils are able to detect and allow only between individual of coils.

d) Client device is inserted in or placed directly in contact with the transmitter.

Yes, client device is placed directly in contact with the transmitter.

e) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

Yes, this is a mobile device.

f) 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.

The EUT H-field Strength levels at 15 cm surrounding the device and 20 cm above the top surface are less than 50% the MPE limit.

**Test Data****Environmental Conditions**

|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 24.2℃     |
| <b>Relative Humidity:</b> | 51 %      |
| <b>ATM Pressure:</b>      | 101.2 kPa |

*The testing was performed by Max Min on 2019-04-03.*

**H-Field Strength**

| <b>Frequency Range (kHz)</b> | <b>Position A (A/m)</b> | <b>Position B (A/m)</b> | <b>Position C (A/m)</b> | <b>Position D (A/m)</b> | <b>Position E (A/m)</b> | <b>50% Limit (A/m)</b> | <b>Limit Test (A/m)</b> |
|------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------|-------------------------|
| 110-148                      | 0.226                   | 0.234                   | 0.228                   | 0.225                   | 0.225                   | 0.815                  | 1.63                    |

**E- Field Strength**

| <b>Frequency Range (kHz)</b> | <b>Position A (V/m)</b> | <b>Position B (V/m)</b> | <b>Position C (V/m)</b> | <b>Position D (V/m)</b> | <b>Position E (V/m)</b> | <b>50% Limit (V/m)</b> | <b>Limit Test (V/m)</b> |
|------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------|-------------------------|
| 110-148                      | 2.957                   | 2.838                   | 2.375                   | 2.952                   | 2.805                   | 307                    | 614                     |

**Note:**

1: According with KDB 680106 D01 RF Exposure Wireless Charging Apps v03, Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614V/m and 1.63 A/m.

2: The distance for position A, B, C, D are 15cm, the distance for position E is 20cm.

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## **FCC §15.203 - ANTENNA REQUIREMENT**

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### **Applicable Standard**

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 shall be considered sufficient to comply with the provisions of this section.

### **Antenna Connector Construction**

The EUT has a coil antenna arrangement, which the antennas gain are 0 dBi; fulfill the requirement of this section. Please refer to the EUT photos.

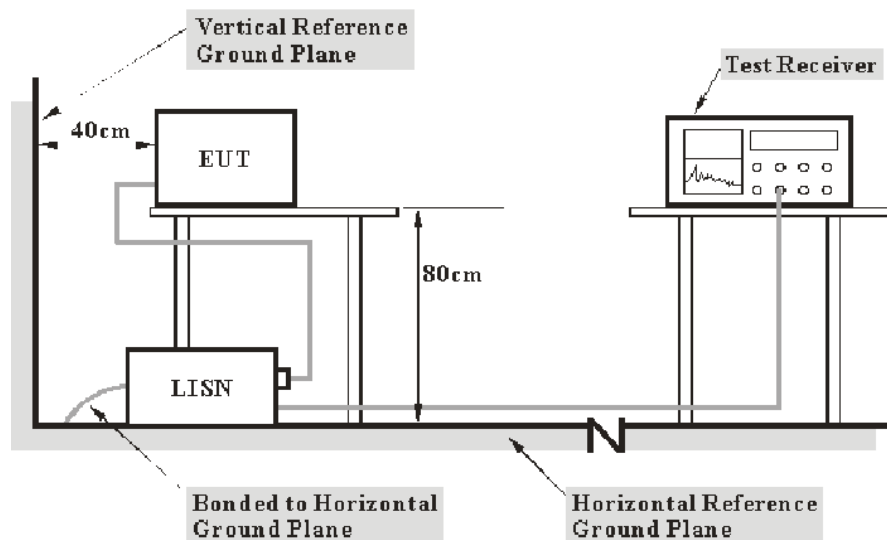
**Result:** Compliant.

## FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

### Applicable Standard

FCC §15.207(a)

### EUT Setup



Note: 1. Support units were connected to second LISN.  
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

### EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

| Frequency Range  | IF B/W |
|------------------|--------|
| 150 kHz – 30 MHz | 9 kHz  |

### Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

## Corrected Factor & Margin Calculation

The Corrected Factor is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

$$\text{Corrected Factor (dB)} = \text{LISN VDF (dB)} + \text{Cable Loss (dB)} + \text{Transient Limiter Attenuation (dB)}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V)} - \text{Corrected Amplitude (dB}\mu\text{V)}$$

## Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

### Test Data

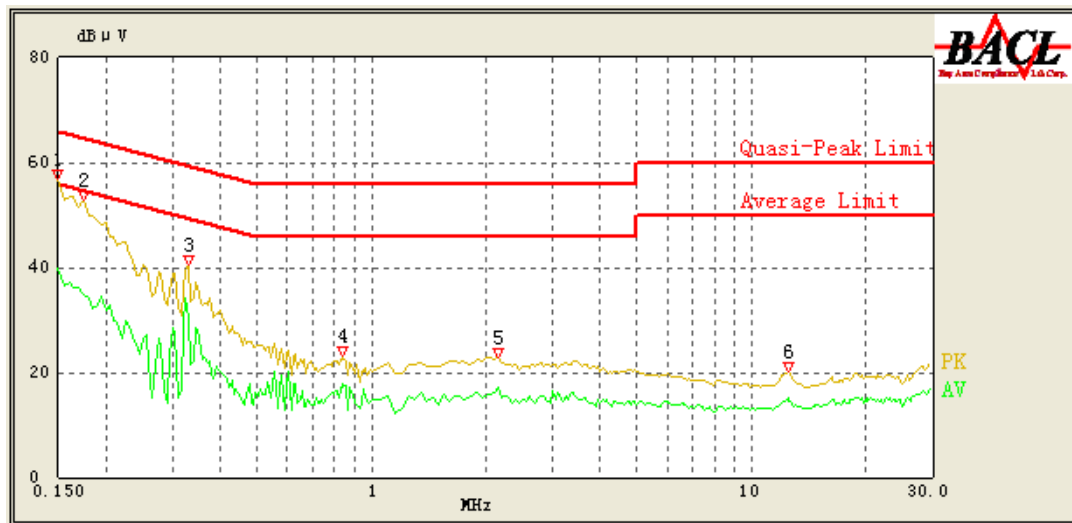
#### Environmental Conditions

|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 24.2°C    |
| <b>Relative Humidity:</b> | 51 %      |
| <b>ATM Pressure:</b>      | 101.2 kPa |

*The testing was performed by Max Min on 2019-03-26.*

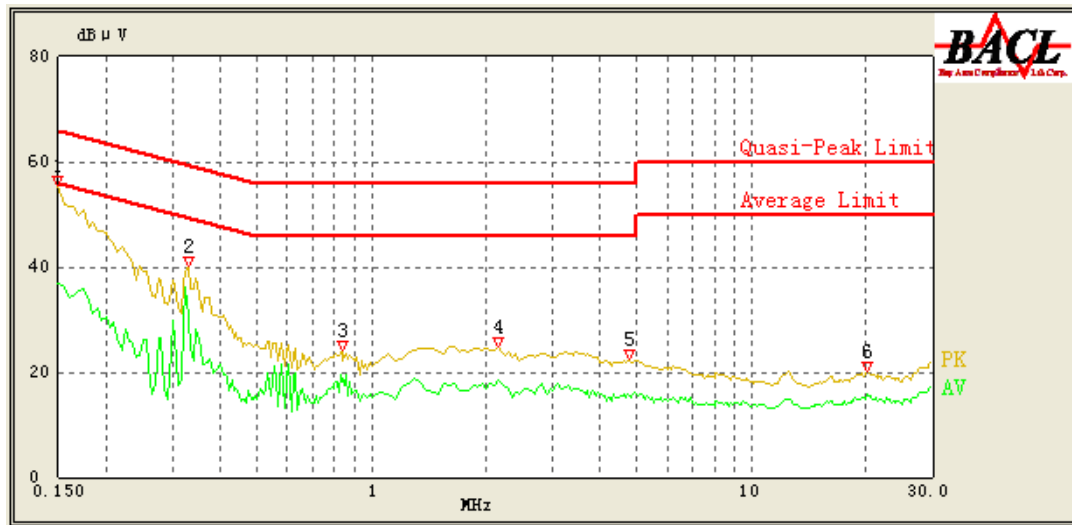
*EUT operation mode: charging and communication*

## AC 120V/60 Hz, Line



| Frequency (MHz) | Corrected Amplitude (dBμV) | Detector (PK/AV/QP) | Bandwidth (kHz) | Line | Corrected Factor (dB) | Limit (dBμV) | Margin (dB) | Comment   |
|-----------------|----------------------------|---------------------|-----------------|------|-----------------------|--------------|-------------|-----------|
| 0.150           | 56.90                      | QP                  | 9.000           | L1   | 16.06                 | 66.00        | 9.10        | Compliant |
| 0.150           | 39.72                      | AV                  | 9.000           | L1   | 16.06                 | 56.00        | 16.28       | Compliant |
| 0.175           | 52.80                      | QP                  | 9.000           | L1   | 16.03                 | 64.72        | 11.92       | Compliant |
| 0.175           | 34.97                      | AV                  | 9.000           | L1   | 16.03                 | 54.72        | 19.75       | Compliant |
| 0.330           | 40.64                      | QP                  | 9.000           | L1   | 16.04                 | 59.45        | 18.81       | Compliant |
| 0.330           | 30.40                      | AV                  | 9.000           | L1   | 16.04                 | 49.45        | 19.05       | Compliant |
| 0.835           | 23.01                      | QP                  | 9.000           | L1   | 15.92                 | 56.00        | 32.99       | Compliant |
| 0.835           | 17.84                      | AV                  | 9.000           | L1   | 15.92                 | 46.00        | 28.16       | Compliant |
| 2.150           | 22.92                      | QP                  | 9.000           | L1   | 15.85                 | 56.00        | 33.08       | Compliant |
| 2.150           | 17.25                      | AV                  | 9.000           | L1   | 15.85                 | 46.00        | 28.75       | Compliant |
| 12.550          | 20.26                      | QP                  | 9.000           | L1   | 16.14                 | 60.00        | 39.74       | Compliant |
| 12.550          | 14.65                      | AV                  | 9.000           | L1   | 16.14                 | 50.00        | 35.35       | Compliant |

## AC 120V/60 Hz, Neutral



| Frequency (MHz) | Corrected Amplitude (dBμV) | Detector (PK/AV/QP) | Bandwidth (kHz) | Line | Corrected Factor (dB) | Limit (dBμV) | Margin (dB) | Comment    |
|-----------------|----------------------------|---------------------|-----------------|------|-----------------------|--------------|-------------|------------|
| 0.150           | 55.48                      | QP                  | 9.000           | N    | 16.06                 | 66.00        | 10.52       | Compliance |
| 0.150           | 36.82                      | AV                  | 9.000           | N    | 16.06                 | 56.00        | 19.18       | Compliance |
| 0.330           | 40.32                      | QP                  | 9.000           | N    | 16.04                 | 59.45        | 19.13       | Compliance |
| 0.330           | 30.54                      | AV                  | 9.000           | N    | 16.04                 | 49.45        | 18.91       | Compliance |
| 0.835           | 24.17                      | QP                  | 9.000           | N    | 15.92                 | 56.00        | 31.83       | Compliance |
| 0.835           | 19.52                      | AV                  | 9.000           | N    | 15.92                 | 46.00        | 26.48       | Compliance |
| 2.150           | 24.88                      | QP                  | 9.000           | N    | 15.85                 | 56.00        | 31.12       | Compliance |
| 2.150           | 18.58                      | AV                  | 9.000           | N    | 15.85                 | 46.00        | 27.42       | Compliance |
| 4.750           | 22.46                      | QP                  | 9.000           | N    | 15.85                 | 56.00        | 33.54       | Compliance |
| 4.750           | 15.95                      | AV                  | 9.000           | N    | 15.85                 | 46.00        | 30.05       | Compliance |
| 20.150          | 20.16                      | QP                  | 9.000           | N    | 16.44                 | 60.00        | 39.84       | Compliance |
| 20.150          | 15.68                      | AV                  | 9.000           | N    | 16.44                 | 50.00        | 34.32       | Compliance |

**Note:**

1) Corrected Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)

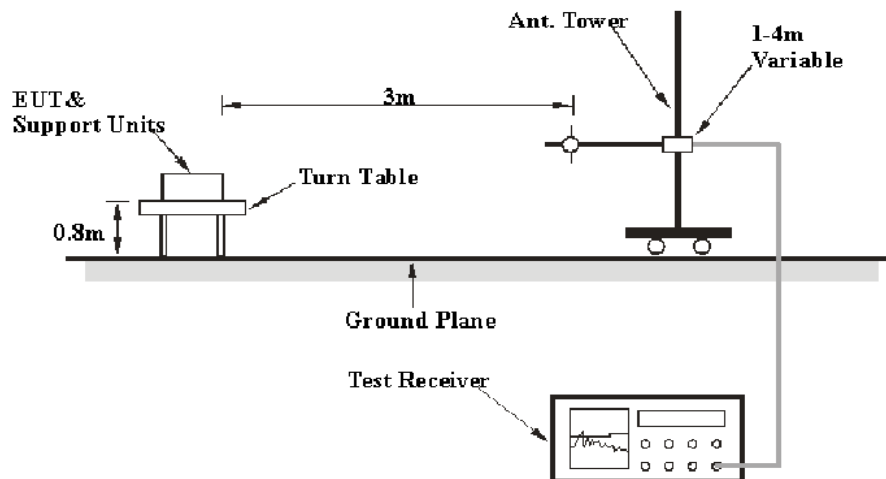
2) Margin (dB) = Limit (dBμV) – Corrected Amplitude (dBμV)

## FCC §15.209 & §15.205 - SPURIOUS EMISSIONS

### Applicable Standard

FCC §15.209; §15.205;

### EUT Setup



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.205 limits.

### EMI Test Receiver Setup

The system was investigated from 9 kHz to 1GHz.

During the radiated emission test, the EMI test receiver setup was set with the following configurations:

| Frequency Range   | RBW     | Video B/W | Detector |
|-------------------|---------|-----------|----------|
| 9 kHz – 150 kHz   | 200 Hz  | 1 kHz     | QP       |
| 150 kHz – 30MHz   | 9kHz    | 30kHz     | QP       |
| 30 MHz – 1000 MHz | 120 kHz | 300 kHz   | QP       |

Note: For the frequency bands 9-90 kHz and 110-490 kHz, the test was based on average detector.

## Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The EUT is set 3 meter away from the testing antenna, which is varied from 1-4 meter, and the EUT is placed on a turntable, which is 0.8 meter above ground plane, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna should be changed the polarization both of horizontal and vertical.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude (dB}\mu\text{V /m)} = \text{Meter Reading (dB}\mu\text{V)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Amplifier Gain (dB)}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V/m)} - \text{Corrected Amplitude (dB}\mu\text{V /m)}$$

## Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205 and 15.209.

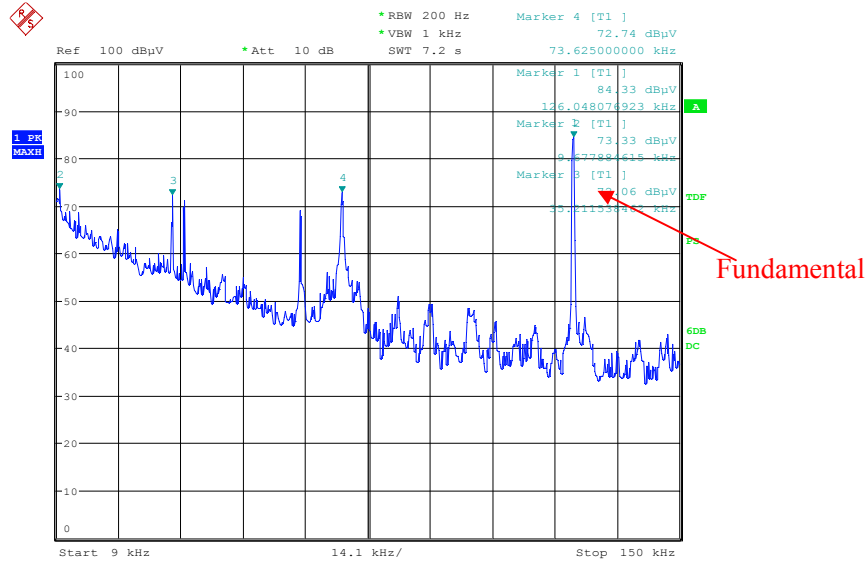
## Test Data

### Environmental Conditions

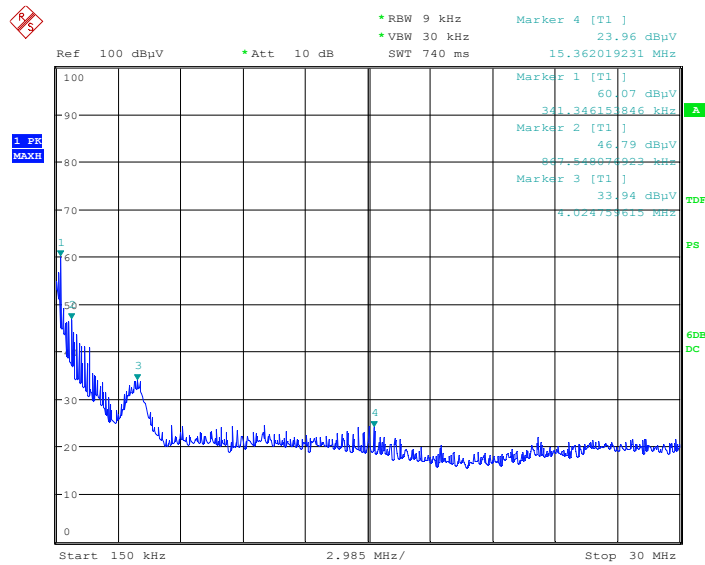
|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 24.2℃     |
| <b>Relative Humidity:</b> | 51 %      |
| <b>ATM Pressure:</b>      | 101.2 kPa |

*The testing was performed by Max Min on 2019-04-04.*

*EUT operation mode: charging and communication*

**9kHz-30MHz:***(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)***9kHz-150kHz (PK)**

Date: 4.APR.2019 17:55:05

**150kHz-30MHz (PK)**

Date: 4.APR.2019 17:56:41

9kHz-490kHz:

| Indicated          |                                                 | Detector<br>(PK/AV/QP) | Corrected<br>Factor<br>(dB/m) | FCC Part 15.209                |                                  |                |
|--------------------|-------------------------------------------------|------------------------|-------------------------------|--------------------------------|----------------------------------|----------------|
| Frequency<br>(kHz) | Corrected<br>Amplitude<br>(dB $\mu$ V/m)<br>@3m |                        |                               | Limit<br>(dB $\mu$ V/m)<br>@3m | Limit<br>(dB $\mu$ V/m)<br>@300m | Margin<br>(dB) |
| 9.68               | 73.33                                           | PK                     | 40.3                          | 127.88                         | 47.88                            | 54.55          |
| 35.21              | 72.06                                           | PK                     | 38.1                          | 116.67                         | 36.67                            | 44.61          |
| 73.63              | 72.74                                           | PK                     | 31.1                          | 111.46                         | 31.46                            | 38.72          |
| 126.05             | 84.33                                           | PK                     | 30.3                          | 105.59                         | 25.59                            | 21.26          |
| 341.35             | 60.07                                           | PK                     | 24.7                          | 96.94                          | 16.94                            | 36.87          |

490kHz-30MHz

| Indicated          |                                                 | Detector<br>(PK/AV/QP) | Corrected<br>Factor<br>(dB/m) | FCC Part 15.209                |                                 |                |
|--------------------|-------------------------------------------------|------------------------|-------------------------------|--------------------------------|---------------------------------|----------------|
| Frequency<br>(MHz) | Corrected<br>Amplitude<br>(dB $\mu$ V/m)<br>@3m |                        |                               | Limit<br>(dB $\mu$ V/m)<br>@3m | Limit<br>(dB $\mu$ V/m)<br>@30m | Margin<br>(dB) |
| 0.867              | 46.79                                           | QP                     | 8.5                           | 68.84                          | 28.84                           | 22.05          |
| 4.024              | 33.94                                           | QP                     | 0.2                           | 69.54                          | 29.54                           | 35.60          |
| 15.362             | 23.96                                           | QP                     | -3.1                          | 69.54                          | 29.54                           | 45.58          |

**Note:**

The average emissions which fall into frequencies 9-90 kHz, 110-490 kHz was not recorded, because the peak emissions are below the average limit.

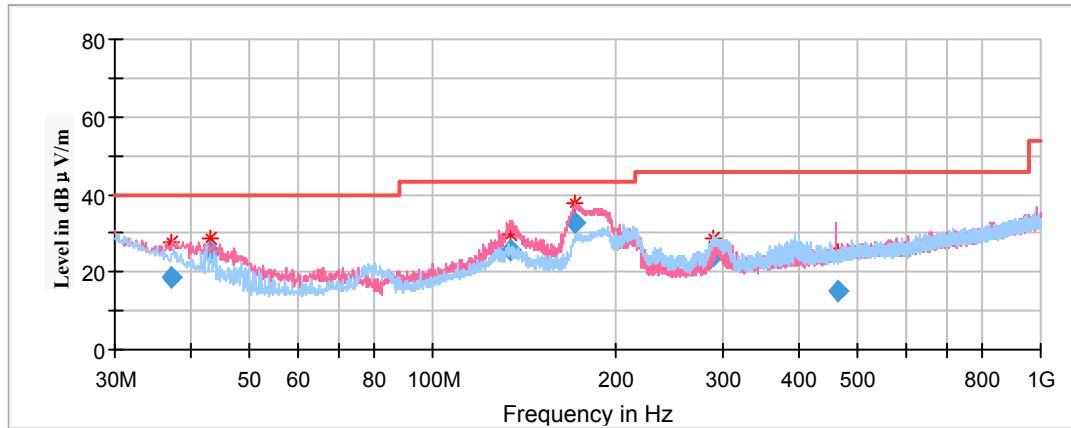
Corrected Factor (dB/m) = Antenna factor (RX) (dB/m) + Cable Loss (dB) – Amplifier Factor (dB)

Corrected Amplitude (dB $\mu$ V /m) = Corrected Factor (dB/m) + Reading (dB $\mu$ V)

Margin (dB) = Limit (dB $\mu$ V/m) – Corrected Amplitude (dB $\mu$ V /m)

**30MHz-1GHz**

(Pre-scan in the X,Y and Z axes of orientation, the worst case **in Z-axis of orientation** was recorded)



| Frequency (MHz) | Corrected Amplitude  | Rx Antenna  |             | Turntable Degree | Corrected Factor (dB/m) | Limit (dBμV/m) | Margin (dB) |
|-----------------|----------------------|-------------|-------------|------------------|-------------------------|----------------|-------------|
|                 | QuasiPeak (dB μ V/m) | Height (cm) | Polar (H/V) |                  |                         |                |             |
| 37.274750       | 18.69                | 199.0       | V           | 326.0            | -8.9                    | 40.00          | 21.31       |
| 43.081700       | 25.01                | 101.0       | V           | 76.0             | -12.8                   | 40.00          | 14.99       |
| 133.973100      | 25.72                | 101.0       | V           | 284.0            | -11.7                   | 43.50          | 17.78       |
| 171.758950      | 32.80                | 101.0       | V           | 27.0             | -13.2                   | 43.50          | 10.70       |
| 288.608150      | 24.01                | 199.0       | H           | 284.0            | -10.8                   | 46.00          | 21.99       |
| 462.808500      | 15.12                | 101.0       | V           | 142.0            | -7.1                    | 46.00          | 30.88       |

**Note:**

Corrected Factor (dB/m) = Antenna factor (RX) (dB/m) + Cable Loss (dB) – Amplifier Factor (dB)

Corrected Amplitude (dBμV /m) = Corrected Factor (dB/m) + Reading (dBμV)

Margin (dB) = Limit (dBμV/m) – Corrected Amplitude (dBμV /m)

**\*\*\*\*\* END OF REPORT \*\*\*\*\***