



# FCC TEST REPORT

**Test report**  
**On Behalf of**  
**JMTek Industries(Shenzhen) Co., Ltd.**  
**For**  
**Wireless Power Charger**  
**Model No.: WPC388, WPC388B, WPC388W**

**FCC ID: 2APU5WPC388**

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**Date of Test:** Nov. 12, 2019 ~Nov. 18, 2019

**Date of Report:** Nov. 18, 2019

**Report Number:** HK1911122869-2E



Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.

| Channel List |                 |         |                 |         |                 |         |                 |
|--------------|-----------------|---------|-----------------|---------|-----------------|---------|-----------------|
| Channel      | Frequency (KHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 01           | 125             |         |                 |         |                 |         |                 |
|              |                 |         |                 |         |                 |         |                 |
|              |                 |         |                 |         |                 |         |                 |
|              |                 |         |                 |         |                 |         |                 |

The EUT antenna is Coil Antenna. No antenna other than that furnished by the responsible party shall be used with the device.

## 2. SUMMARY OF TEST RESULTS

### 2.1 Test procedures according to the technical standards:

FCC KDB680106 D01 RF Exposure Wireless Charging Apps v03

| FCC CFR 47                                             |                                   |          |        |
|--------------------------------------------------------|-----------------------------------|----------|--------|
| Standard Section                                       | Test Item                         | Judgment | Remark |
| FCC CFR 47 part1,<br>1.1310 KDB680106<br>D01v03 (3)(3) | Electric Field Strength (E) (V/m) | PASS     |        |
|                                                        | Magnetic Field Strength (H) (A/m) | PASS     |        |

### 2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately **95 %**.

| No. | Item                                     | Uncertainty             |
|-----|------------------------------------------|-------------------------|
| 1   | All emissions,radiated(<30M)(9KHz-30MHz) | $\pm 2.45\text{dB}$     |
| 2   | Temperature                              | $\pm 0.5^\circ\text{C}$ |
| 3   | Humidity                                 | $\pm 2\%$               |



## 2.3 Test Instruments

| Description           | Brand     | Model No. | Frequency Range | Calibrated Date | Calibrated Until |
|-----------------------|-----------|-----------|-----------------|-----------------|------------------|
| Broadband Field Meter | NARDA     | NBM-550   | -               | Dec. 27, 2018   | Dec. 26, 2019    |
| Magnetic Field Meter  | NARDA     | ELT-400   | 1 – 400kHz      | Dec. 27, 2018   | Dec. 26, 2019    |
| Magnetic Probe        | NARDA     | HF-3061   | 300kHz – 30MHz  | Dec. 27, 2018   | Dec. 26, 2019    |
| Magnetic Probe        | NARDA     | HF-0191   | 27 – 1000MHz    | Dec. 27, 2018   | Dec. 26, 2019    |
| Broadband Field Meter | NARDA     | NBM-550   | -               | Dec. 27, 2018   | Dec. 26, 2019    |
| Electric Field Meter  | COMBINOVA | EFM 200   | 5Hz – 400kHz    | Dec. 27, 2018   | Dec. 26, 2019    |
| E-Field Probe         | NARDA     | EF-0391   | 100kHz – 3GHz   | Dec. 27, 2018   | Dec. 26, 2019    |
| E-Field Probe         | NARDA     | EF-6091   | 100MHz – 60GHz  | Dec. 27, 2018   | Dec. 26, 2019    |

NOTE: 1. The calibration interval of the above test instruments is 12 months .



### 3. MAXIMUM PERMISSIBLE EXPOSURE

#### 3.1 MAXIMUM PERMISSIBLE EXPOSURE

Limit of 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 Time  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                                                                |
| 1500-100,000                                          |                                   |                                   | 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 Time  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)*                               | 30                                                               |
| 30-300                                                | 27.5                              | 0.073                             | 0.2                                      | 30                                                               |
| 300-1500                                              |                                   |                                   | F/1500                                   | 30                                                               |
| 1500-100,000                                          |                                   |                                   | 1                                        | 30                                                               |

Note 1: f = frequency in MHz ; \*Plane-wave equivalent power density

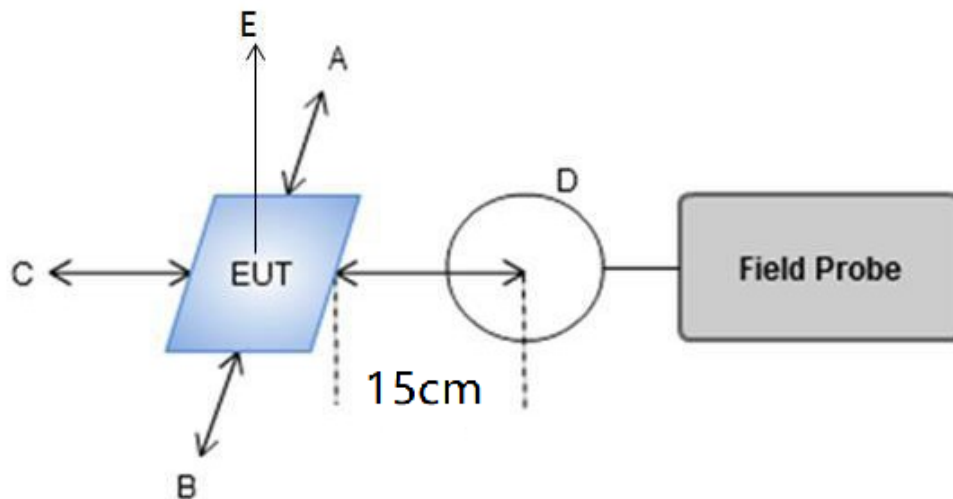
Note 2: For the applicable limit, see FCC 1.1310, 680106 D01 RF Exposure Wireless Charging Apps v03

Note 3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

#### 4. TEST PROCEDURE

a. For devices designed for typical desktop applications, such as wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of (H-field & E-field strengths for all sides is 15cm, H-field strengths of top side is 20cm). E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device.

##### 4.1 TEST SETUP



##### 4.2 RESULT OF MAXIMUM PERMISSIBLE EXPOSURE



For Full load mode:

E-Field Strength at 15cm from the edges surrounding the EUT (V/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Limits Test (V/m) |
|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|
| 0.125                 | 1.17            | 1.31            | 1.26            | 1.24            | 1.19            | 614               |

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

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Limits Test (A/m) |
|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|
| 0.125                 | 0.28            | 0.25            | 0.27            | 0.24            | 0.41            | 0.815             |

For Half Load mode:

E-Field Strength at 15cm from the edges surrounding the EUT (V/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Limits Test (V/m) |
|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|
| 0.125                 | 1.19            | 1.27            | 1.41            | 1.32            | 1.28            | 614               |

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

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Limits Test (A/m) |
|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|
| 0.125                 | 0.21            | 0.28            | 0.26            | 0.29            | 0.27            | 0.815             |



For No load mode:

E-Field Strength at 15 cm from the edges surrounding the EUT (V/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Limits Test (V/m) |
|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|
| 0.125                 | 1.29            | 1.14            | 1.12            | 1.25            | 1.17            | 614               |

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

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Limits Test (A/m) |
|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|
| 0.125                 | 0.21            | 0.27            | 0.19            | 0.28            | 0.27            | 0.815             |

Remark: According KDB 680106 D01 RF Exposure Wireless Charging App v03, section 5, b). 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 E- field evaluation conducted assuming a user separation distance of 15 cm according to the KDB 680106 D01 RF Exposure Wireless Charging App v03 section 3, c).

Result: The device comply with the RF exposure requirement according to KDB 680106 D01 v03, section 5, b):

- (1) The operating frequency is 125kHz, is less than 1MHz.
- (2) The max Output power for each primary coil is 5W, less than or equal to 15W.
- (3) The transfer system includes only single primary and secondary coils.
- (4) Client device is placed directly in contact with the transmitter.
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- (6) 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.



## PHOTOGRAPH OF TEST



※※※※※THE END※※※※※