



# FCC TEST REPORT

**Test report  
On Behalf of  
Dongguan Fulun Electronics Co.,Limited  
For  
Wireless Charger  
Model No.: W01, PP6966HP, PP6965FR, PP6965FRTX  
FCC ID: 2ATOY-W01**

**Prepared for :** Dongguan Fulun Electronics Co.,Limited  
4-8/F, Building B, Xinbosheng Industrial Park, No.5 Xinyuan S Rd, Tangxia,  
Dongguan.CN

**Prepared By :** Shenzhen Tongzhou Testing Co.,Ltd  
1th Floor, Building 1, Haomai High-tech Park, Huating Road 387, Dalang  
Street, Longhua, Shenzhen, China

**Date of Test:** Jun. 2, 2020 ~ Jun. 11, 2020

**Date of Report:** Jun. 12, 2020

**Report Number:** TZ200601394-E2

The test report apply only to the specific sample(s) tested under stated test conditions  
It is not permitted to copy extracts of these test result without the written permission of the test  
laboratory.



## TEST RESULT CERTIFICATION

**Applicant's name** ..... : Dongguan Fulun Electronics Co.,Limited  
**Address** ..... : 4-8/F, Building B, Xinbosheng Industrial Park, No.5 Xinyuan S Rd,  
Tangxia, Dongguan.CN  
**Manufacture's Name**..... : Dongguan Fulun Electronics Co.,Limited  
**Address** ..... : 4-8/F, Building B, Xinbosheng Industrial Park, No.5 Xinyuan S Rd,  
Tangxia, Dongguan.CN  
**Product description**  
**Trade Mark** ..... : BarbetSound  
**Product name** ..... : Wireless Charger  
**Model and/or type reference** : W01, PP6966HP, PP6965FR, PP6965FRTX  
**Standards** ..... : FCC Rules and Regulations Part 2.1091,  
KDB680106 D01v03

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**Date of Test** ..... :  
**Date (s) of performance of tests** ..... : Jun. 2, 2020 ~ Jun. 11, 2020  
**Date of Issue** ..... : Jun. 12, 2020  
**Test Result**..... : **Pass**

Testing Engineer :

*Nancy Li*

(Nancy Li)

Technical Manager :

*Hugo Chen*

(Hugo Chen)

Authorized Signatory :

*Andy Zhang*

(Andy Zhang)



## 1. GENERAL INFORMATION

### 1.1 General Description of EUT

|                     |                                                                               |
|---------------------|-------------------------------------------------------------------------------|
| Equipment           | Wireless Charger                                                              |
| Model Name          | W01, PP6966HP, PP6965FR, PP6965FRTX                                           |
| Serial No.          | N/A                                                                           |
| Model Difference    | All the same except for the model name and colour                             |
| Trade Mark          | BarbetSound                                                                   |
| FCC ID              | 2ATOY-W01                                                                     |
| Antenna Type        | Coil Antenna                                                                  |
| Antenna Gain        | 0dBi                                                                          |
| Operation frequency | 110-205KHz                                                                    |
| Modulation Type     | ASK                                                                           |
| Power Rating        | Input: 5V $\overline{\text{---}}$ 2A<br>Output: 5V $\overline{\text{---}}$ 1A |
| Test Sample ID      | TZ200601394-1#                                                                |

Note:

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

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, 2019   | Dec. 27, 2020    |
| Magnetic Field Meter  | NARDA     | ELT-400   | 1 – 400kHz      | Dec. 27, 2019   | Dec. 27, 2020    |
| Magnetic Probe        | NARDA     | HF-3061   | 300kHz – 30MHz  | Dec. 27, 2019   | Dec. 27, 2020    |
| Magnetic Probe        | NARDA     | HF-0191   | 27 – 1000MHz    | Dec. 27, 2019   | Dec. 27, 2020    |
| Broadband Field Meter | NARDA     | NBM-550   | -               | Dec. 27, 2019   | Dec. 27, 2020    |
| Electric Field Meter  | COMBINOVA | EFM 200   | 5Hz – 400kHz    | Dec. 27, 2019   | Dec. 27, 2020    |
| E-Field Probe         | NARDA     | EF-0391   | 100kHz – 3GHz   | Dec. 27, 2019   | Dec. 27, 2020    |
| E-Field Probe         | NARDA     | EF-6091   | 100MHz – 60GHz  | Dec. 27, 2019   | Dec. 27, 2020    |

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

## 2.4 Special Accessories

| No. | Equipment    | Manufacturer | Model No. | Input |
|-----|--------------|--------------|-----------|-------|
| 1   | Mobile phone | iPhone       | iPhone XR | 5V DC |

## 2.5 Operation of EUT during testing

| Test Modes:                                                                               |                                                                  |            |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------|------------|
| Mode 1                                                                                    | AC/DC Adapter (5V/2A) + EUT + MobilePhone (Battery Status: <1%)  | Record     |
| Mode 2                                                                                    | AC/DC Adapter (5V/2A) + EUT + MobilePhone (Battery Status: <50%) | Pre-tested |
| Mode 3                                                                                    | AC/DC Adapter (5V/2A) + EUT + MobilePhone (Battery Status: 100%) | Pre-tested |
| Note: All test modes were pre-tested, but we only recorded the worst case in this report. |                                                                  |            |



### 3. 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

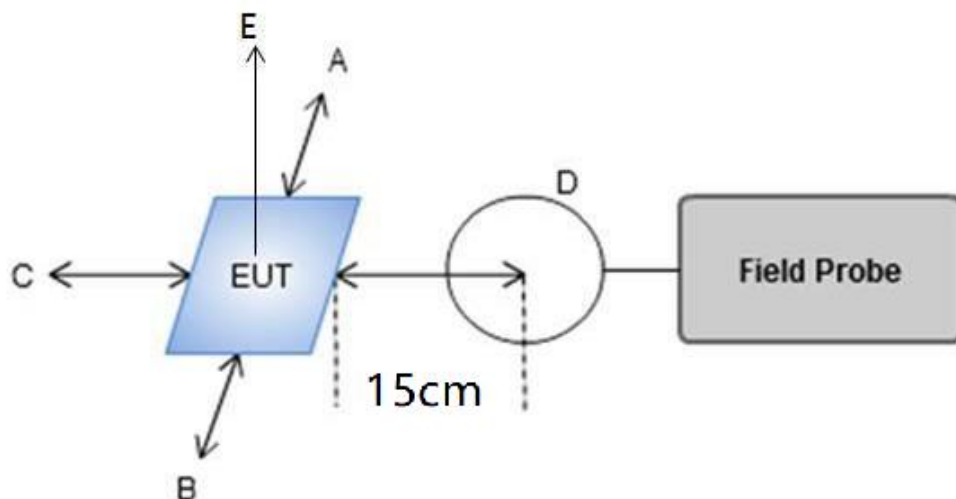
Note 2: For the applicable limit, see FCC 1.1310, 680106 D01 RF Exposure Wireless Charging Apps v03

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 15 cm. 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

|               |          |                |        |
|---------------|----------|----------------|--------|
| Temperature   | 22.8°C   | Humidity       | 55%    |
| Test Engineer | Tony Luo | Configurations | Mode 1 |



E-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

| Charging Battery Level | Frequency Range (MHz) | Measured E-Field Strength Values (V/m) |                 |                 |                 |                 | FCC E-Field Strength 50% Limits (V/m) | FCC E-Field Strength Limits (V/m) |
|------------------------|-----------------------|----------------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------------------------|-----------------------------------|
|                        |                       | Test Position A                        | Test Position B | Test Position C | Test Position D | Test Position E |                                       |                                   |
| 1%                     | 0.145                 | 1.27                                   | 1.34            | 1.33            | 1.23            | 1.35            | 307                                   | 614                               |
| 50%                    | 0.145                 | 1.30                                   | 1.31            | 1.13            | 1.23            | 1.34            | 307                                   | 614                               |
| 99%                    | 0.145                 | 1.25                                   | 1.19            | 1.25            | 1.25            | 1.24            | 307                                   | 614                               |

H-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

| Charging Battery Level | Frequency Range (MHz) | Measured E-Field Strength Values (A/m) |                 |                 |                 |                 | FCC H-Field Strength 50% Limits (A/m) | FCC H-Field Strength Limits (A/m) |
|------------------------|-----------------------|----------------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------------------------|-----------------------------------|
|                        |                       | Test Position A                        | Test Position B | Test Position C | Test Position D | Test Position E |                                       |                                   |
| 1%                     | 0.145                 | 0.22                                   | 0.22            | 0.23            | 0.23            | 0.24            | 0.815                                 | 1.63                              |
| 50%                    | 0.145                 | 0.22                                   | 0.20            | 0.20            | 0.20            | 0.22            | 0.815                                 | 1.63                              |
| 99%                    | 0.145                 | 0.19                                   | 0.17            | 0.19            | 0.17            | 0.19            | 0.815                                 | 1.63                              |

H-Field Strength at 20cm from the top surface of the EUT

| Charging Battery Level | Frequency Range (MHz) | Measured E-Field Strength Values (A/m) | FCC H-Field Strength 50% Limits (A/m) | FCC H-Field Strength Limits (A/m) |
|------------------------|-----------------------|----------------------------------------|---------------------------------------|-----------------------------------|
|                        |                       | Test Position E                        |                                       |                                   |
| 1%                     | 0.145                 | 0.16                                   | 0.815                                 | 1.63                              |
| 50%                    | 0.145                 | 0.12                                   | 0.815                                 | 1.63                              |
| 99%                    | 0.145                 | 0.09                                   | 0.815                                 | 1.63                              |



#### 4.3 Equipment Approval Considerations

The EUT does comply with KDB 680106 D01 as follow table.

| Requirements of KDB 680106 D01                                                                                                                                                                                                           | Yes / No | Description                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power transfer frequency is less than 1 MHz                                                                                                                                                                                              | Yes      | The device operate in the frequency range 110KHz~205KHz                                                                                                                                   |
| Output power from each primary coil is less than 15 watts                                                                                                                                                                                | Yes      | The maximum output power for each primary coil is 5W.                                                                                                                                     |
| 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 one primary coils and are able to detect and allow coupling only between individual pairs of coils.                                                          |
| Client device is placed directly in contact with the transmitter.                                                                                                                                                                        | Yes      | Client device is placed directly in contact with the transmitter.                                                                                                                         |
| Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).                                                                                                                                        | Yes      | Mobile exposure conditions only                                                                                                                                                           |
| 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.                                          | Yes      | The EUT 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. |

#### 4.4 Conclusion

The detected emissions with a distance of 15cm surrounding the device and 20 cm above the top surface of the device are below the FCC E-Field Strength & H-Field Strength limits; and comply with the requirements of FCC KDB 680106 D01.

# PHOTOGRAPH OF TEST



※※※※※THE END※※※※※