



REPORT No. : SZ18010036S01

# TEST REPORT

**APPLICANT** : Bostar Technology INC  
**PRODUCT NAME** : Wireless Charger  
**MODEL NAME** : BSD-WF-R201  
**BRAND NAME** : CUCELL  
**FCC ID** : 2AEKMBSD-WF-R201  
**STANDARD(S)** : 47CFR 2.1093  
**TEST DATE** : 2018-05-13  
**ISSUE DATE** : 2018-05-15

Tested by:

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Gan Yueming (Test engineer)

Approved by:

*Peng Huarui*  
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Peng Huarui (Supervisor)

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Change History		
Issue	Date	Reason for change
1.0	2018-05-15	First edition



## 1. Technical Information

**Note:** Provide by manufacturer.

### 1.1. Applicant and Manufacturer Information

<b>Applicant:</b>	Bostar Technology INC		
<b>Applicant Address:</b>	NO.39 DaDong Road,DazhouCun 1st Industrial Zone,QiaoTou Town,DongGuan,GuangDong,China		
<b>Manufacturer:</b>	Bostar Technology INC		
<b>Manufacturer Address:</b>	NO.39 DaDong Road,DazhouCun 1st Industrial Zone,QiaoTou Town,DongGuan,GuangDong,China		

### 1.2. Equipment Under Test (EUT) Description

<b>EUT Type:</b>	Wireless Charger		
<b>Hardware Version:</b>	N/A		
<b>Software Version:</b>	N/A		
<b>Frequency Bands:</b>	110KHz~148KHz		
<b>Antenna type:</b>	N/A		
<b>MPE:</b>	H-field	0.016 A/m	50%Limit: 0.815(A/m)

**Note:** For a more detailed description, please refer to specification or user's manual supplied by the applicant and/or manufacturer.

### 1.3. Photographs of the EUT

Please refer to the External Photos for the Photos of the EUT

### 1.4. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	<b>47 CFR§2.1093</b>	Radiofrequency Radiation Exposure Evaluation: Portable Devices
2	<b>680106 D01v03</b>	RF Exposure Considerations for Low Power Consumer Wireless Power Transfer Applications



## 2. FCC MPE Requirement

### 2.1. General Information

For devices designed for typical desktop applications, such a 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. 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.

### 2.2. MPE Limit

#### Basic Restrictions Reference levels

Basic Restriction for electric, magnetic and electromagnetic fields (0Hz to 300GHz)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<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
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz \* = Plane-wave equivalent power density

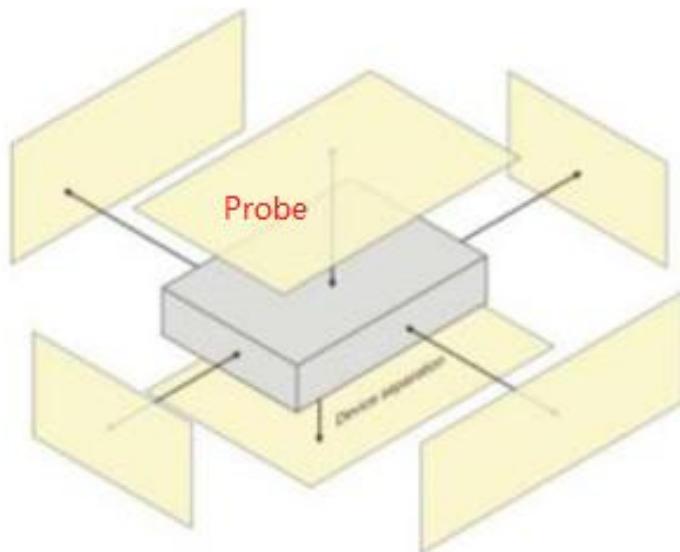
## 2.3. Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Radiated Frequency	$7 \times 10^8$
Uncertainty for test site temperature and humidity	0.6 °C
	3%

## 2.4. Test Information

The EUT working at normal charging mode, use the E-Probe measure the H-field Strength, E-field Strength separately. The measure distance is 15cm.

## 2.5. Test Setup





### 3. Assess Results

EUT: Wireless charger	M/N:
Test Date:	2018.05.13
Temperature: $22.5 \pm 0.6$ °C	Humidity: $53.4 \pm 3.0\%$

H- field strength result (Test frequency range from 110KHz to 148KHz)					
Frequency Band	Exposure Position	Distance (cm)	H-field Strength (Max. A/m)	Limit 50%(A/m)	Result
110KHz to 148KHz	Front Side	15	0.015	0.815	PASS
	Back Side	15	0.016	0.815	PASS
	Left Side	15	0.015	0.815	PASS
	Right Side	15	0.014	0.815	PASS
	Top Side	15	0.015	0.815	PASS
	Bottom Side	15	0.015	0.815	PASS

Note:

1. According to KDB 680106 D01V03 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
2. The more tighter limit apply to each band.
3. In this report, 15cm distance gap was used for testing on top surface.



## Annex A General Information

### 1. Identification of the Responsible Testing Laboratory

<b>Company Name:</b>	Shenzhen Morlab Communications Technology Co., Ltd.
<b>Department:</b>	Morlab Laboratory
<b>Address:</b>	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
<b>Responsible Test Lab Manager:</b>	Mr. Su Feng
<b>Telephone:</b>	+86 755 36698555
<b>Facsimile:</b>	+86 755 36698525

### 2. Identification of the Responsible Testing Location

<b>Name:</b>	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
<b>Address:</b>	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
<b>TAF No.:</b>	L2030

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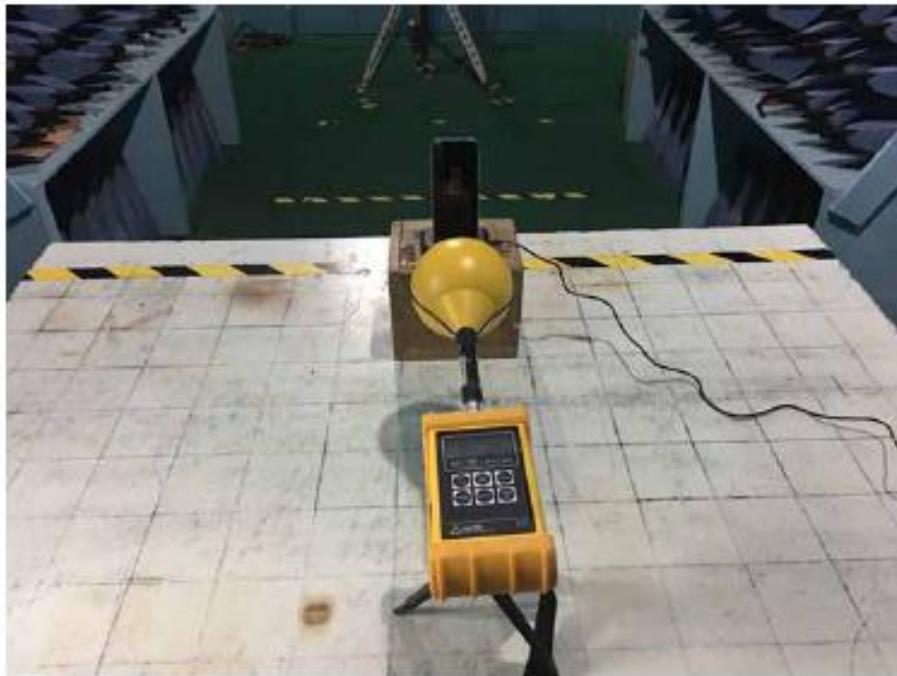


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### 3. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
Nadar	Broadband Field meter	NBM-550	E-0716	2017.10.15	2018.10.14
Nadar	PROBE	EF-0391	D-0608	2017.10.15	2018.10.14
Nadar	Probe	HF-3061	D-0227	2017.10.15	2018.10.14
Nadar	Probe	HF-0191	D-0162	2017.10.15	2018.10.14
Nadar	Field meter	ELT-400	N-0163	2017.10.15	2018.10.14
Nadar	ELT PROBE	ELT PROBE	M-0609	2017.10.15	2018.10.14

## Annex B Test Setup Photos



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