

# TXS Industrial Design Inc., dba Brandstand Products

## TEST REPORT

**SCOPE OF WORK**  
EMCTESTING-BPETOP

**REPORT NUMBER**  
191115134GZU-003

**ISSUE DATE**                      **[REVISED DATE]**  
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## TEST REPORT

Applicant Name & Address : TXS Industrial Design Inc., dba Brandstand Products  
3301 Matrix Drive #200, Richardson, Texas, USA  
Manufacturing Site : Same as applicant  
Intertek Report No: 191115134GZU-003  
FCC ID: 2AFT4-BPETOP

### Test standards

**47 CFR PART 1, Subpart I, Section 1.1310**  
**KDB 680106 D01 RF Exposure Wireless Charging App v03r01**

### Sample Description

Product : Cubietrio+  
Model No. : BPETOP  
Electrical Rating : Input:125V AC 12A 60Hz 1500W  
Powered USB output: 5V 2400mA shared  
Wireless charging output: Up to 10W  
**Serial No.** : Not Labeled  
Date Received : 15 November 2019  
Date Test : 10 March 2022  
Conducted

Prepared and Checked By

Approved By:



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Project Engineer

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**TEST REPORT****1.0 TEST RESULT SUMMARY**

Classification of EUT: Class B

Test Item	Standard	Result
EMF	47 CFR PART 1, Subpart I, Section 1.1310	PASS

Remark:

When determining the test results, measurement uncertainty of tests has been considered.

## TEST REPORT

### 2.0 General Description

#### 2.1 Product Description

Operating Frequency	111-148KHz
Type of Modulation:	MSK
Antenna Type	Inductive loop coil antenna
Antenna gain:	0 dBi as declared by applicant
Power Supply:	Input:125V AC 12A 60Hz 1500W Powered USB output: 5V 2400mA shared Wireless charging output: Up to 10W
Power cord:	wires unscreened cable

#### 2.2 Test Facility

Room102/104, No 203, KeZhu Road, Science City, GETDD Guangzhou, China

A2LA Certificate Number 0078.10

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch is accredited by A2LA and Listed in FCC website. FCC accredited test labs may perform both Certification testing under Parts 15 and 18 and Declaration of Conformity testing.

#### 2.3 EUT Exercising Software

N/A

#### 2.4 Special Accessories

N/A

#### 2.5 Equipment Modification

Any modifications installed previous to testing by TXS Industrial Design Inc., dba Brandstand Products will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Guangzhou Branch.

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### 2.6 Support Equipment List and Description

This product was tested with corresponding support equipment as below:  
Support Equipment

Description	Manufacturer	Model No.	SN/Version	Supplied by
NoteBook	HP	Compaq 6710b	SN:CNU8240LF9	Intertek
Control board	WIK	CNMDIP34	Version:3434	WIK
1 <sup>st</sup> Bulb	FSL	100-240V, 50W	-	Intertek
2 <sup>nd</sup> Bulb	FSL	100-240V, 40W	-	Intertek
1 <sup>st</sup> cement resistor	-	2 $\Omega$ ,50W	-	Intertek
2 <sup>nd</sup> cement resistor	-	2 $\Omega$ ,50W	-	Intertek
WPT client	TXS Industrial Design	5W,7.5W,10W	113K/146K	Customer

#### Cable

Description	Model No.	Connector type	Cable length/type	Supplied by
Antenna cable	RF-01	SMA	0.2 m(shielded)	Intertek
USB extension cord	USB-01	USB	1.0 m(unshielded)	WIK
1 <sup>st</sup> cement resistor cord	C-01	USB	0.3 m(unshielded)	Intertek
2 <sup>nd</sup> cement resistor cord	C-02	USB	0.3 m(unshielded)	Intertek
1 <sup>st</sup> Bulb cord	C-03	USB	0.5 m(unshielded)	Intertek
2 <sup>nd</sup> Bulb cord	C-04	USB	0.5 m(unshielded)	Intertek

**Remark:** WPT client was one of typical client devices, it's selected such that the EUT was fully exercised at maximum power from its transmitter. It will not be sold together.

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above evaluated respectively

Pretest mode	Description	
Standby Mode	kept transmitting continuously	
Charging Mode	CH: Low	Mobile phone is charging at 1% battery power, 50% and 99% battery power respectively, keep transmitting continuously
	CH: Middle	
	CH: High	

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### 3.0 EMF TEST

#### 3.1 Standard Requirement

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.1m normally can be maintained between the user and the device.

##### (a) 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 Times  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
1500-100000	--	--	5	6

##### (b) 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 Times  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
1500-100000	--	--	1.0	30

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

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**3.2 Test Data**

Input Voltage: 120V/60Hz  
Ambient Condition: 24°C, 50%RH

Test distance: 15 cm surrounding the device, and 20 cm away from the surface from the coil.

H-Filed Strength:

Test Position	Probe Measure Result (A/m)			50% Limit (A/m)	Limit (A/m)
	Mobile in 1% battery power	Mobile in 50% battery power	Mobile in 99% battery power		
Side 1	0.044	0.037	0.036	0.815	1.63
Side 2	0.038	0.037	0.035	0.815	1.63
Side 3	0.037	0.036	0.035	0.815	1.63
Side 4	0.036	0.037	0.036	0.815	1.63
Top	0.047	0.046	0.044	0.815	1.63

MPE ratio:  
 $0.047(A/m)/0.815(A/m) = 0.0577$

The EUT is composite device with Bluetooth and WPT function, Bluetooth function MPE ratio is 0.0004, the test data please refer to FCC ID: 2AFT4-BPETOP, 191115134GZU MPE report.

Sum of the MPE ratio for all simultaneously transmitting antennas:  
 $0.0004+0.0577=0.0581 < 1$



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### 4.0 Test Equipment List

Equip. No.	Equipment	Model	Manufacturer	Cal. date	Due date
EM007-03	Exposure Level Tester	ELT-400	NARDA	01/03/2022	28/02/2022

\*\*\*\*\*End of the test report\*\*\*\*\*