

TXS Industrial Design Inc., dba Brandstand Products

TEST REPORT



SCOPE OF WORK
EMC TESTING—BPETO

REPORT NUMBER
180424178GZU-002

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TEST REPORT

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Manufacturing Site : Same as applicant
Intertek Report No: 180424178GZU-002
FCC ID: 2AFT4-BPETO

Test standards

47 CFR PART 1, Subpart I, Section 1.1310
KDB 680106 D01 RF Exposure Wireless Charging Apps v03

Sample Description

Product : Cubietrio
Model No. : BPETO
Electrical Rating : Input: 125Vac, 60Hz
USB Output: 5Vdc, 2.4A
Wireless output: Up to 15W
Serial No. : Not Labeled
Date Received : 24 April 2018
Date Test : 24 April 2018-02 July 2018
Conducted

Prepared and Checked By

Approved By:



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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.

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2.0 General Description

2.1 Product Description

Operating Frequency	123-146KHz
Type of Modulation:	MSK
Antenna Type	Inductive loop coil antenna
Antenna gain:	0 dBi
Power Supply:	Input: 125Vac, 60Hz USB Output: 5Vdc, 2.4A Wireless output: Up to 15W
Power cord:	1.8m x 2 wires unscreened cable

2.2 Test Facility

Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou 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 ACTION GmbH 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:

Equipment	Model No.	Rating	Supplier
Mobile phone	LG V30+	--	Client

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 ²)	Averaging Times E ² , H ² 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 ²)	Averaging Times E ² , H ² 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: 125V/60Hz

Ambient Condition: 24°C, 50%RH

Test distance: 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils

E-Filed Strength:

Test Position	Probe Measure Result (V/m)			50% Limit (V/m)	Limit (V/m)
	Mobile in 1% battery power	Mobile in 50% battery power	Mobile in 99% battery power		
Side 1	42.342	39.640	35.736	307	614
Side 2	42.042	39.039	35.435	307	614
Side 3	42.042	38.138	35.135	307	614
Side 4	41.441	37.838	35.435	307	614
Bottom	41.141	37.538	35.736	307	614
Top	36.637	33.033	27.027	307	614

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	0.141	0.132	0.119	0.815	1.63
Side 2	0.140	0.130	0.118	0.815	1.63
Side 3	0.140	0.127	0.117	0.815	1.63
Side 4	0.138	0.126	0.118	0.815	1.63
Bottom	0.137	0.125	0.119	0.815	1.63
Top	0.122	0.110	0.090	0.815	1.63

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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	2017/12/11	2018/12/11

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5.0 Appendix I - Photos of test setup

Side 1:



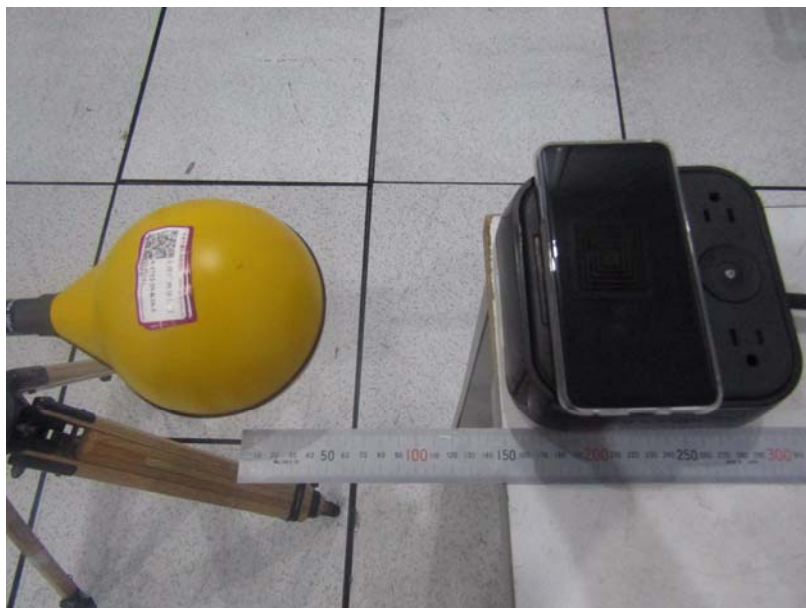
Side 2:



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Side 3:



Side 4:

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Top:



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