

TXS Industrial Design Inc. dba Brandstand Products

TEST REPORT



SCOPE OF WORK
EMC TESTING—BPEDO

REPORT NUMBER
180629112GZU-002

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TEST REPORT

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Address : 801 E. Campbell Road #620 Richardson, TX 75081 United States
Manufacturing Site : Same as applicant
Intertek Report No: 180629112GZU-002
FCC ID: 2AFT4-BPEDO

Test standards

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

Sample Description

Product : CubieDuo
Model No. : BPEDO
Electrical Rating : Input: 125Vac, 60Hz
USB Output: 5Vdc, 2.4A
Wireless output: Up to 15W
Serial No. : Not Labeled
Date Received : 29 June 2018
Date Test : 29 June 2018-12 September 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 unshielded 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 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:

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	46.8468	44.4444	37.2372	307	614
Side 2	46.2462	42.9429	35.7357	307	614
Side 3	46.5465	44.1441	36.3363	307	614
Side 4	47.1471	44.7447	36.6366	307	614
Bottom	46.8468	44.4444	36.9369	307	614
Top	45.6456	42.6426	35.1351	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	0.156	0.148	0.124	0.815	1.63
Side 2	0.154	0.143	0.119	0.815	1.63
Side 3	0.155	0.147	0.121	0.815	1.63
Side 4	0.157	0.149	0.122	0.815	1.63
Bottom	0.156	0.148	0.123	0.815	1.63
Top	0.152	0.142	0.117	0.815	1.63

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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:

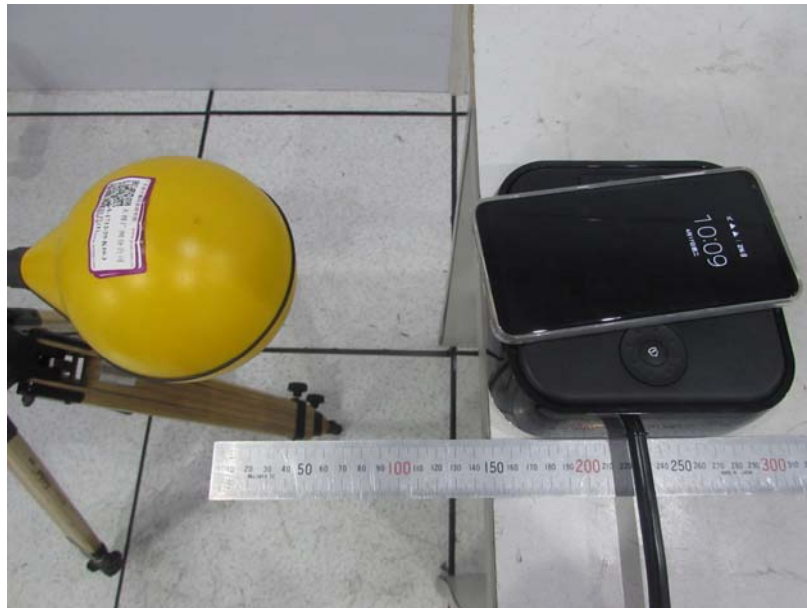


Side 2:

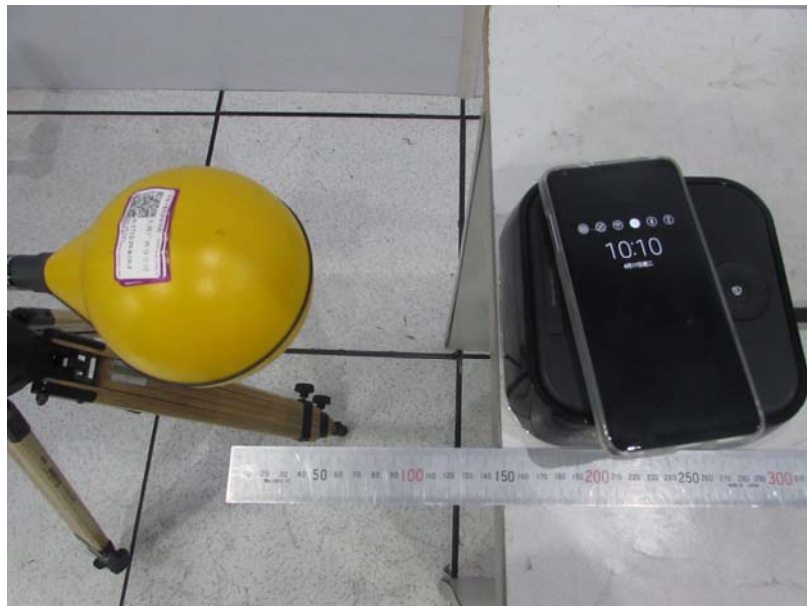


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Side 3:



Side 4:



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Top:



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