RF EXPOSURE TEST REPORT

Applicant	Belkin International, Inc
Address	12045 East Waterfront Drive, Playa Vista, CA 90094, USA

Manufacturer or Supplier	Belkin International, Inc
Address	12045 East Waterfront Drive, Playa Vista, CA 90094, USA
Product	BOOSTCHARGE Portable Wireless Charger + Stand Special Edition
Brand Name	belkin
Model	WIZ003
Additional Model & Model Difference	N/A
Date of tests	Mar. 26, 2020 ~ May 09, 2020

The submitted sample of the above equipment has been tested according to the requirements of the following standard:

☒ **47 CFR PART 1, Subpart I, Section 1.1310**
☒ **KDB 680106 D01**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Andy Zhu Project Engineer / EMC Department	Approved by Glyn He Assistant Manager/ EMC Department
	 Data: Jun. 03, 2020

Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM200326N003	Original release	Jun. 03, 2020

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1. GENERAL INFORMATION

1.1. GENERAL DESCRIPTION OF EUT

FCC ID	K7SWIZ003
PRODUCT	BOOSTCHARGE Portable Wireless Charger + Stand Special Edition
MODEL NO.	WIZ003
ADDITIONAL MODEL	N/A
POWER SUPPLY	DC 3.7V from battery Input USB-C: 5.0V⎓3.0A, 9.0V⎓2.0A, 12V⎓1.5A Input Pogo Pin: 5.0V⎓3.0A, 9.0V⎓2.0A, 12V⎓1.5A Output USB A: 5V⎓2.4A Output Wireless: 10W Total Output (USB A + Wireless): 12W (Max)
MODULATION TECHNOLOGY	FSK
OPERATING FREQUENCY RANGE	110 ~ 205KHz
ANTENNA TYPE	Coil Antenna
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	USB-C cable: Shielded, non-detachable 1.2m

NOTES:

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

2. For the test results, the EUT had been tested with all conditions, but only the worst case was shown in test report.

3. Please refer to the EUT photo document (Reference No.: 200326N003) for detailed product photo.

4. The EUT were powered by the following car charger:

ADAPTER	
BRAND:	DBK
MODEL:	USB-150PD-US
INPUT:	AC 100-240V, 50-60HZ, 0.8A(MAX)
OUTPUT:	Type-C 5V⎓3A, 9V⎓2A, 12V⎓1.5A, 18W(MAX)
DC LINE:	N/A

2. RF EXPOSURE MEASUREMENT

2.1 LIMITS

§ 1.1310 The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency(RF) radiation as specified in § 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f²)	6
30–300	61.4	0.163	1.0	6
300–1500	.....	.....	f/300	6
1500–100,000	.....	.....	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f²)	30
30–300	27.5	0.073	0.2	30
300–1500	.....	.....	f/1500	30
1500–100,000	.....	.....	1.0	30

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

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

Reference KDB 680106 D01 RF Exposure Wireless Charging App v03

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.

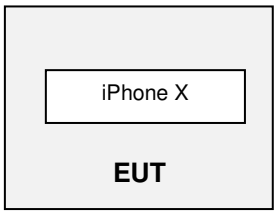
2.2 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested with associated equipment below

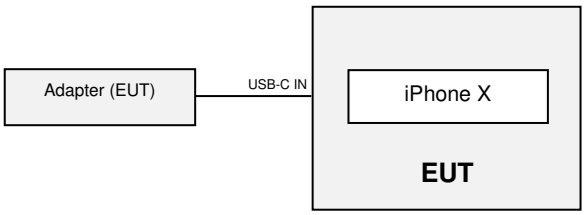
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	iPhone X	Apple	ML7F2CH/A	C6KQKXLAGRY8	N/A

2.3 CONFIGURATION OF SYSTEM UNDER TEST

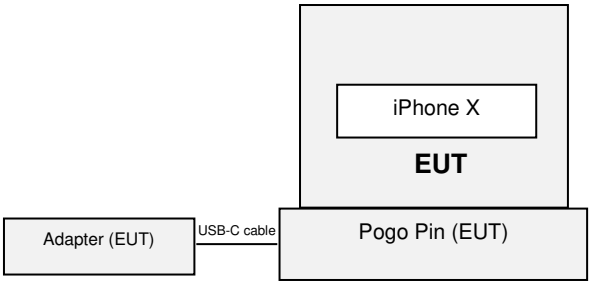
Charging Mode with iPhone X(EUT(battery full))



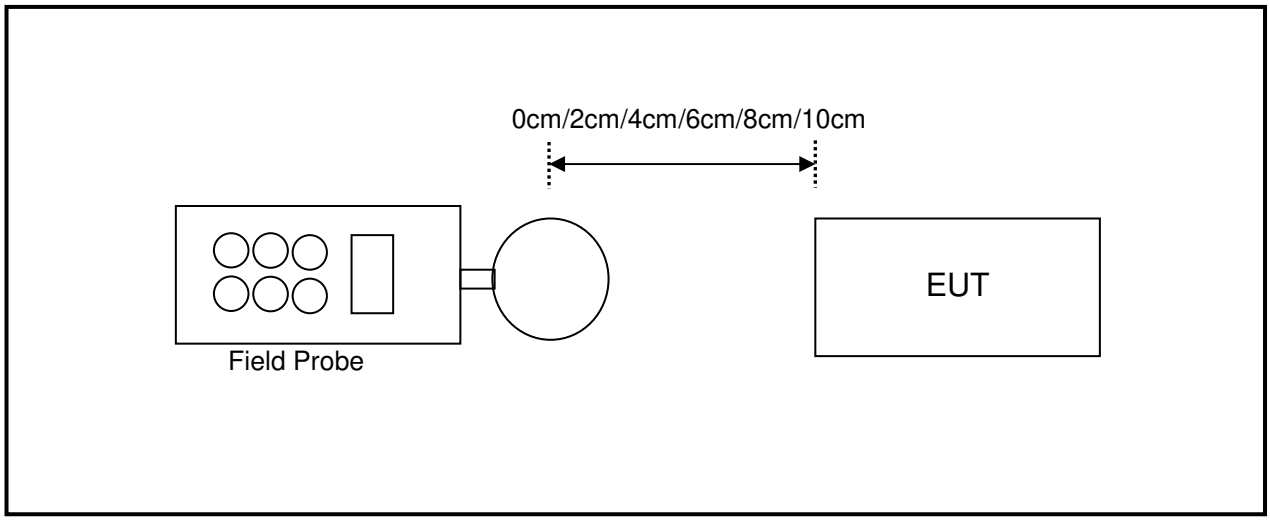
Charging Mode with iPhone X(EUT USB-C port(DC 5V/2.4A) input)



Charging Mode with iPhone X(EUT POGO Pin(DC 5V/2.4A) input)



2.4 TEST SETUP FOR WPC



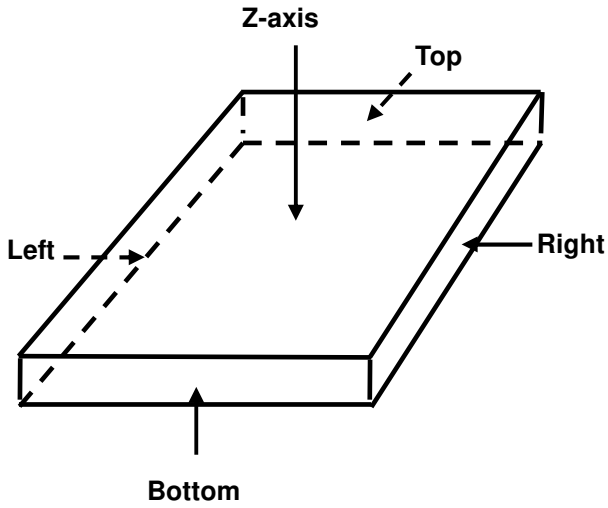
Note: Measurements should be made from all sides and the top of the primary/client pair, with the 0cm, 2 cm, 4cm, 6cm, 8cm, or 10 cm measured from the center of the probe(s) to the edge of the device.

2.5 EQUIPMENTS USED DURING TEST

Item	Test Equipment	Manufacturer	Model No.	S/No	Due date.
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	7m*4m*3m	NSEMC003	2021-03-19
2	B-field Probe	Narda	Y2006	L-0017	2020-12-23
3	E-Field probe	Narda	NBM-520	2403/01B	2020-12-23

NOTE: 1. The test was performed in RS chamber.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

2.6 TEST POINT DESCRIPTION



2.7 TEST RESULTS

Charging Mode 1: EUT(battery full) + Charging Mode with iPhone X 10% (distance 0 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	9.58	10.43	4.52	3.16	10.56
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-604.42	-603.57	-609.48	-610.84	-603.44

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.407	0.288	0.247	0.317	0.664
Max H-field (A/m)	0.324	0.229	0.197	0.252	0.529
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.306	-1.401	-1.433	-1.378	-1.101

Measurements was made from all sides and the top of the primary/client pair, with the 0 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 2: EUT(battery full) + Charging Mode with iPhone X 10% (distance 2 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	5.46	4.74	3.71	1.88	7.46
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-608.54	-609.26	-610.29	-612.12	-606.54

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.297	0.252	0.245	0.245	0.34
Max H-field (A/m)	0.236	0.201	0.195	0.195	0.271
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.394	-1.429	-1.435	-1.435	-1.359

Measurements was made from all sides and the top of the primary/client pair, with the 2 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 3: EUT(battery full) + Charging Mode with iPhone X 10% Charger (distance 4 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.75	2.73	1.77	1.33	3.22
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.25	-611.27	-612.23	-612.67	-610.78

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.274	0.237	0.24	0.234	0.289
Max H-field (A/m)	0.218	0.189	0.191	0.186	0.230
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.412	-1.441	-1.439	-1.444	-1.400

Measurements was made from all sides and the top of the primary/client pair, with the 4 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 4: EUT(battery full) + Charging Mode with iPhone X 10% Charger (distance 6 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	1.96	1.58	1.55	1.29	2.02
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-612.04	-612.42	-612.45	-612.71	-611.98

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.24	0.231	0.233	0.229	0.237
Max H-field (A/m)	0.191	0.184	0.186	0.182	0.189
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.439	-1.446	-1.444	-1.448	-1.441

Measurements was made from all sides and the top of the primary/client pair, with the 6 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 5: EUT(battery full) + Charging Mode with iPhone X 10% Charger (distance 8 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	1.74	1.21	1.73	1.31	1.19
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-612.26	-612.79	-612.27	-612.69	-612.81

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.237	0.228	0.225	0.227	0.239
Max H-field (A/m)	0.189	0.182	0.179	0.181	0.190
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.441	-1.448	-1.451	-1.449	-1.440

Measurements was made from all sides and the top of the primary/client pair, with the 8 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 6: EUT(battery full) + Charging Mode with iPhone X 10% Charger (distance 10 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	1.26	1.33	1.07	1.2	0.77
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-612.74	-612.67	-612.93	-612.80	-613.23

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.227	0.224	0.224	0.226	0.227
Max H-field (A/m)	0.181	0.178	0.178	0.180	0.181
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.449	-1.452	-1.452	-1.450	-1.449

Measurements was made from all sides and the top of the primary/client pair, with the 10 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 7: EUT USB-C port(DC 5V/2.4A) input + Charging Mode with iPhone X 10% Charger (distance 10 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	1.99	2.13	1.32	2.66	1.64
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-612.01	-611.87	-612.68	-611.34	-612.36

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.226	0.226	0.224	0.225	0.227
Max H-field (A/m)	0.180	0.180	0.178	0.179	0.181
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.450	-1.450	-1.452	-1.451	-1.449

Measurements was made from all sides and the top of the primary/client pair, with the 10 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 8: EUT POGO Pin(DC 5V/2.4A) input + Charging Mode with iPhone X 10% Charger(distance 10 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	1.79	1.66	1.64	1.46	1.31
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-612.21	-612.34	-612.36	-612.54	-612.69

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.227	0.224	0.225	0.223	0.225
Max H-field (A/m)	0.181	0.178	0.179	0.178	0.179
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.449	-1.452	-1.451	-1.452	-1.451

Measurements was made from all sides and the top of the primary/client pair, with the 10 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

3. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (MPE Test Photos)

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