

## 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	BOOST↑CHARGE™ Wireless Charging Pad 10W	
Additional Product	Wireless Charging Pad 10W	
Brand Name	belkin, playa	
Model	WIA001V2	
Additional Model & Model Difference	PW0003V2, see items 1.1	
Date of tests	Feb. 09, 2021 ~ Mar. 16, 2021	

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

**KDB 680106 D01** 

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

Tested by Lucas Chen	Approved by Glyn He
Project Engineer / EMC Department	Assistant Manager/ EMC Department

Data: Mar. 26, 2021

This report is governed by, and incorporates by reference, CPS Conditions of Service as posted at the date of issuance of this report at <a href="http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/">http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/</a> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute you unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch No. 96, Guantai Road (Houjie Section), Houjie Town, Dongguan City, Guangdong Province. 523942. People's Republic of China. Tel.: +86 769 8998 2098 Fax: +86 769 8593 1080

Email: customerservice.dg@cn.bureauveritas.com



# **TABLE OF CONTENTS**

F EXP	OSURE TEST REPORT	1
LEASI	E CONTROL RECORD	3
RF E	EXPOSURE MEASUREMENT	4
2.1	LIMITS	5
2.2	DESCRIPTION OF SUPPORT UNITS	5
2.3	CONFIGURATION OF SYSTEM UNDER TEST	6
2.4	TEST SETUP FOR WPC	6
2.5	EQUIPMENTS USED DURING TEST	7
2.6	TEST POINT DESCRIPTION	7
2.7	TEST RESULTS	8
PHC	OTOGRAPHS OF THE TEST CONFIGURATION	12
	ELEASI GEN 1.1. RF I 2.1 2.2 2.3 2.4 2.5 2.6 2.7	F EXPOSURE TEST REPORT  LEASE CONTROL RECORD  GENERAL INFORMATION  1.1. GENERAL DESCRIPTION OF EUT  RF EXPOSURE MEASUREMENT  2.1 LIMITS  2.2 DESCRIPTION OF SUPPORT UNITS  2.3 CONFIGURATION OF SYSTEM UNDER TEST  2.4 TEST SETUP FOR WPC  2.5 EQUIPMENTS USED DURING TEST  2.6 TEST POINT DESCRIPTION  2.7 TEST RESULTS  PHOTOGRAPHS OF THE TEST CONFIGURATION

Tel.: +86 769 8998 2098 Fax: +86 769 8593 1080



## **RELEASE CONTROL RECORD**

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM2102WDG0029	Original release	Mar. 26, 2021

Tel.: +86 769 8998 2098 Fax: +86 769 8593 1080



## 1. GENERAL INFORMATION

#### 1.1. GENERAL DESCRIPTION OF EUT

FCC ID	K7SWIA001V2
PRODUCT	BOOST↑CHARGE™ Wireless Charging Pad 10W
ADDITIONAL PRODUCT	Wireless Charging Pad 10W
MODEL NO.	WIA001V2
ADDITIONAL MODEL	PW0003V2
SAMPLE STATUS	Engineering sample
POWER SUPPLY	Input: 5.0VDC 2.0A, Output:5.0VDC 5.0W; Input: 9.0VDC 2.0A, Output:9VDC 10.0W; Input: 12.0VDC 1.5A, Output:12VDC 10.0W
MODULATION TECHNOLOGY	FSK
OPERATING FREQUENCY RANGE	111KHz ~ 145KHz
ANTENNA TYPE	Coil Antenna
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	USB- A to Micro USB cable: Shielded, detachable 1.3m

#### **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.: 2102WDG0029-1) for detailed product photo.
- 4. Additional model PW0003V2 is identical with test model WIA001V2 except the product name and model no. for trading purpose.
- 5. The EUT was powered by the following adapter. (only worst case adapter 1 was shown in test report)

ADAPTER 1	
BRAND:	N/A
MODEL:	DSA-18QFB FUS A
	AC 100-240V, 50/60HZ, 0.8A
OUTPUT:	DC 3.6-6V 2A, 6-9V 2A, 9-12V 1.5A
DC LINE:	N/A
ADAPTER 2	
BRAND:	belkin
MODEL:	A138A-120150U-US5
	AC 100-240V, 50/60HZ, 0.5A
OUTPUT:	DC 5.0V 2.0A, 9V 2A, 12V 1.5A
DC LINE:	N/A

Tel.: +86 769 8998 2098 Fax: +86 769 8593 1080



### 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 Populati	on/Uncontrolled Exp	oosure				
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

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	Receiver load	N/A	N/A	N/A	N/A

Tel.: +86 769 8998 2098 Fax: +86 769 8593 1080

Email: customerservice.dg@cn.bureauveritas.com

<sup>† =</sup> frequency in MHz

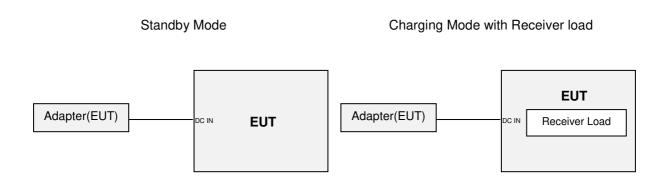
\* = Plane-wave equivalent power density

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.

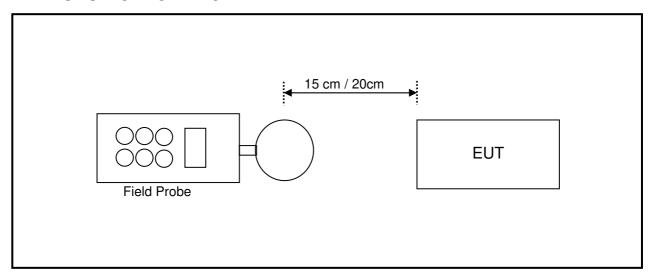
Note 2 to Table 1: General population/uncontrolled exposures apply in situations in which the general public may be exposure or can not exposure or can not exposure or can not exposure or can not exposure.



## 2.3 CONFIGURATION OF SYSTEM UNDER TEST



## 2.4 TEST SETUP FOR WPC



Note: Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device.

Tel.: +86 769 8998 2098 Fax: +86 769 8593 1080



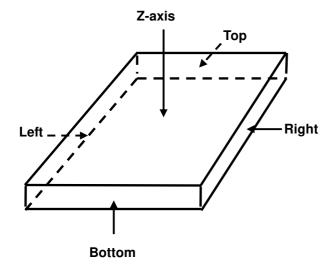
## 2.5 EQUIPMENTS USED DURING TEST

			1	1 _	1
Item	Test Equipment	Manufacturer	Model No.	Frequency Range	Next Cal.
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	7m*4m*3m	NSEMC003	2021-03-19
2	Narda Broadband Field Meter	Narda	NBM-520	100KHz-90GHz	2021-12-23
3	E-Field probe	Narda	EF0691	100KHz-6GHz	2021-12-23
4	Exposure Level Tester	Narda	ELT-400	1Hz-400KHz	2021-12-23

**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



Tel.: +86 769 8998 2098 Fax: +86 769 8593 1080



#### 2.7 TEST RESULTS

Mode 1 USB-C port input + Standby

mode i deb e per input i etandej							
E-Field Measurement							
Distance		15	cm		20cm		
EUT Side	Left	Left Right Top Bottom					
Max E-field (V/m)	0.25	0.29	0.25	0.23	0.31		
Limit (V/m)	614	614	614	614	614		
Margin (V/m)	-613.75	-613.71	-613.75	-613.77	-613.69		
50% Limit (V/m)	307	307	307	307	307		
50% Margin (V/m)	-306.75						

H-Field Measurement						
Distance		150	cm		20cm	
EUT Side	Left	Right	Тор	Bottom	Z-axis	
Max H-field (uT)	0.223	0.224	0.226	0.225	0.271	
Max H-field (A/m)	0.178	0.178	0.180	0.179	0.216	
Limit (A/m)	1.63	1.63	1.63	1.63	1.63	
Margin (A/m)	-1.452	-1.452	-1.450	-1.451	-1.414	
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815	
50% Margin (A/m)	-0.637	-0.637	-0.635	-0.636	-0.599	

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode2 USB-C port input + Receiver load operating at center (100% Load)

E-Field Measurement								
Distance		15	cm		20cm			
EUT Side	Left	Left Right Top Bottom						
Max E-field (V/m)	1.29	2.32	1.26	4.22	2.5			
Limit (V/m)	614	614	614	614	614			
Margin (V/m)	-612.71	-611.68	-612.74	-609.78	-611.5			
50% Limit (V/m)	307	307	307	307	307			
50% Margin (V/m)	-305.71	-304.68	-305.74	-302.78	-304.5			

H-Field Measurement								
Distance		15	cm		20cm			
EUT Side	Left	Left Right Top Bottom						
Max H-field (uT)	0.251	0.273	0.301	0.283	0.364			
Max H-field (A/m)	0.200							
Limit (A/m)	1.63	1.63	1.63	1.63	1.63			
Margin (A/m)	-1.430	-1.413	-1.390	-1.405	-1.340			
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815			
50% Margin (A/m)	-0.615	-0.598	-0.575	-0.590	-0.525			

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Tel.: +86 769 8998 2098 Fax: +86 769 8593 1080



Charging Mode3 USB-C port input + Receiver load operating at center (50% Load)

E-Field Measurement									
Distance		15cm 200							
EUT Side	Left	Right	Тор	Bottom	Z-axis				
Max E-field (V/m)	1.35	2.16	1.64	2.85	2.64				
Limit (V/m)	614	614	614	614	614				
Margin (V/m)	-612.65	-611.84	-612.36	-611.15	-611.36				
50% Limit (V/m)	307	307	307	307	307				
50% Margin (V/m)	-305.65	-304.84	-305.36	-304.15	-304.36				

H-Field Measurement								
Distance		15	cm		20cm			
EUT Side	Left	Left Right Top Bottom						
Max H-field (uT)	0.242	0.269	0.295	0.271	0.355			
Max H-field (A/m)	0.193	0.214	0.235	0.216	0.283			
Limit (A/m)	1.63	1.63	1.63	1.63	1.63			
Margin (A/m)	-1.437	-1.416	-1.395	-1.414	-1.347			
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815			
50% Margin (A/m)	-0.622	-0.601	-0.580	-0.599	-0.532			

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode4 USB-C port input + Receiver load operating at center (10% Load)

onarging moder out of portinipation read operating at content (1070 2000)									
E-Field Measurement									
Distance		15cm 20							
EUT Side	Left Right Top Bottom								
Max E-field (V/m)	1.26	2.09	1.63	2.46	2.36				
Limit (V/m)	614	614	614	614	614				
Margin (V/m)	-612.74	-611.91	-612.37	-611.54	-611.64				
50% Limit (V/m)	307	307	307	307	307				
50% Margin (V/m)	-305.74	-304.91	-305.37	-304.54	-304.64				

H-Field Measurement								
Distance		15	cm		20cm			
EUT Side	Left	Left Right Top Bottom						
Max H-field (uT)	0.216	0.251	0.288	0.259	0.329			
Max H-field (A/m)	0.172	0.200	0.229	0.206	0.262			
Limit (A/m)	1.63	1.63	1.63	1.63	1.63			
Margin (A/m)	-1.458	-1.430	-1.401	-1.424	-1.368			
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815			
50% Margin (A/m)	-0.643	-0.615	-0.586	-0.609	-0.553			

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Tel.: +86 769 8998 2098 Fax: +86 769 8593 1080



Charging Mode5 USB-C port input + Receiver load operating with 3 mm airgap at center (100% Load)

E-Field Measurement								
Distance		15	cm		20cm			
EUT Side	Left Right Top Bottom				Z-axis			
Max E-field (V/m)	0.81	1.86	3.3	1.17	1.8			
Limit (V/m)	614	614	614	614	614			
Margin (V/m)	-613.19	-612.14	-610.7	-612.83	-612.2			
50% Limit (V/m)	307	307	307	307	307			
50% Margin (V/m)	-306.19	-305.14	-303.7	-305.83	-305.2			

H-Field Measurement								
Distance		15	cm		20cm			
EUT Side	Left	Left Right Top Bottom						
Max H-field (uT)	0.283	0.311	0.34	0.398	0.446			
Max H-field (A/m)	0.225	0.248	0.271	0.317	0.355			
Limit (A/m)	1.63	1.63	1.63	1.63	1.63			
Margin (A/m)	-1.405	-1.382	-1.359	-1.313	-1.275			
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815			
50% Margin (A/m)	-0.590	-0.567	-0.544	-0.498	-0.460			

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode6 USB-C port input + Receiver load operating with 3 mm airgap at center (50% Load)

enalging measures (early interest in the enal operating many and angle at content (early beauty									
E-Field Measurement									
Distance		15	cm		20cm				
EUT Side	Left	Z-axis							
Max E-field (V/m)	0.76	1.64	2.89	1.06	1.92				
Limit (V/m)	614	614	614	614	614				
Margin (V/m)	-613.24	-612.36	-611.11	-612.94	-612.08				
50% Limit (V/m)	307	307	307	307	307				
50% Margin (V/m)	-306.24	-305.36	-304.11	-305.94	-305.08				

H-Field Measurement								
Distance		15	cm		20cm			
EUT Side	Left	Left Right Top Bottom						
Max H-field (uT)	0.273	0.301	0.332	0.367	0.438			
Max H-field (A/m)	0.217	0.217 0.240 0.264 0.292						
Limit (A/m)	1.63	1.63	1.63	1.63	1.63			
Margin (A/m)	-1.413	-1.390	-1.366	-1.338	-1.281			
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815			
50% Margin (A/m)	-0.598	-0.575	-0.551	-0.523	-0.466			

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Tel.: +86 769 8998 2098 Fax: +86 769 8593 1080



Charging Mode 7 USB-C port input + Receiver load operating with 3 mm airgap at center (10% Load)

E-Field Measurement									
Distance		15cm 20cm							
EUT Side	Left	Right	Тор	Bottom	Z-axis				
Max E-field (V/m)	0.76	1.68	2.88	1.12	2.06				
Limit (V/m)	614	614	614	614	614				
Margin (V/m)	-613.24	-612.32	-611.12	-612.88	-611.94				
50% Limit (V/m)	307	307	307	307	307				
50% Margin (V/m)	-306.24	-305.32	-304.12	-305.88	-304.94				

H-Field Measurement								
Distance		150	cm		20cm			
EUT Side	Left	Left Right Top Bottom						
Max H-field (uT)	0.263	0.306	0.329	0.362	0.435			
Max H-field (A/m)	0.209	0.244	0.262	0.288	0.346			
Limit (A/m)	1.63	1.63	1.63	1.63	1.63			
Margin (A/m)	-1.421	-1.386	-1.368	-1.342	-1.284			
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815			
50% Margin (A/m)	-0.606	-0.571	-0.553	-0.527	-0.469			

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Tel.: +86 769 8998 2098 Fax: +86 769 8593 1080



## 3. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

--- END ---

Tel.: +86 769 8998 2098 Fax: +86 769 8593 1080