

## RF Exposure Report

**Report No.:** SA170614C22

**FCC ID:** K7SF8M747

**Test Model:** F8M741

**Series Model:** F8M747

**Received Date:** Jun. 14, 2017

**Test Date:** Aug. 12 ~ Aug. 24, 2017

**Issued Date:** Sep. 04, 2017

**Applicant:** Belkin International, Inc.

**Address:** 12045 E. Waterfront Drive, Playa Vista, CA 90094 USA

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.

**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)



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### Release Control Record

Issue No.	Description	Date Issued
SA170614C22	Original release	Sep. 04, 2017

## 1 Certificate of Conformity

**Product:** Wireless Charging Pad

**Brand:** belkin

**Test Model:** F8M741

**Series Model:** F8M747


**Sample Status:** Engineering sample

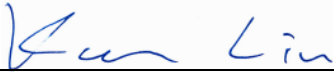
**Applicant:** Belkin International, Inc.

**Test Date:** Aug. 12 ~ Aug. 24, 2017

**Standards:** FCC Part 1 (Section 1.1307(b), 1.1310)

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :**  , **Date:** Sep. 04, 2017  
Suntee Liu / Specialist

**Approved by :**  , **Date:** Sep. 04, 2017  
Ken Liu / Senior Manager

## 2 RF Exposure

### 2.1 Description of Support Units

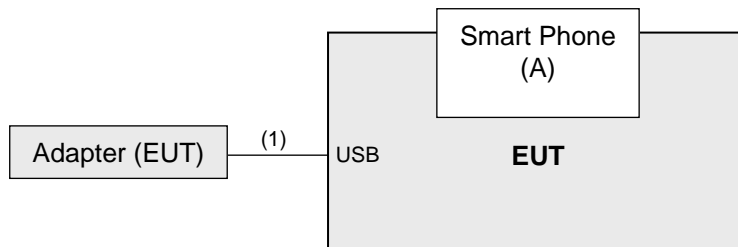
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Smart Phone	Samsung	Galaxy S8	NA	FCC DoC Approved	-

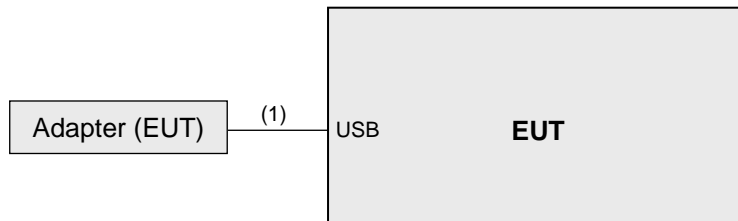
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB	1	1.8	Y	0	Accessory of EUT

#### 2.1.1 Configuration of System Under Test

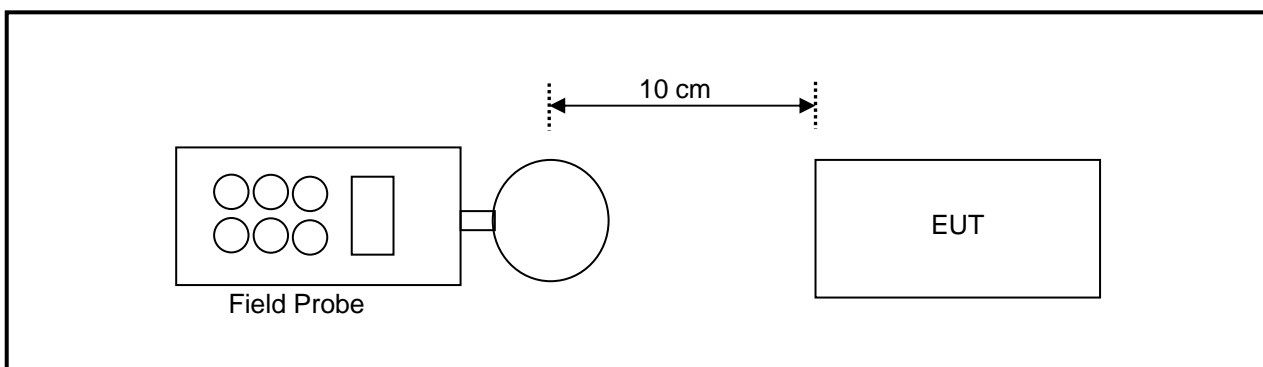
Charging Mode



Standby Mode



### 2.2 Test Setup



Note: Measurements should be 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.

### 2.3 Test Instruments

Description	Brand	Model No.	Frequency Range	Calibrated Date	Calibrated Until
Broadband Field Meter	NARDA	NBM-550	-	Feb. 9, 2016	Feb. 8, 2018
Magnetic Field Meter	NARDA	ELT-400	1 – 400kHz	Feb. 11, 2016	Feb. 10, 2018
Magnetic Probe	NARDA	HF 3061	300kHz – 30MHz	Feb. 9, 2016	Feb. 8, 2018
Magnetic Probe	NARDA	HF-0191	27 – 1000MHz	Feb. 9, 2016	Feb. 8, 2018
Broadband Field Meter	NARDA	NBM-550	-	Feb. 9, 2016	Feb. 8, 2018
Electric Field Meter	COMBINOVA	EFM 200	5Hz – 400kHz	Oct. 16, 2016	Oct. 15, 2017
E-Field Probe	NARDA	EF 0391	100kHz – 3GHz	Feb. 9, 2016	Feb. 8, 2018
E-Field Probe	NARDA	EF6091	100MHz – 60GHz	Feb. 9, 2016	Feb. 8, 2018

Note: 1. The calibration interval of the above test instruments is 12/24 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa RF Chamber

## 2.4 Limits for Maximum Permissible Exposure (MPE)

§ 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/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3–3.0 .....	614	1.63	*(100)	6
3.0–30 .....	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30–300 .....	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3–1.34 .....	614	1.63	*(100)	30
1.34–30 .....	824/f	2.19/f	*(180/f <sup>2</sup> )	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

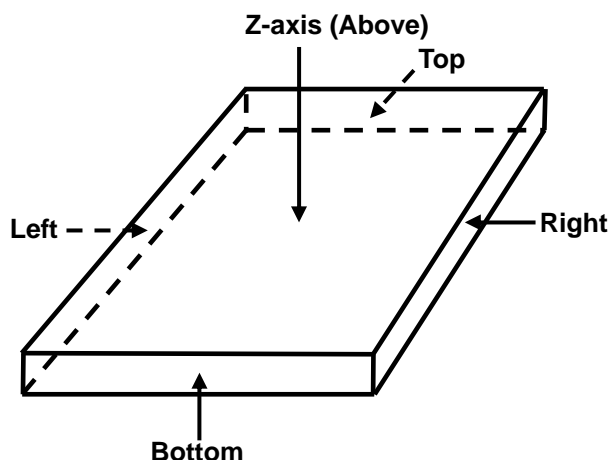
NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply 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.

### 680106 D01 RF Exposure Wireless Charging Apps v02

Aggregate leakage fields at 10 cm surrounding the device from all simultaneous transmitting coils are demonstrated to be less than 30% of the MPE limit.

## 2.5 Test Point Description



### 3 Calculation Result of Maximum Conducted Power

Charging Mode 10%

E-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max E-field (V/m)	0.72	0.87	1.01	1.03	0.78
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-613.28	-613.13	-612.99	-612.97	-613.22
70 % Limit (V/m)	429.8	429.8	429.8	429.8	429.8
70 % Margin (V/m)	-429.296	-429.191	-429.093	-429.079	-429.254

H-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max H-field (uT)	0.285	0.252	0.261	0.273	0.321
Max H-field (A/m)	0.228	0.2016	0.2088	0.2184	0.2568
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.402	-1.4284	-1.4212	-1.4116	-1.3732
70 % Limit (A/m)	1.141	1.141	1.141	1.141	1.141
70 % Margin (A/m)	-0.9814	-0.99988	-0.99484	-0.98812	-0.96124

Measurement 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 50%

E-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max E-field (V/m)	0.78	0.84	1.13	1.09	0.87
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-613.22	-613.16	-612.87	-612.91	-613.13
70 % Limit (V/m)	429.8	429.8	429.8	429.8	429.8
70 % Margin (V/m)	-429.254	-429.212	-429.009	-429.037	-429.191

H-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max H-field (uT)	0.286	0.251	0.266	0.274	0.321
Max H-field (A/m)	0.2288	0.2008	0.2128	0.2192	0.2568
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.4012	-1.4292	-1.4172	-1.4108	-1.3732
70 % Limit (A/m)	1.141	1.141	1.141	1.141	1.141
70 % Margin (A/m)	-0.98084	-1.00044	-0.99204	-0.98756	-0.96124

Measurement 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 90%

E-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max E-field (V/m)	0.77	0.85	1.15	1.05	0.82
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-613.23	-613.15	-612.85	-612.95	-613.18
70 % Limit (V/m)	429.8	429.8	429.8	429.8	429.8
70 % Margin (V/m)	-429.261	-429.205	-428.995	-429.065	-429.226

H-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max H-field (uT)	0.284	0.252	0.261	0.271	0.325
Max H-field (A/m)	0.2272	0.2016	0.2088	0.2168	0.26
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.4028	-1.4284	-1.4212	-1.4132	-1.37
70 % Limit (A/m)	1.141	1.141	1.141	1.141	1.141
70 % Margin (A/m)	-0.98196	-0.99988	-0.99484	-0.98924	-0.959

Measurement 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.

Standby Mode

E-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max E-field (V/m)	0.72	0.87	0.34	0.26	0.31
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-613.28	-613.13	-613.66	-613.74	-613.69
70 % Limit (V/m)	429.8	429.8	429.8	429.8	429.8
70 % Margin (V/m)	-429.296	-429.191	-429.562	-429.618	-429.583

H-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max H-field (uT)	0.243	0.247	0.245	0.256	0.258
Max H-field (A/m)	0.1944	0.1976	0.196	0.2048	0.2064
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.4356	-1.4324	-1.434	-1.4252	-1.4236
70 % Limit (A/m)	1.141	1.141	1.141	1.141	1.141
70 % Margin (A/m)	-1.00492	-1.00268	-1.0038	-0.99764	-0.99652

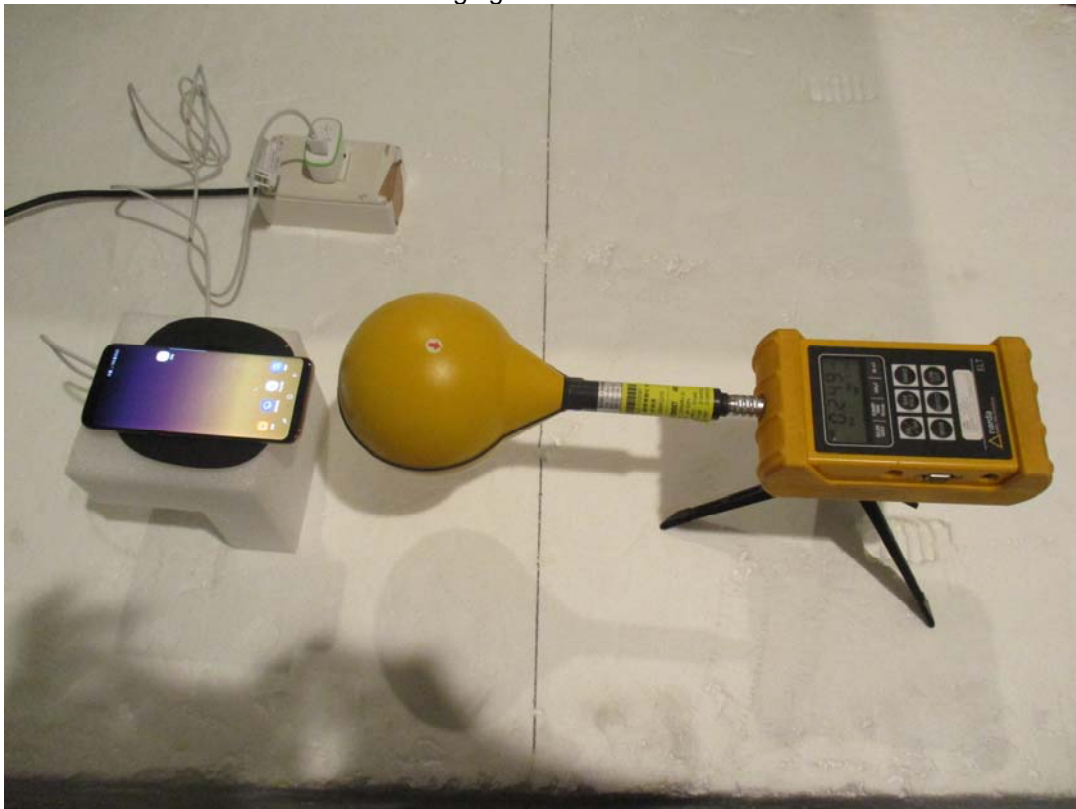
Measurement was made from all sides and the top of the primary/client pair, with the 10 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

#### 4 Photographs of the Test Configuration

Charging Mode E-Field



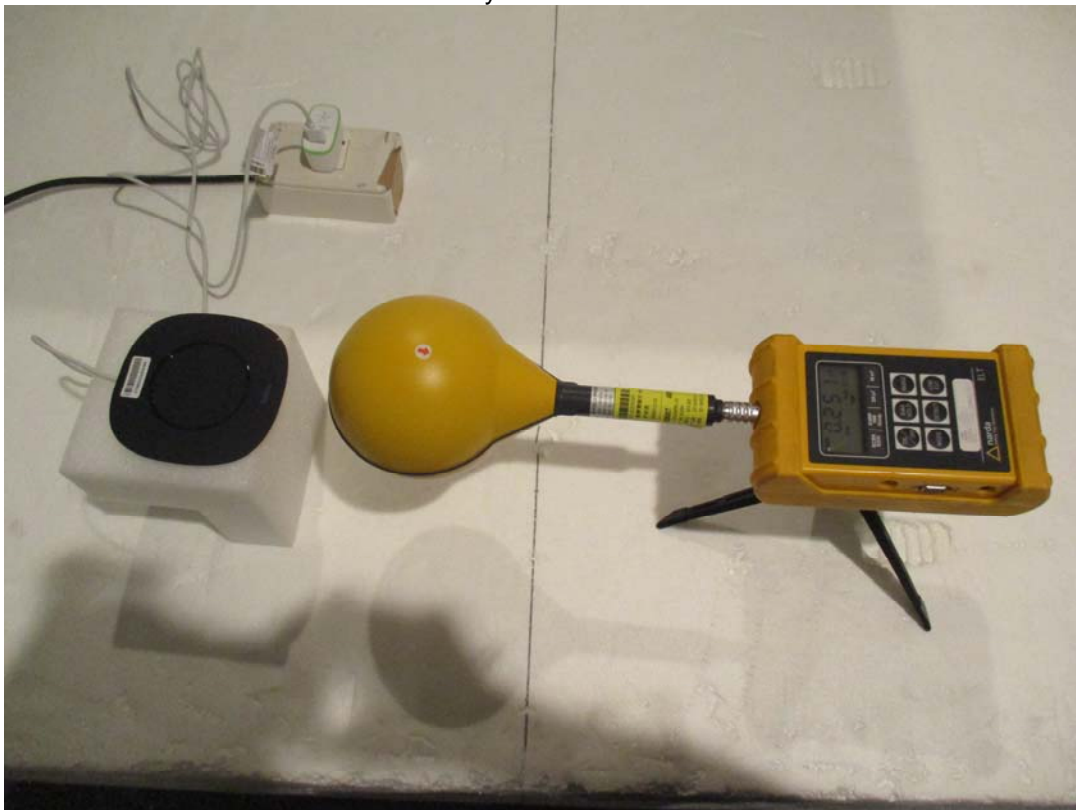
Charging Mode H-Field



Standby Mode E-Field



Standby Mode H-Field



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