

RF EXPOSURE TEST REPORT

Product name: Wireless charging power bank

FCC ID: 2AFKNF704W

Model: F704W

Standards: FCC CFR 47 PART 1.1310,

Applicant: Spigen Korea Co., Ltd.

Test Report No.: UCSFR-1511-006



UCS Co., Ltd.

#702, AnyangMegavalley, 268 Hagui-ro, Dongan-gu, Anyang-si, Gyeonggi-do, 431-767 Korea.

Tel: +82-31-420-5680 / Fax: +82-31-420-5685 / Open Site: +82-31-355-2666

Online: <http://www.ucs.co.kr>

RF Exposure Test Report

Report Number		UCSFR-1511-006			
Applicant	Company Name	Spigen Korea Co., Ltd.			
	Address	NO. 1709 STX-V TOWER, 371-37, GASAN-DONG, GEUMCHEON-GU, SEOUL, 153803, KOREA			
Product	Product Name	Wireless charging power bank			
	FCC ID	2AFKNF704W			
	Model Name	F704W			
	Family Model Name	-			
	Manufacturer	Shenzhen Powerqi Technology Co., Ltd.			
	Serial No.	-	Country of origin	China	
Other	Receipt Date	2015.08.06	Receipt Number	UCS-R-2014-591	
	Issued Date	2015.11.18	Tested Date	2015.11.17	
Standards		FCC CFR 47 PART 1.1310			
Tested by		Y. Choi  (Sign)			
Approved by		Y. M. Choi  (Sign)			
<h2 style="margin: 0;">UCS Co., Ltd.</h2> <p style="margin: 0;">#702, AnyangMegavally, 268 Hagui-ro, Dongan-gu, Anyang-si, Gyeonggi-do, 431-767 Korea. Tel : +82-31-420-5680, Fax : +82-31-420-5685</p>					
<p>o This is certified that the above mentioned products have been tested for the sample provided by client. o No part of this document may not be duplicated or reproduced by any means without the express written permission of UCS Co., Ltd.</p>					

Contents

1. Applicant Information.....	4
2. EUT (Equipment under test) Information.....	4
3. Laboratory Information.....	4
4. Test Configuration and Condition.....	5
5. Environmental evaluation and exposure limit	6
6. Test Results	7
7. Test Setup Photographs.....	9
8. Test Equipment Used For Test.....	10

Revision History

Issued Report No.	Issued Date	Revisions	Effect Section
UCSFR-1511-006	18-Nov-15	Spigen Korea Co., Ltd.	All

1. Applicant Information

Applicant Name : Spigen Korea Co., Ltd.
Address : NO. 1709 STX-V TOWER, 371-37, GASAN-DONG, GEUMCHEON-GU, SEOUL,
153803, KOREA
Manufacturer : Shenzhen Powerqi Technology Co., Ltd.
Address : 14th Floor, 3rd Building, Zhonghaixin Science & Tech Park, Longgang District,
Shenzhen, China
Country of Origin : China

2. EUT (Equipment under test) Information

Product name	Wireless charging power bank
Model name	F704W
Power source	DC 3.7 V (Battery)
Modulation Technique	ASK
Antenna Type	Integral loop coil antenna

3. Laboratory Information

UCS Co., Ltd.

#702, AnyangMegavally, 268 Hagui-ro, Dongan-gu, Anyang-si, Gyeonggi-do, 431-767 Korea.

ER Center

#476-4, Hwalcho-dong, Hwaseong-si, Gyeonggi-do, 445-150, Korea

Test site

- FCC Registration Number: 803225

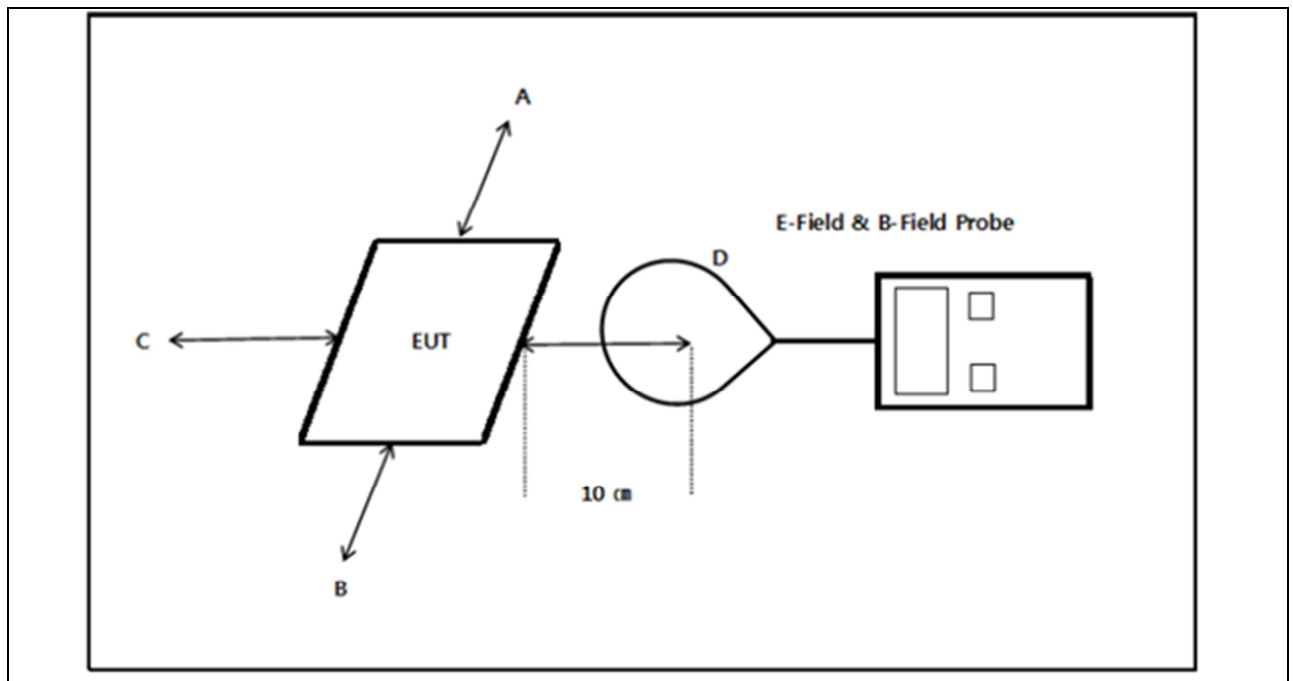
- This test site is in compliance with ISO/IEC 17025 for general requirements for the competence of testing and calibration laboratories.

4. Test Configuration and Condition

4.1 EUT operating condition

Mode	Charging current	Description
Charging mode With load	400 mA	Using Max load
	1200 mA	Using Mid load
	2 600 mA	Using Min load
Charging mode With Mobile Phone	-	< 1% of Battery status
	-	50% of Battery status

4.2 EUT test configuration diagram



[System Block Diagram of Test Configuration]

4.3 Peripheral equipments list for test

Equipment Name	Model	Serial Number	Manufacturer
Mobile Phone	SM-G925S	0054212	Samsung Electronics
-	-	-	

4.4 Cable connections

Start		End		Cable	
Name	I/O Port	Name	I/O Port	Length	Spec.
-	-	-	-	-	-

4.5 EUT modifications

-. None

5. Environmental evaluation and exposure limit

According to FCC 1.1310 : The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range [MHz]	Electric Field Strength [V/m]	Magnetic Field Strength [A/m]	Power Density [mW/cm ²]	Average Time [minutes]
(A) Limits for Occupational / Control Exposures				
0.3 – 3.0	614	1.63	*(100)	6
(B) Limits for General Population/Uncontrolled Exposure				
<u>0.3 – 1.34</u>	614	1.63	*(100)	30

* = Plane-wave equivalent power density

6. Test Results

6.1 E field strength at 10 cm from each edges the EUT

Test Mode	Position A [V/m]	Position B [V/m]	Position C [V/m]	Position D [V/m]	Limits [V/m]
Charging mode with load (Max)	0.47	0.80	0.41	0.82	614
Charging mode with load (Mid)	0.48	0.83	0.45	0.85	614
Charging mode with load (Min)	0.42	0.81	0.44	0.83	614
Charging mode with mobile Phone(<1 % of Battery)	0.86	1.48	1.27	0.51	614
Charging mode with mobile Phone(50 % of Battery)	0.85	1.42	1.25	0.53	614
Standby mode (Not charging)	0.27	0.23	0.18	0.28	614

6.2 H field strength at 10 cm from each edges the EUT

Test Mode	Position A [A/m]	Position B [A/m]	Position C [A/m]	Position D [A/m]	Limits [A/m]
Charging mode with load (Max)	0.73	0.75	0.78	0.95	1.63
Charging mode with load (Mid)	0.76	0.75	0.77	0.82	1.63
Charging mode with load (Min)	0.77	0.78	0.79	0.84	1.63
Charging mode with mobile Phone(<1 % of Battery)	0.75	0.78	0.75	0.77	1.63
Charging mode with mobile Phone(50 % of Battery)	0.74	0.77	0.78	0.81	1.63
Standby mode (Not charging)	0.65	0.62	0.58	0.62	1.63

7. Test Setup Photographs

[E-Field]



[H-Field]



8. Test Equipment Used For Test

Used	Description	Manufacturer	Model Name	Serial Number	Specifications	Next Cal. Data
■	Isotropic Electric Field Probe	Amplifer research	FP7003	311520	100 kHz ~ 3 GHz	2016-03-11
■	B-Field Probe	Narde	2300/90.10	M-0269	1 Hz ~ 400 kHz	2016-08-26
■	Exposure Level Meter	Narde	ELP-400	M-0260	1 Hz ~ 400 kHz	2016-08-26