MPE TEST REPORT

Report No: STS1704193F02

Issued for

Spigen Korea Co., Ltd.

N0. 1709 STX-V Tower, 371-37, Gasan-Dong,
GeumCheon-Gu, Seoul, South Korea

Product Name:	Fast Wireless Charger
Brand Name:	spigen
Model Name:	F303W
Series Model:	N/A
FCC ID:	2AFKNF303W
Test Standard:	FCC CFR 47 part 1, 1.1310

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TEST RESULT CERTIFICATION

Applicant's name :	Spigen Korea Co., Ltd.
Address :	N0. 1709 STX-V Tower, 371-37, Gasan-Dong, GeumCheon-Gu, Seoul, South Korea
Manufacture's Name :	Shenzhen Fang Xin Technology Co.,Ltd.
Address :	27F-JK, ShangbuBuilding, 68, NanYuan, RD, FuTian, SHenZhen,GuangDong, China

Product description

Product name :	Fast Wireless Charger
Brand name :	spigen
Model and/or type reference :	F303W
Standards :	FCC CFR 47 part 1, 1.1310
Test Procedure :	KDB 680106 D01 RF Exposure Wireless Charging Apps v02

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Date of performance of tests:	09 Sep. 2016 ~28 Sep. 2016
Date of Issue :	15 May. 2017
Test Result :	**Pass**

Testing Engineer : Leo li
(Leo li)

Technical Manager : Tony liu
(Tony liu)

Authorized Signatory : Vita Li
(Vita Li)

TESTING CONSULTING CERTIFICATION SOLUTION STS APPROVAL

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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	15 May. 2017	STS1704193F02	ALL	Initial Issue

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:
FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v02

FCC CFR 47			
Standard Section	Test Item	Judgment	Remark
FCC CFR 47 part1, 1.1310 KDB680106 D01v02 (3)(3)	Electric Field Strength (E) (V/m)	PASS	
	Magnetic Field Strength (H) (A/m)	PASS	

1.1 TEST FACTORY

BZT Testing Technology Co., Ltd.
Add. : Buliding 17, Xinghua Road Xingwei industrial Park Fuyong,
Baoan District, Shenzhen, Guangdong, China
FCC Registration No.: 701733

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ±**U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	All emissions,radiated(<30M)(9KHz-30MHz)	±2.45dB
2	Temperature	±0.5°C
3	Humidity	±2%

1.3 GENERAL DESCRIPTION OF EUT

Equipment	Fast Wireless Charger
Trade Name	spigen
Model Name	F303W
Series Model	N/A
Model Difference	N/A
Equipemnt Category	Non-ISM frequency
Operating frequency	111-205KHz
Modulation Type	GFSK
Power Adapter	Input: AC 5V, 2A
Hardware version number	V1.0.1
Software version number	V1.1.2

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2.

Channel List					
Channel	Frequency (KHz)	Channel	Frequency (KHz)	Channel	Frequency (KHz)
01	111	48	158	95	205

3. Table for Filed Antenna

Ant	Brand	Model Name	Antenna Type	Connector	NOTE
1	spigen	F303W	Coil	NA	

The EUT antenna is Coil Antenna. No antenna other than that furnished by the responsible party shall be used with the device.

1.4 EQUIPMENTS LIST FOR ALL TEST ITEMS

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
E-Field Probe	CHROMA	MFM 2000	CR25G41Y	2016.10.23	2017.10.22
H-Field Probe	CHROMA	MFM 2000	CR25G41Y	2016.10.23	2017.10.22

2. MAXIMUM PERMISSIBLE EXPOSURE

2.1 MAXIMUM PERMISSIBLE EXPOSURE

Limit of Maximum Permissible Exposure

Limits for Occupational / Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |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
1500-100,000			5	6

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/ cm²)	Averaging Time |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
1500-100,000			1	30

Note 1: f = frequency in MHz ; *Plane-wave equivalent power density

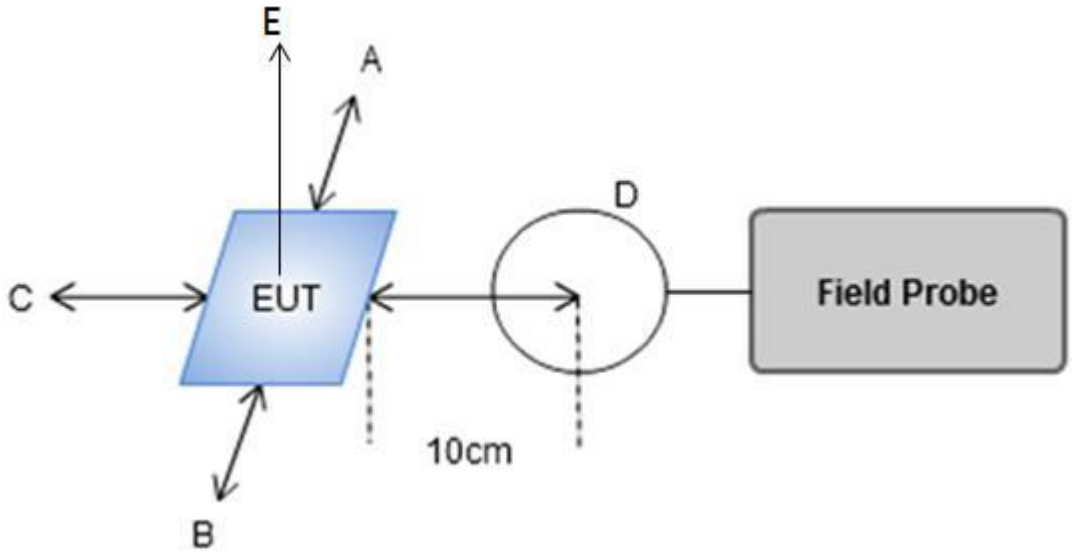
Note 2: For the applicable limit, see FCC 1.1310, 680106 D01 RF Exposure Wireless Charging Apps v02

Note 3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

2.2 TEST PROCEDURE

a. For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 10 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. 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 SETUP



2.4 RESULT OF MAXIMUM PERMISSIBLE EXPOSURE

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
Full load	10cm	A	1.72	0.367
Full load	10cm	B	1.69	0.375
Full load	10cm	C	1.96	0.351
Full load	10cm	D	1.64	0.362
Full load	10cm	E	5.88	0.342
Limit			614	1.63
Margin Limit (%)			0.96%	23.01%

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
no load	10cm	A	1.12	0.320
no load	10cm	B	1.24	0.330
no load	10cm	C	1.32	0.318
no load	10cm	D	1.24	0.323
no load	10cm	E	4.98	0.317
Limit			614	1.63
Margin Limit (%)			0.81%	20.25%

MPE SETUP PHOTO

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