MPE TEST REPORT

Report No.:STS2003246H01

Issued for

SHENZHEN DBK ELECTRONICS CO.,LTD.

No.8 Qinghua Road, Zhu Viliage, Fucheng New Community, Guanlan Street, Longhua District, Shenzhen City, Guangdong Province, China

Product Name:	Qi Wireless Charging Pad
Brand Name:	INSIGNIA, MODAL, Platinum, DYNEX, Rocketfish
Model Name:	NS-MWPC5K, NS-MWPC5K-C, NS-MWPC5KTP, NS-xxxxxxxxxx, MD-xxxxxxxxxx, PT-xxxxxxxxxx, DX-xxxxxxxxxx, RF-xxxxxxxxxx ("X" = 0-9, A-Z, a-z, "-" or blank for market purpose)
Series Model:	N/A
FCC ID:	2ARVRWC073
Test Standard:	FCC CFR 47 part 1, 1.1310

Shenzhen STS Test Services Co., Ltd.
A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China
TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail:sts@stsapp.com

TEST RESULT CERTIFICATION

Applicant's Name..... :	SHENZHEN DBK ELECTRONICS CO.,LTD.
Address..... :	No.8 Qinghua Road, Zhu Viliage, Fucheng New Community, Guanlan Street, Longhua District, Shenzhen City, Guangdong Province, China
Manufacture's Name..... :	SHENZHEN DBK ELECTRONICS CO.,LTD.
Address..... :	No.8 Qinghua Road, Zhu Viliage, Fucheng New Community, Guanlan Street, Longhua District, Shenzhen City, Guangdong Province, China

Product Description

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Standards..... :	FCC CFR 47 part 1, 1.1310
Test Procedure ..... :	680106 D01 RF Exposure Wireless Charging Apps v03

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/IC requirements. And it is applicable only to the tested sample identified in the report.
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Date of receipt of test item ..... :	19 Mar. 2020
Date of performance of tests.. :	19 Mar. 2020 ~ 26 Mar. 2020
Date of Issue..... :	26 Mar. 2020
Test Result..... :	**Pass**

Testing Engineer : Chris chen
(Chris Chen)

Technical Manager : Sean She
(Sean she)

Authorized Signatory : Vita Li
(Vita Li)

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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	26 Mar. 2020	STS2003246H01	ALL	Initial Issue

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:
FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v03

FCC CFR 47			
Standard Section	Test Item	Judgment	Remark
FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v03	Electric Field Strength (E) (V/m)	PASS	---
	Magnetic Field Strength (H) (A/m)	PASS	---

1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD
Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China
FCC test Firm Registration Number: 625569
IC test Firm Registration Number: 12108A
A2LA Certificate No.: 4338.01

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	Uncertainly
1	H-filed	±1.2μT
2	E-filed	±16%

1.3 GENERAL DESCRIPTION OF THE EUT

Product Name	Qi Wireless Charging Pad
Trade Name	INSIGNIA, MODAL, Platinum, DYNEX, Rocketfish
Model Name	NS-MWPC5K
Series Model	NS-MWPC5K-C, NS-MWPC5KTP, NS-xxxxxxxxxx, MD-xxxxxxxxxx, PT-xxxxxxxxxx, DX-xxxxxxxxxx, RF-xxxxxxxxxx ("X" = 0-9, A-Z, a-z, "-" or blank for market purpose)
Model Difference	1) All the models are identical except the model name and/or color. 2) The model NS-MWPC5K was select to test as master device.
Equipemnt Category	Non-ISM frequency
Operating frequency	110-205KHz
Modulation Type	FSK
Antenna Type	Coil Antenna
Antenna number	1
Wireless Charger output power	Max. 5W
Adapter:	AC/DC Operated, Model: USB-159US Input: 100-240Vac, 50/60Hz, Output: 5Vdc, 2.4A

Note: Equipment Approval Considerations

Power transfer frequency is less than 1 MHz.	Yes
Output power from each primary coil is less than or equal to 15 watts.	Yes
The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.	Yes
Client device is placed directly in contact with the transmitter.	Yes
Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	Yes
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.	Yes

1.4 EQUIPMENTS LIST FOR ALL TEST ITEMS

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
EMF Meter	NARDA	ELT-400	N-0342	2019.10.20	2020.10.19
EMF probe	NARDA	B-Field Probe	M-0779	2019.10.20	2020.10.19
Broadband field meter NARDA NBM	550	Broadband field meter NARDA NBM	E-1275	2019.10.20	2020.10.19
Broadband field probe NARDA EF	0391	Broadband field probe NARDA EF	D-0894	2019.10.20	2020.10.19

2. MAXIMUM PERMISSIBLE EXPOSURE

2.1 MAXIMUM PERMISSIBLE EXPOSURE

Limit of Maximum Permissible Exposure

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	$*900/f^2$	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			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	$*180/f^2$	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

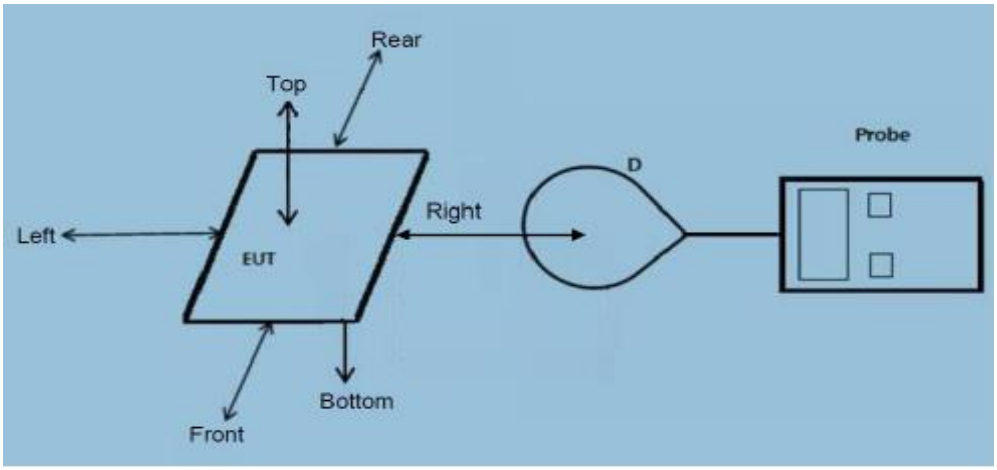
Note: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m.

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

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 10cm. 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 10cm 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)
< 10% Battery Load	15cm	Front	1.651	0.179
< 10% Battery Load	15cm	Rear	2.934	0.181
< 10% Battery Load	15cm	Left	5.982	0.147
< 10% Battery Load	15cm	Right	7.613	0.198
< 10% Battery Load	20cm	Top	6.732	0.274
Limit			614	1.63
50% Limt			307	0.815

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
50% Battery Load	15cm	Front	1.641	0.173
50% Battery Load	15cm	Rear	2.928	0.178
50% Battery Load	15cm	Left	5.978	0.140
50% Battery Load	15cm	Right	7.605	0.194
50% Battery Load	20cm	Top	6.724	0.267
Limit			614	1.63
50% Limt			307	0.815

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
＞90% Battery Load	15cm	Front	1.635	0.167
＞90% Battery Load	15cm	Rear	2.924	0.170
＞90% Battery Load	15cm	Left	5.973	0.136
＞90% Battery Load	15cm	Right	7.589	0.187
＞90% Battery Load	20cm	Top	6.715	0.262
Limit			614	1.63
50% Limt			307	0.815