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MPE TEST REPORT

Report No:STS2207060H01

Issued for

Shenzhen Reflying Electronic Co., Ltd

6 Bldg, GaoXinJian Industrial zone, HePing village, Fuyong
Town, Bao'an district, Shenzhen, Guangdong, China

Product Name:	3-in-1 Magnetic Wireless Charger
Brand Name:	NA
Model Name:	BE-MQ231W23, BE-MQ231xxxxxxx, NS-MQ231xxxxxxx, ("x"=0-9, A-Z, a-z, - or blank, for market purpose only)
Series Model:	N/A
FCC ID:	A7M-MQ231W23
Test Standard:	FCC CFR 47 part 1, 1.1310

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**TEST RESULT CERTIFICATION**

Applicant's Name.....: Shenzhen Reflying Electronic Co., Ltd
Address: 6 Bldg, GaoXinJian Industrial zone, HePing village, Fuyong Town, Bao'an district, Shenzhen, Guangdong, China
Manufacturer's Name: Shenzhen Reflying Electronic Co., Ltd
Address: 6 Bldg, GaoXinJian Industrial zone, HePing village, Fuyong Town, Bao'an district, Shenzhen, Guangdong, China

Product Description

Product Name.....: 3-in-1 Magnetic Wireless Charger
Brand Name: NA
Model Name: BE-MQ231W23, BE-MQ231xxxxxxxx, NS-MQ231xxxxxxxx, ("x"=0-9, A-Z, a-z, - or blank, for market purpose only)
Series Model.....: N/A
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 requirements. And it is applicable only to the tested sample identified in the report.

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Date of receipt of test item.....: 12 July 2022
Date of performance of tests ...: 12 July 2022 ~ 19 July 2022
Date of Issue: 19 July 2022
Test Result: **Pass**

Testing Engineer :

(Chris Chen)

Technical Manager :

(Sean She)

Authorized Signatory :

(Bovey Yang)





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**Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	19 July 2022	STS2207060H01	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 CFR 47 part1, 1.1310 KDB680106 D01v03	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 $y \pm U$, 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	$\pm 0.83\text{dB}$
2	E-filed	$\pm 0.91\text{dB}$

1.3 GENERAL DESCRIPTION OF THE EUT

Product Name	3-in-1 Magnetic Wireless Charger
Trade Name	NA
Model Name	BE-MQ231W23, BE-MQ231xxxxxxx, NS-MQ231xxxxxxx, ("x"=0-9, A-Z, a-z, - or blank, for market purpose only)
Series Model	N/A
Model Difference	All models are identical except the model number or color for different market purpose.
Equipemnt Category	Non-ISM frequency
Antenna Type	Please refer to the Note 2.
Operating frequency	111-205kHz
Modulation Type	FSK
Adapter	Input: AC 100-240V, 50/60Hz via AC/DC Adapter Output: DC 5V, 1A for USB-A and 7.5W / 5W for wireless
Hardware version number	N/A
Software version number	N/A
Connecting I/O Port(s)	Please refer to the Note 1.

Note:

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

Ant.	Brand	Model Name	Antenna Type	Connector	NOTE
1	N/A	BE-MQ231W23	Coil	NA	Antenna

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
Electric and Magnetic field Probe - Analyzer	Narda	EHP 200A	180ZX10220	2021.08.02	2022.08.01

1.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
N/A	N/A	N/A	N/A	N/A	N/A

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
E-1	Iphone	Iphone	Iphone 8	N/A	N/A
E-2	Charging Box	N/A	N/A	N/A	N/A

Note:

- (1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (2) “YES” is means “with core”; “NO” is means “without core”.

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/ cm ²)	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/ cm ²)	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 v03

Note 3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1

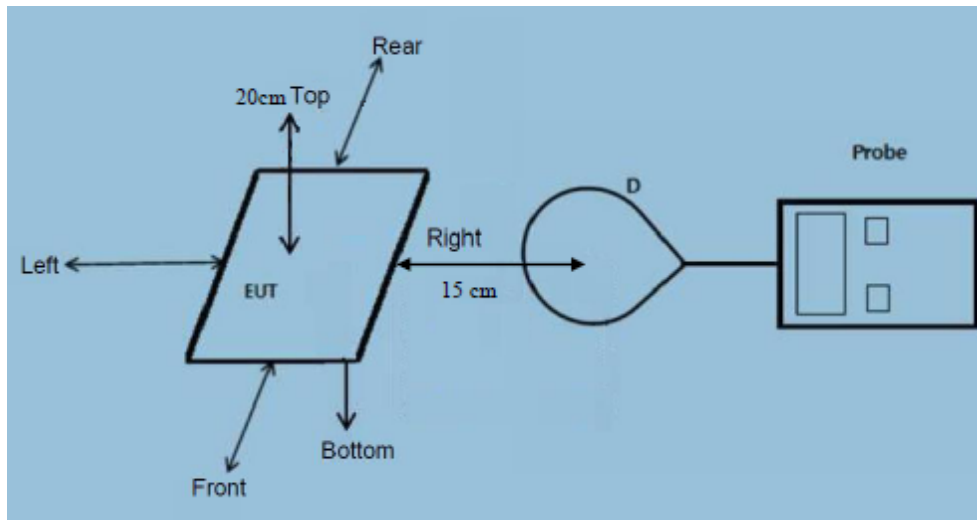
of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

Note 4: 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 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 20 cm(Top) and 15cm(Edge). 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 20 cm(Top) and 15cm(Edge) measured from the center of the probe(s) to the edge of the device.

2.3 TEST SETUP



Remark: The EHP 200A probe antenna diameter is less than 11.5cm.

2.4 TEST RESULTS

The EUT does comply with item 5 KDB680106 D01 v03.

- (1) Power transfer frequency is less than 1 MHz.
(Conform)
- (2) Output power from each primary coil is less than or equal to 15 watts.
(Conform)
- (3) 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.
(Conform)
- (4) Client device is placed directly in contact with the transmitter.
(Conform)
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
(Conform)
- (6) 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.
(Conform)



2.5 MAXIMUM PERMISSIBLE EXPOSURE

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
< 1% Battery	15cm	Front	2.011	0.159
< 1% Battery	15cm	Rear	2.763	0.126
< 1% Battery	15cm	Left	2.335	0.282
< 1% Battery	15cm	Right	2.043	0.281
< 1% Battery	20cm	Top	1.542	0.126
Limit			614	1.630
Margin Limit (%)			0.25%	7.73%

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
50% Battery	15cm	Front	2.087	0.143
50% Battery	15cm	Rear	2.594	0.12
50% Battery	15cm	Left	2.499	0.266
50% Battery	15cm	Right	1.903	0.269
50% Battery	20cm	Top	1.81	0.127
Limit			614	1.630
Margin Limit (%)			0.29%	7.79%

Maximum Permissible Exposure				
Charging	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
> 99% Battery	15cm	Front	1.987	0.124
> 99% Battery	15cm	Rear	2.908	0.106
> 99% Battery	15cm	Left	2.216	0.257
> 99% Battery	15cm	Right	2.138	0.266
> 99% Battery	20cm	Top	1.78	0.123
Limit			614	1.630
Margin Limit (%)			0.29%	7.55%

MPE SETUP PHOTO

Refer to photo documents

XXXXXXXXXXEND OF THE REPORTXXXXXXXXXX