Maximum Permissible Exposure

FCC ID	:	NYOSYECFWPC1806
Equipment	:	Wireless Charging System
Brand Name	:	HYUNDAI
Model Name	:	SYECFWPC1806
Applicant	:	SEOYON ELECTRONICS Co.,Ltd 100, Saneop-ro 156beon-gil, Gwonseon-gu, Suwon-si, Gyeonggi-do, South Korea
Manufacturer	:	SEOYON ELECTRONICS Co.,Ltd 100, Saneop-ro 156beon-gil, Gwonseon-gu, Suwon-si, Gyeonggi-do, South Korea
Standard	:	47 CFR Part 2.1091

The product was received on Mar. 28, 2018, and testing was started from Apr. 12, 2018 and completed on Apr. 12, 2018. We, SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in IEEE C95.1 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of United States government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Allen Lin

SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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Appendix A. Test Photos A1
Photographs of EUT V01

History of this test report

Report No.	Version	Description	Issued Date
FA832620	01	Initial issue of report	May 02, 2018

Reviewed by: Sam Tsai

Report Producer: Amber Chiu

1 Human Exposure Assessment

1.1 Maximum Permissible Exposure

1.1.1 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	($900 / f^2$)*	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	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	F/1500	30
1500-100,000	-	-	1.0	30
Note 1: f = frequency in MHz ; *Plane-wave equivalent power density Note 2: For the applicable limit, see FCC 1.1310				

1.1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- Part 2 Section 2.109
- FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v03

1.2 Testing Location Information

Testing Location					
☒	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-327-0973			
Test site Designation No. TW1190 with FCC.					
Test Condition		**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
RF Conducted		TH06-HY	Tim	23.5°C / 65%	12/Apr/2018

1.3 Support Equipment

Support Equipment			
No.	**Equipment**	**Brand Name**	**Model Name**
1	DC Power Supply	G.W	GPS-303ODD
2	Wireless charging antenna coils	-	-
3	LOAD	-	-

Note: Support equipment No.2 & 3 was provided by customer.

1.4 The Worst Condition

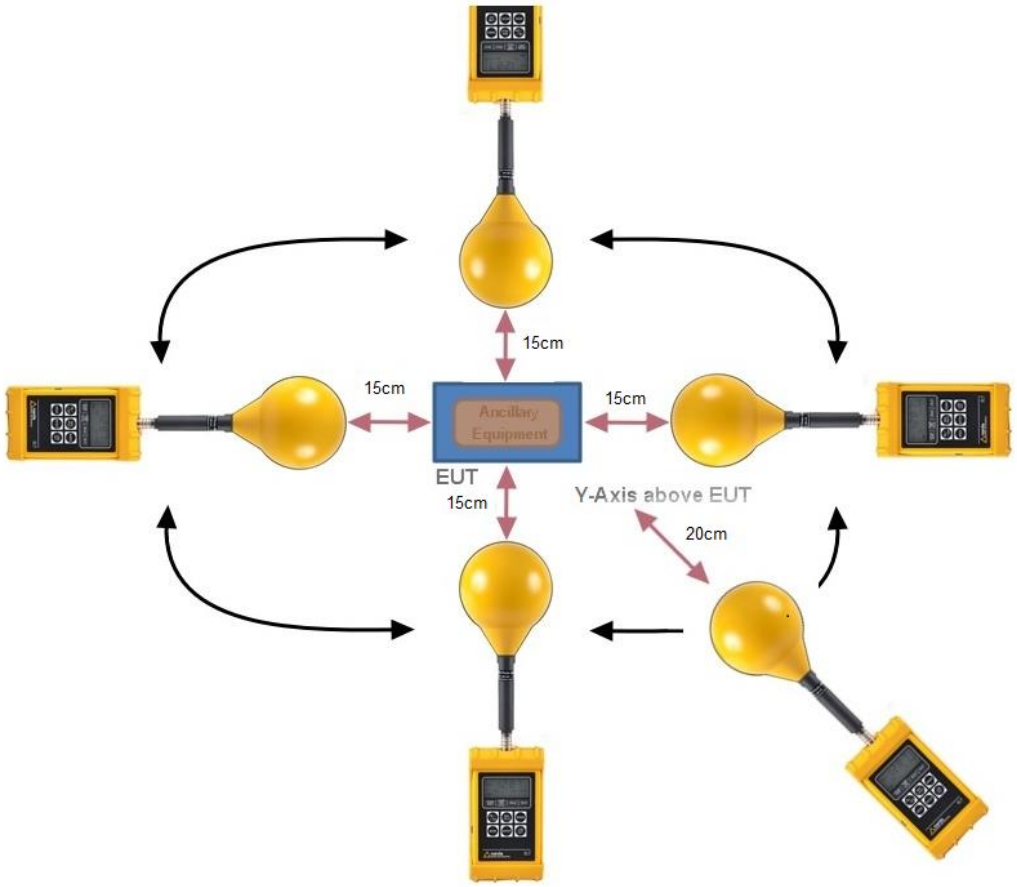
Ancillary Equipment	Charging Condition	Worst Charging Condition
Fixture Load	Charging Mode	Charging Mode

1.4.1 Test Method

Test Method
☒ Performed aggregate both leakage E-field and H-field at surrounding the device from all simultaneous transmitting coils.
☒ During testing, the EUT was placed on a non-conductive table top and the ancillary equipment (e.g., mobile phone) was placed on the EUT for charging. Maximum E-field and H-field measurements were tested 10cm from each side of the EUT. Along the side of the EUT to center of E-field probe and H-field probe were positioned at the location to search maximum field strength.

1.4.2 Test Setup

E-field and H-field Measurement



1.4.3 Result of Maximum Permissible Exposure

Maximum Permissible Exposure				
Charging Condition	**Separation**	**Probe from EUT Side**	**E-field (V/m)**	**H-field Limit (A/m)**
Operating	15cm	Left	1.36	0.004
Operating	15cm	Right	1.06	0.003
Operating	15cm	Top	1.38	0.004
Operating	15cm	Bottom	2.46	0.007
Operating	20cm	Y-axis above EUT	1.67	0.004
Limit			614	1.63
Margin Limit (%)			0.40%	0.40%

2 Test Equipment and Calibration Data

Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Probe EF	Narda Safety Test Solutions GmbH	0391 E-Field	D-0667	0.1MHz ~ 3GHz	09/ Jun/2016	08/Jun/2018
Broadband Field Meter	Narda Safety Test Solutions GmbH	NBM-550	E-0847	0.1MHz ~ 3GHz	09/ Jun/2016	08/Jun/2018