



RF EXPOSURE REPORT

Applicant: Dongguan Vatro Electronics Technology Co., LTD

Address of Applicant: No 25,Dabandi Industrial Park, Daning Village, Humen Town, Dongguan City, China

Manufacturer: Dongguan Vatro Electronics Technology Co., LTD

Address of Manufacturer: No 25,Dabandi Industrial Park, Daning Village, Humen Town, Dongguan City, China

Equipment Under Test (EUT)

Product Name: Wireless Charger

Model No.: X3, C3, D3, S3, K3, Z3, A3

Trade Mark: Vatro

FCC ID: 2AOP7-X3

Applicable standards: FCC CFR Title 47 Part 15 Subpart C:2017

Date of sample receipt: December 26, 2017

Date of Test: December 27, 2017-January 04, 2018

Date of report issued: January 05, 2018

Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

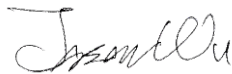
Robinson Lo
Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

Version No.	Date	Description
00	January 05, 2018	Original

Prepared By:

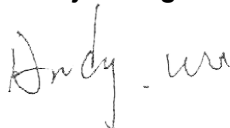


Date:

January 05, 2018

Project Engineer

Check By:



Date:

January 05, 2018

Reviewer

2.1 Test Facility

• **Industry Canada (IC) —Registration No.: 9079A-2**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-2, August 15, 2016

2.2 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.
No. 301-309, 3/F., Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102
Tel: 0755-27798480
Fax: 0755-27798960

2.3 Other Information Requested by the Customer

None.

2.4 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC Approval
SAMSUNG	Mobile Phone	S7EDGE	R28H835BJ2B	DOC
APPLE	USB Charger	A1399	N/A	N/A

3 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	SN.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	N/A	July 03 2015	July 02 2020
2	Exposure Level Tester	Narda	ELT-400	N-0231	June 29 2017	June 28 2018
3	Magnetic field probe 100cm ²	Narda	ELT probe 100cm ²	M0675	June 29 2017	June 28 2018

4 Method of measurement

4.1 Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1093 RF exposure is calculated.

According KDB680106 D01v02: RF Exposure Wireless Charging Apps v02.

5 Test Result

Test setup:	<p>The diagram illustrates the test setup. It shows a rectangular anechoic chamber. Four measurement points are marked: A (left side), B (right side), C (top edge), and D (bottom edge). A measurement probe is positioned 10 cm from the right edge of the chamber. A device is connected to the probe.</p>
Test Procedure:	<ol style="list-style-type: none"> The RF exposure test was performed on 360 degree turn table in anechoic chamber. The measurement probe was placed at test distance (10cm) which is between the edge of the charger and the geometric centre of probe. The turn table was rotated 360d degree to search of highest strength. The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed. The EUT were measured according to the dictates of KDB 680106D01v02.

5.1 Equipment Approval Considerations:

The EUT does comply with item 5.2 of KDB 680106 D01v02
a) Power transfer frequency is less than 1MHz.
Yes; the device operate in the frequency range from 111.5 KHz to 205 KHz
b) Output power from each primary coil is less than 5 watts
Yes; the maximum output power of the primary coil is $4W < 5W$.
c) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that able to detect and allow coupling only between individual pair of coils.
Yes; the transfer system includes only single primary and secondary coils.
d) Client device is inserted in or placed directly in contact with the transmitter.
Yes; Client device is placed directly in contact with the transmitter.
e) The maximum coupling surface area of the transmit (charging) device:
Yes; The EUT coupling surface area was $65 \text{ cm}^2 > 60 \text{ cm}^2$
f) Aggregate leakage fields at 10cm surrounding the device from all simultaneous transmitting coils are demonstrated to be less than 30% of the MPE limit.
Yes; The EUT field strength levels are less than 30% of the MPE limit.

5.2 E and H field Strength

Test mode for wireless charger: Normal Operation (Charging mode)

Frequency Range (MHz)	E-Filed Strength at 10 cm from the edges surrounding the EUT (V/m)						Limits (V/m)
	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F	
0.1115-0.205	1.10	1.57	0.82	0.89	1.49	1.70	614

Frequency Range (MHz)	H-Filed Strength at 10 cm from the edges surrounding the EUT (A/m)						Limits (A/m)
	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F	
0.1115-0.205	0.27	0.48	0.31	0.32	0.40	0.48	1.63

6 Test Setup Photo



----- End-----