RF EXPOSURE EVALUATION REPORT

Application No.:	GZCR2112021534AT
Applicant:	ASAP Technology(Jiangxi) Co., Ltd.
Address of Applicant:	Ji'an Industrial Park, Ji'an, Jiangxi 343100, China
Manufacturer:	ASAP Technology(Jiangxi) Co., Ltd.
Address of Manufacturer:	Ji'an Industrial Park, Ji'an, Jiangxi 343100, China
Equipment Under Test (EUT):	
EUT Name:	Wireless Charger
Model No.:	WIABLK100007866, WIAWHT100008483 ♣
♣	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade Mark:	Onn.
Standard(s) :	47 CFR PART 1, Subpart I, Section 1.1310 47 CFR PART 2, Subpart J, Section 2.1091
Date of Receipt:	2021-11-24
Date of Evaluation:	2021-11-24 to 2021-12-21
Date of Issue:	2021-12-24
Evaluation Result:	**Pass***

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

Kobe Jian
EMC Laboratory Manager

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2021-12-24		Original

Authorized for issue by				
Tested By		 **Curry Wu/Project Engineer**		
Reviewed By		 **Ricky Liu/Reviewer**		

2 Evaluation Summary

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
RF Exposure	47 CFR PART 1, Subpart I, Section 1.1310	KDB 680106 D01 TCB Workshop Presentation November 2019 RF Exposure	CFR 47 Part 1.1310	Pass

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.

Declaration of EUT Family Grouping:

Model No.: WIABLK100007866, WIAWHT100008483

All models have been tested, since according to the declaration from the applicant, the electrical circuit design, PCB layout, components used and internal wiring and functions were identical for the above models, with only difference on enclosure color, enclosure material and model No..

Considering to the difference, pre-scans were performed on the models WIABLK100007866 and WIAWHT100008483, then found the exposure result of WIAWHT100008483 is worse, so record this result in this report.

3 Contents

4 General Information

4.1 Details of E.U.T.

Power supply:	Input: DC 5-12V 1.5A Max. Output: 10W Max. Main test sample: Adapter Model: WIABLK100007866 Input: 100-240V~50/60Hz 0.5A Output: DC 5V/3A, 9V/2A, 12V/1.5A Difference test sample: Adapter Model: WIAWHT100008483 Input: 100-240V~50/60Hz 0.5A Output: DC 5V/3A, 9V/2A, 12V/1.5A
Cable(s):	USB cable: 100cm shielded
Operation Frequency:	111.2KHz-148.4KHz
Modulation Type:	Load modulation
Antenna Type:	Loop antenna
Remark:	1 This device has been tested the worst status of full load and the device has been tested with load at 5W, 7.5W and 10W. The worst case 10W is reported only. 2 Since according to the declaration from the applicant, the electrical circuit design, PCB layout, components used and internal wiring and functions were identical for the above adapter models, with only difference on color.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Mobile Phone	Nexus	MRA58K	REF. No.SEA16P00
iPhone 8	Apple	A1863	REF. No.SEA16J00
SAMSUNG Galaxy S8	SAMSUNG	SM-G9500	REF. No.SEA16M01
E-loading	SGS	N/A	REF. No.SEA42A00

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
RF Exposure Evaluation	MF: 0.13dB, EF: 0.4dB

5 Equipments Used during Test

RF Exposure					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
743 Compact 3m Semi-Anechoic Chamber	ChangZhou ZhongYu	N/A	EMC0525	2019-10-20	2022-10-19
Electric and Magnetic Field Analyzer	Narada	EHP-200A	180ZX00603	2021-01-25	2022-01-24

General used equipment					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
DMM	Fluke	73	EMC0006	2021-07-08	2022-07-07
DMM	Fluke	73	EMC0007	2021-07-08	2022-07-07

5.1 Evaluating Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,

198 Kezhu Road, Scientech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.

5.2 Facility

The facility is recognized, certified, or accredited by the following organizations:

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

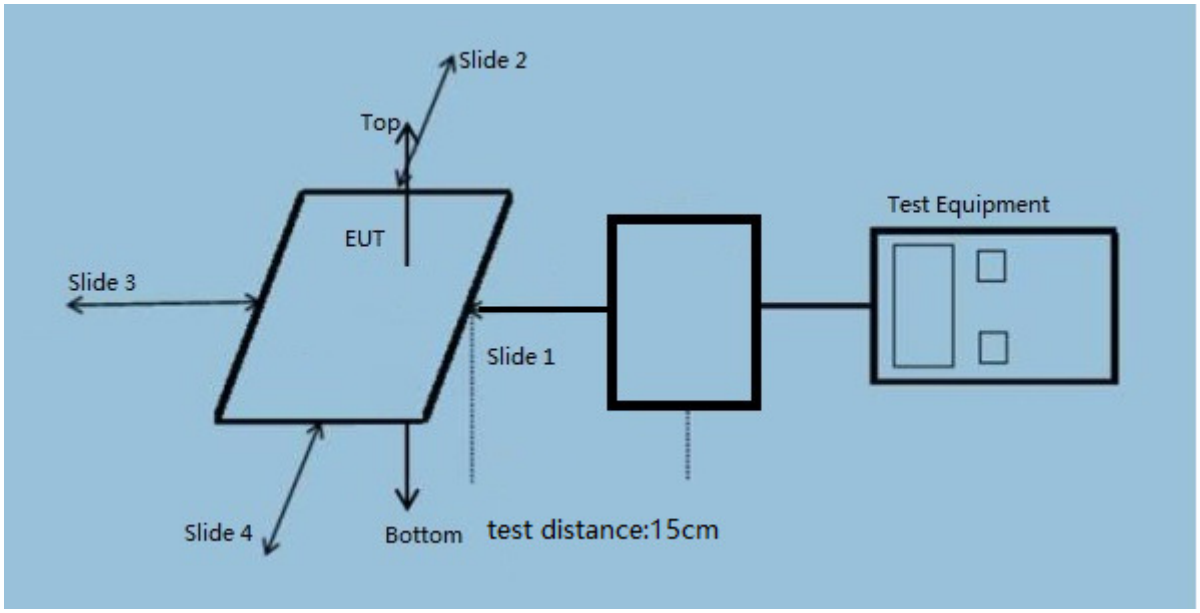
5.3 Deviation from Standards

None

5.4 Abnormalities from Standard Conditions

None

5.5 Test Block Diagram



6 Test Results

6.1 RF Exposure test

Test Requirement: 47 CFR PART 1, Subpart I, Section 1.1310
47 CFR PART 2, Subpart J, Section 2.1091

Measurement Distance: 15cm

Limit:

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in Part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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 Exposures				
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
(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
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

F=frequency in MHz

*=Plane-wave equivalent power density

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

According to IEEE C95.3:2002 section 5.5.1.1, The power density S at a point on the axis at a distance d from a transmitting antenna is given by the Friis free-space transmission formula

$$S = \frac{PG}{4\pi d^2}$$

S = power density (mW/cm^2)
P = the net power delivered to the antenna (mW)
G = gain of the antenna in linear scale
d = distance between observation point and center of the radiator (cm)

6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22.2 °C Humidity: 52.7% RH Atmospheric Pressure: 1010 mbar

EUT Operation:

This device has been tested the worst status of full load and the device has been tested with load at zero charge, intermediate charge, and full charge.

6.1.2 Measurement Data

The max output power =10W;

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)			50 % Limit (A/m)	10 % Limit (A/m)
			unload	Half load	full load		
119.3 kHz which is the worst case within the operation frequency range	15	Side 1	0.086	0.097	0.121	0.815	0.163
		Side 2	0.079	0.089	0.111		
		Side 3	0.086	0.102	0.115		
		Side 4	0.090	0.106	0.124		
		Top	0.090	0.106	0.123		

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50 % Limit (A/m)	10 % Limit (A/m)
			zero charge	intermediate charge	full charge		
121.2kHz which is the worst case within the operation frequency range	15	Side 1	0.116	0.097	0.077	0.815	0.163
		Side 2	0.105	0.088	0.070		
		Side 3	0.113	0.095	0.075		
		Side 4	0.120	0.101	0.080		
		Top	0.127	0.107	0.085		

7 Photographs- RF exposure Setup photos

Refer to Appendix_RF Exposure SetupPhotos for GZCR2112021534AT

- End of the Report -

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