RF Exposure Report

Report No.:	SA190827C16
FCC ID:	2AARN-EA702C1U
Contains module FCC ID:	2ACOE-WG209-1
Test Model:	EA702C1U
Received Date:	Aug. 27, 2019
Test Date:	Sep. 25 ~ Sep. 26, 2019
Issued Date:	Oct. 25, 2019
Applicant:	PHIHONG TECHNOLOGY CO., LTD.
Address:	No. 568, Fuxing 3rd Rd., Guishan District, Taoyuan City 333 Taiwan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN
FCC Registration / Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
SA190827C16	Original release	Oct. 25, 2019

1 Certificate of Conformity

Product:	AC EV Charger
Brand:	PHIHONG
Test Model:	EA702C1U
Sample Status:	Engineering sample
Applicant:	PHIHONG TECHNOLOGY CO., LTD.
Test Date:	Sep. 25 ~ Sep. 26, 2019
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.3 -2002

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Oct. 25, 2019

Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Oct. 25, 2019

Bruce Chen / Senior Project Engineer

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
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

2.2 MPE Calculation Formula

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result Of Maximum Conducted Power

For WLAN: (Base on WLAN module report (Model: WG209, FCC ID: 2ACOE-WG209-1)

Mode	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
WLAN 2.4GHz	14.51	1.50	20	0.008	1

For RFID:

Mode	Electric field (dBuV/m) @3m	Electric field (dBuV/m) @10m	Electric field (dBuV/m) @0.2m	Max Power (dBm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
RFID	54.0	43.54	111.50	-7.251	0.00004	0.978

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

WLAN + RFID = 0.008/1 + 0.00004/0.978 = 0.008

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