

RF Exposure Report

Report No.: SA171229C02C

FCC ID: RC6-APH50C

Test Model: APH50c, APH51c

Received Date: Jun. 14, 2018

Test Date: Jun. 19 ~ Jul. 03, 2018 and Nov. 28 ~ Nov. 29, 2018

Issued Date: Dec. 05, 2018

Applicant: Amigo Technology Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

FCC Registration / 788550 / TW0003

Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
SA171229C02C	Original release	Dec. 05, 2018

1 Certificate of Conformity

Product: Indoor Access Point

Brand: Amigo

Test Model: APH50c, APH51c

Sample Status: Engineering sample

Applicant: Amigo Technology Inc.

Test Date: Jun. 19 ~ Jul. 03, 2018 and Nov. 28 ~ Nov. 29, 2018

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

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:** Dec. 05, 2018
Celine Chou / Senior Specialist

Approved by : Bruce Chen, **Date:** Dec. 05, 2018
Bruce Chen / 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				
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/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

π = 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

Function	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WLAN	2412-2462	25.02	5.83	20	0.242	1
	5180-5240	22.49	7.74	20	0.210	1
	5745-5825	23.55	7.74	20	0.268	1
BT LE	2402-2480	3.39	3.88	20	0.001	1

Note:

2.4GHz: Directional gain = $2.82\text{dBi} + 10\log(2) = 5.83\text{dBi}$

5GHz: Directional gain = $4.73\text{dBi} + 10\log(2) = 7.74\text{dBi}$

Conclusion:

Both of the WLAN 2.4G & WLAN 5G & BT LE can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

$2.4\text{G} + 5\text{G} + \text{BT LE} = 0.242 / 1 + 0.268 / 1 + 0.001 / 1 = 0.511$

Therefore the maximum calculations of above situations are less than the "1" limit.

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