

RF Exposure Report

Report No.: SA161004C24L

FCC ID: AFJ400900

Test Model: AP-95M

Received Date: Sep. 14, 2018

Test Date: Sep. 25 ~ Oct. 08, 2018

Issued Date: Nov. 26, 2018

Applicant: Icom Inc.

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

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FCC Registration / 788550 / TW0003
Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
SA161004C24L	Original release	Nov. 26, 2018

1 Certificate of Conformity

Product: Wireless 802.11 abgn/ac indoor AP

Brand: ICOM

Test Model: AP-95M

Sample Status: Engineering sample

Applicant: Icom Inc.

Test Date: Sep. 25 ~ Oct. 08, 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:** Nov. 26, 2018
Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Nov. 26, 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

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = power density in mW/cm²

P_{out} = 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 23cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
CDD Mode					
2412-2462	25.05	7.51	23	0.271	1
5180-5240	25.82	8.61	23	0.417	1
5745-5825	27.82	8.61	23	0.661	1
Beamforming Mode					
2412-2462	21.49	7.51	23	0.119	1
5180-5240	22.81	8.61	23	0.209	1
5745-5825	24.81	8.61	23	0.331	1

Note:

2.4GHz: Directional gain = 4.5dBi + 10log(2) = 7.51dBi

5GHz: Directional gain = 5.6dBi + 10log(2) = 8.61dBi

Conclusion:

Both of the WLAN 2.4G & WLAN 5G 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

$$2.4G + 5G = 0.271 + 0.661 = 0.932$$

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

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