

## RF Exposure Report

**Report No.:** SA181224C17

**FCC ID:** W23-JWW6051

**Test Model:** JWW6051

**Received Date:** Dec. 24, 2018

**Date of Evaluation:** Feb. 18, 2019

**Issued Date:** Feb. 23, 2019

**Applicant:** jjPlus Corporation

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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 /  
Designation Number:** 427177 / TW0011



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### Release Control Record

Issue No.	Description	Date Issued
SA181224C17	Original Release	Feb. 23, 2019

## 1 Certificate of Conformity

**Product:** 11ac wave2/abgn 2T2R WIFI & BT4.2 M.2 Combo Module

**Brand:** jjPlus

**Test Model:** JWW6051

**Sample Status:** Engineering Sample

**Applicant:** jjPlus Corporation

**Date of Evaluation:** Feb. 18, 2019

**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 :**



**Date:**

Feb. 23, 2019

Ivonne Wu / Supervisor

**Approved by :**



**Date:**

Feb. 23, 2019

Dylan Chiou / 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 <sup>2</sup> )	Average Time (minutes)
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 <sup>2</sup> )*	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

### 2.2 MPE Calculation Formula

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

where

Pd = power density in mW/cm<sup>2</sup>

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**.

## 2.4 Calculation Result of Maximum Conducted Power

Band	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WLAN	2412-2462	27.51	6.01	20	0.447	1.00
	5180-5240	16.9	8.01	20	0.062	1.00
	5260-5320	17.98	8.01	20	0.079	1.00
	5500-5700	18.37	8.01	20	0.086	1.00
	5745-5825	17.89	8.01	20	0.077	1.00
BT	2402-2480	6.29	3	20	0.002	1.00

**NOTE:**

2.4GHz: Directional gain = 3 dBi + 10log(2) = 6.01 dBi

5.0GHz: Directional gain = 5 dBi + 10log(2) = 8.01 dBi

**Conclusion:**

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN + BT = 0.447 + 0.002 = 0.449

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

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