FCC RF Exposure Report

FCC ID	:	**2AAS9-BW1257**
Equipment	:	**Tri-Band Wi-Fi AC3000 Indoor Access Point**
Model No.	:	**BW1257**
Brand Name	:	**BROWAN**
Applicant	:	**BROWAN COMMUNICATIONS Co., Ltd.**
Address	:	**No.15-1, Zhoughua Rd, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, R.O.C. 333**
Standard	:	**47 CFR FCC Part 2.1091**
Received Date	:	**Dec. 18, 2018**
Tested Date	:	**Dec. 24 ~ Apr. 03, 2019**

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by: **Approved by:**

Along Chen / Assistant Manager **Gary Chang / Manager**

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FA8D1801	Rev. 01	Initial issue	Jun. 19, 2019

1 MPE EVALUATION OF MOBILE DEVICES

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 23 cm or more from persons.

1.1 LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

Frequency Range (MHz)	Power Density (mW /cm^2)	Averaging Time (minutes)
300~1500	F/1500	30
1500~100000	1.0	30

1.2 MPE EVALUATION FORMULA

$$\textbf{Pd} = \frac{Pt}{4 * Pi * R^2}$$

Where

Pd= Power density in mW/cm^2
Pt= EIRP in mW
Pi= 3.1416
R= Measurement distance

1.3 DEVIATION FROM TEST STANDARD AND MEASUREMENT PROCEDURE

None

1.4 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Parameters	Uncertainty
Conducted power	±0.808 dB

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared values of gain for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of the gain.

1.5 MPE EVALUATION RESULTS

MPE Evaluation of Single Transmission

Non-beamforming mode

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	Ratio*	Pass / Fail
2412~2462 (Wi-Fi)	28.22	28.5	3.4	23	0.233	1	**0.233**	Pass
5150~5250 (Wi-Fi)	25.11	25.5	3.3	23	0.114	1	0.114	Pass
5725~5850 (Wi-Fi)	29.88	30.0	4.3	23	0.405	1	0.405	Pass
2402 ~ 2480 (BT EDR)	8.54	9	3.4	23	0.003	1	**0.003**	Pass
2402 ~ 2480 (BT LE)	3.10	3.5	3.4	23	0.001	1	0.001	Pass

Beamforming mode

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	Ratio*	Pass / Fail
2412~2462 (Wi-Fi)	22.19	22.5	6.41	23	0.117	1	0.117	Pass
5150~5250 (Wi-Fi)	24.29	24.5	6.31	23	0.181	1	**0.181**	Pass
5725~5850 (Wi-Fi)	25.07	25.5	10.32	23	0.575	1	**0.575**	Pass

Note:

1. For 2412~2462 MHz band
   Directional gain = 3.4+10* log(2/1) = 6.41 dBi
   For 5150~5250 MHz band
   Directional gain = 3.3+10* log(2/1) = 6.31 dBi
   For 5745~5850 MHz band
   Directional gain = 4.3+10* log(4/1) = 10.32 dBi

MPE Evaluation of Simultaneous Transmission

Mode 1	Max Ratio of Each Mode
Bluetooth	0.003
Wi-Fi 5150 ~ 5250 MHz	0.181
Wi-Fi 5725 ~ 5850 MHz	0.575
Sum	0.758
Limit	1
Pass / Fail	Pass

Mode 2	Max Ratio of Each Mode
Wi-Fi 2412 ~ 2462 MHz	0.233
Wi-Fi 5150 ~ 5250 MHz	0.181
Wi-Fi 5725 ~ 5850 MHz	0.575
Sum	0.989
Limit	1
Pass / Fail	Pass

Conclusion

MPE evaluations of single and simultaneous transmission meet the requirement of standard.

2 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website http://www.icertifi.com.tw.

Linkou	**Kwei Shan**	**Kwei Shan Site II**
Tel: 886-2-2601-1640	Tel: 886-3-271-8666	Tel: 886-3-271-8640
No. 30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan, R.O.C.	No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.	No. 14-1, Lane 19, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information.

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