ISED RF Exposure Report

IC	:	**3147A-SU60SOMC**
Equipment	:	**802.11ac Professional Wi-Fi + BT5.0 Module**
Model No.	:	**SU60-SOMC-2G (453-00004)**
Brand Name	:	**Laird Connectivity**
Applicant	:	**Laird Connectivity, LLC**
Address	:	**W66N220 Commerce Court, Cedarburg, Wisconsin 53012, USA**
Manufacturer	:	**Laird Connectivity, Inc.**
Address	:	**W66N220 Commerce Court, Cedarburg, Wisconsin 53012, USA**
Standard	:	**47 CFR FCC Part 2.1091**
Received Date	:	**Aug. 19, 2019**
Tested Date	:	**Jan. 08 ~ Jan. 10, 2020**

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
CA8N2101-03	Rev. 01	Initial issue	Apr. 24, 2020
CA8N2101-03	Rev. 02	Updated brand name	May 25, 2020

1 MPE EVALUATION OF MOBILE DEVICES

1.1 RF FIELD STRENGTH LIMITS FOR DEVICE USED BY THE GENERAL PUBLIC

Frequency Range (MHz)	Power Density (W/m^2)	Averaging Time (minutes)
300-6000	$0.02619f^{0.6834}$	6
6000-15000	10	6

1.2 RF FIELD STRENGTH EVALUATION FORMULA

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

Where

Pd= Power density in W/m^2
Pt= EIRP in W
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 of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1.5 MPE EVALUATION RESULTS

IC ID: 3147A-BL654

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (W/m^2)	Limit (W/m^2)	Ratio*	Pass / Fail
2412~2462 (Wi-Fi)	21.45	21.5	2	20	0.445	5.37	**0.083**	Pass
5150~5250 (Wi-Fi)	16.89	17.0	2	20	0.158	9.05	0.017	Pass
5250~5350 (Wi-Fi)	19.03	19.5	2	20	0.281	9.14	0.031	Pass
5470~5725 (Wi-Fi)	20.53	21.0	2	20	0.397	9.43	**0.042**	Pass
5725~5850 (Wi-Fi)	20.36	20.5	2	20	0.354	9.71	0.036	Pass

IC ID: 3147A-IGUPCAT1

Frequency Band (MHz)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (W/m^2)	Limit (W/m^2)	Ratio*	Pass / Fail
GSM 850	25.97	0.5	20	0.883	2.580	**0.342**	Pass
GSM 1900	22.97	2.2	20	0.654	4.480	0.146	Pass
WCDMA 850	25	0.5	20	0.706	2.580	0.274	Pass
WCDMA1700	25	2.2	20	1.044	4.240	0.246	Pass
WCDMA 1900	25	2.2	20	1.044	4.480	0.233	Pass
LTE Band 2	25	2.2	20	1.044	4.480	0.233	Pass
LTE Band 4	25	2.2	20	1.044	4.240	0.246	Pass
LTE Band 5	25	0.5	20	0.706	2.580	0.274	Pass
LTE Band 12	25	0.5	20	0.706	2.300	0.307	Pass

*Ratio = Power density / Limit.

IC: 3147A-BL654

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (W/m^2)	Limit (W/m^2)	Ratio*	Pass / Fail
2402-2480 (BT LE)	7.50	8	2	20	0.020	5.35	**0.004**	Pass

*Ratio = Power density / Limit.

1.6 MPE EVALUATION OF SIMULTANEOUS TRANSMISSION

Mode	Max Ratio of Each Mode
Wi-Fi 2.4 GHz	0.083
Wi-Fi 5 GHz	0.042
WWAN	0.342
BT	0.004
Sum (Wi-Fi 2.4 GHz+ WWAN+BLE)	0.429
Sum (Wi-Fi 5 GHz+ WWAN +BLE)	0.388
Limit	1
Pass / Fail	Pass

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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