Testing Laboratory 3787

RADIO EXPOSURE TEST REPORT

FCC ID	:	TLZ-CU668
Equipment	:	IEEE802.11 a/b/g/n/ac/ax and Bluetooth LE 5.4 LGA Module
Brand Name	:	AzureWave
Model Name	:	AW-CU668, AW-CU680, AW-CU712
Applicant	:	AzureWave Technologies, Inc. 8F., No.94, Baozhong Rd. , Xindian Dist., New Taipei City , Taiwan 231
Manufacturer	:	AzureWave Technologies, Inc. 8F., No.94, Baozhong Rd. , Xindian Dist., New Taipei City , Taiwan 231
Standard	:	47 CFR Part 2.1091

The product was received on Jul. 03, 2025, and testing was started from Jul. 14, 2025 and completed on Oct. 04, 2025. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR Part 2.1091 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Rex Liao

Sporton International Inc. Hsinchu Laboratory
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Photographs of EUT v01

History of this test report

Report No.	Version	Description	Issued Date
FA570129	01	Initial issue of report	Nov. 19, 2025

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. 2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".
Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sam Chen

Report Producer: Sophia Shiung

1 General Description

1.1 EUT General Information

RF General Information			
Evaluation Mode	**Frequency Range (MHz)**	**Operating Frequency (MHz)**	**Modulation Type**
2.4GHz WLAN	2400-2483.5	2412-2462	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) VHT: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
5GHz WLAN	5150-5250 5250-5350 5470-5725 5725-5850	5180-5240 5260-5320 5500-5720 5745-5825	802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
6GHz WLAN	5925-7125	5955-7115	802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Bluetooth	2400-2483.5	2402-2480	LE: GFSK

1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
						WLAN 2.4GHz / Bluetooth	WLAN 5GHz / 6GHz
1	1	ARISTOTLE	RFA-27-JP326MHF4C198	PIFA	I-Pex	3.5	5
2	-		RFA-27-JP326-C198				

Note 1: The Ant. 1 and Ant. 2 are identical in type and gain, and the Ant. 1 was selected as representative antenna for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

Note 3: **For WLAN 2.4GHz function:**

For IEEE 802.11 b/g/n/VHT/ax (1TX/1RX):

Only Port 1 can be used as transmitting/receiving antenna.

For WLAN 5GHz function:

For IEEE 802.11 a/n/ac/ax (1TX/1RX):

Only Port 1 can be used as transmitting/receiving antenna.

For WLAN 6GHz function:

For IEEE 802.11 ax (1TX/1RX):

Only Port 1 can be used as transmitting/receiving antenna.

For Bluetooth function (1TX/1RX):

Only Port 1 can be used as transmitting/receiving antenna.

1.3 Table for Multiple Listing

Model Name	Chipset	WLAN 2.4GHz	WLAN 5GHz	WLAN 6GHz	Bluetooth
AW-CU668	CYW55913	✓	✓	✓	✓
AW-CU680	CYW55912	✓	✓	×	✓
AW-CU712	CYW55911	✓	×	×	✓

Note 1: The EUT has three model names that are identical in all aspects except for the supported wireless functionalities. The wireless differences are implemented solely through software configuration, with the firmware being the same and requiring no hardware changes.
Note 2: From the models above, model "AW-CU668" was selected to test.
Note 3: The EUT can only function WLAN 2.4GHz, 5GHz, 6GHz or Bluetooth at a time.
Note 4: The above information was declared by manufacturer.

1.4 Accessories

N/A

1.5 Testing Location

Testing Location Information	
Test Lab.：Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065 FAX: 886-3-656-9085
	Test site Designation No. TW3787 with FCC.
	Conformity Assessment Body Identifier (CABID) TW3787 with ISED.

2 Maximum Permissible Exposure

2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |E|²,|H|² or S (minutes)
0.3-3.0	614	1.63	*(100)	<6
3.0-30	1842/f	4.89/f	*(900/f²)	<6
30-300	61.4	0.163	1.0	<6
300-1500	-	-	f/300	<6
1500-100,000	-	-	5	<6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |E|²,|H|² or S (minutes)
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f²)	<30
30-300	27.5	0.073	0.2	<30
300-1500	-	-	f/1500	<30
1500-100,000	-	-	1.0	<30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Method

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

E (V/m) $= \frac{\sqrt{30 \times P \times G}}{d}$ Power Density: *Pd* (W/m²) $= \frac{E^2}{377}$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

2.3 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (mW/cm^2)	S Limit (mW/cm^2)
2.4G;G1D	3.50	22.34	25.84	0.50	26.34	20	0.08565	1.00000
5.2G;D1D	5.00	21.93	26.93	0.50	27.43	20	0.11009	1.00000
5.3G;D1D	5.00	21.97	26.97	0.50	27.47	20	0.11110	1.00000
5.6G;D1D	5.00	21.72	26.72	0.50	27.22	20	0.10489	1.00000
5.8G;D1D	5.00	21.40	26.40	0.50	26.90	20	0.09744	1.00000
6.2G;D1D	5.00	6.49	11.49	0.50	11.99	20	0.00315	1.00000
6.4G;D1D	5.00	6.52	11.52	0.50	12.02	20	0.00317	1.00000
6.7G;D1D	5.00	6.99	11.99	0.50	12.49	20	0.00353	1.00000
7.0G;D1D	5.00	6.71	11.71	0.50	12.21	20	0.00331	1.00000
2.4G;BT-LE	3.50	10.79	14.29	0.50	14.79	20	0.00599	1.00000

———THE END———