

## RF Exposure Report

**Report No.:** SA190527E01

**FCC ID:** TLZ-CM382

**Test Model:** AW-CM382

**Received Date:** May 27, 2019

**Test Date:** June 11, 2019

**Issued Date:** July 10, 2019

**Applicant:** AzureWave Technologies, Inc.

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

**Lab Address:** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,  
Taiwan R.O.C.

**Test Location:** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,  
Taiwan R.O.C.

**FCC Registration /  
Designation Number:** 723255 / TW2022

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### Release Control Record

Issue No.	Description	Date Issued
SA190527E01	Original release.	July 10, 2019

## 1 Certificate of Conformity

**Product:** IEEE 802.11 a/b/g/n/ac MAC/baseband/radio and Bluetooth 5.0 Module

**Brand:** AzureWave

**Test Model:** AW-CM382

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** AzureWave Technologies, Inc.

**Test Date:** June 11, 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 EMC characteristics under the conditions specified in this report.

**Prepared by :** Wendy Wu , **Date:** July 10, 2019  
Wendy Wu / Specialist

**Approved by :** Ma Chen , **Date:** July 10, 2019  
Ma Chen / Manager

## 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 Antenna Gain

Ant. Set	Transmitter Circuit	Antenna Gain (dBi)	Frequency range (GHz ~ GHz)	Antenna Type	Connector Type
1	Chain 0 (Main)	1	2.4~2.4835	PIFA	None
		6	5.15~5.85		
	Chain 1 (Aux)	1	2.4~2.4835	PIFA	None
		6	5.15~5.85		

Note: For Bluetooth will fix transmission on Chain 0.

## 2.5 Calculation Result of Maximum Conducted Power

Operation Mode	Evaluation Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WLAN 2.4GHz	2437	301.301	1	20	0.07546	1
WLAN U-NII-1	5230	77.625	6	20	0.06148	1
WLAN U-NII-2A	5270	82.035	6	20	0.06497	1
WLAN U-NII-2C	5550	76.384	6	20	0.06050	1
WLAN U-NII-3	5755	81.846	6	20	0.06482	1
Bluetooth (BT-EDR)	2441	9.75	1	20	0.00244	1
Bluetooth (BT-LE)	2440	8.035	1	20	0.00201	1

### NOTE:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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