

## RF Exposure Report

**Report No.:** SA200103E02

**FCC ID:** TLZ-CU427

**Test Model:** AW-CU427-P, AW-CU427-E

**Received Date:** Jan. 03, 2020

**Test Date:** Apr. 13 to 14, 2020

**Issued Date:** Apr. 22, 2020

**Applicant:** AzureWave Technologies, Inc.

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

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Taiwan

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

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

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### Release Control Record

Issue No.	Description	Date Issued
SA200103E02	Original release.	Apr. 22, 2020

## 1 Certificate of Conformity

**Product:** IEEE 802.11 b/g/n MAC/baseband/radio and Bluetooth 4.2 IoT Module Internal Antenna

**Brand:** AzureWave

**Test Model:** AW-CU427-P, AW-CU427-E

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** AzureWave Technologies, Inc.

**Test Date:** Apr. 13 to 14, 2020

**Standards:** FCC Part 2 (Section 2.1091)  
IEEE C95.3 -2002

**References Test Guidance:** KDB 447498 D01 General RF Exposure Guidance v06

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 :** Joyce Kuo , **Date:** Apr. 22, 2020  
Joyce Kuo / Specialist

**Approved by :** Clark Lin , **Date:** Apr. 22, 2020  
Clark Lin / Technical 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

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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 20 cm away from the body of the user. So, this device is classified as **Mobile Device**.

### 2.4 Antenna Gain

Antenna NO.	RF Chain NO.	Brand	Model	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type	Cable Length (mm)
1	0	mag layers	MSA-4008-25GC1-A1	2.98	2.4~2.4835GHz	PIFA	i-pex(MHF)	150
2	0	AzureWave	AW-CU427	3.12	2.4~2.4835GHz	PIFA	None	-

## 2.5 Calculation Result of Maximum Conducted Power

Operation Mode	Evaluation Frequency (MHz)	Max. Average Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WLAN (2.4GHz)	2412~2462	138.995	3.12	20	0.05672	1
BT-EDR	2402~2480	9.594	3.12	20	0.00391	1
BT-LE	2402~2480	14.588	3.12	20	0.00595	1

Note:

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

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