

RF Exposure Report

Report No.: SA160824E01A

FCC ID: TLZ-NM191NF

Test Model: AW-NM191NF

Received Date: Mar. 28, 2019

Test Date: June 17 to 21, 2019

Issued Date: July 05, 2019

Applicant: AzureWave Technologies, Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 723255 / TW2022

Designation Number:

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Release Control Record

Issue No.	Description	Date Issued
SA160824E01A	Original release.	July 05, 2019

1 Certificate of Conformity

Product: IEEE 802.11b/g/n Wireless LAN Module

Brand: Azurewave

Test Model: AW-NM191NF

Sample Status: ENGINEERING SAMPLE

Applicant: AzureWave Technologies, Inc

Test Date: June 17 to 21, 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 05, 2019
Wendy Wu / Specialist

Approved by : May Chen , **Date:** July 05, 2019
May 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 ²)	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 ²)*	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

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

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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	Brand	Model	Ant. Gain (dBi) Including cable loss	Frequency range (MHz to MHz)	Antenna Type	Cnconnector Type	Cable Loss (dB)	Cable Length (cm)
1	Chain (0)	MAG.LAYERS	MSA-4008-25GC1-A2	2.98 5.16	2400~2500 5150~5850	PIFA	I-PEX 4	NA	15
	Chain (1)	MAG.LAYERS	MSA-4008-25GC1-A2	2.98 5.16	2400~2500 5150~5850	PIFA	I-PEX 4	NA	15

Note: From the above Chain 0 and Chain 1 port, The worse case was found in Chain 0. Therefore only the test data of the mode was recorded in this report.

Calculation Result of Maximum Conducted Power

Operation Mode	Evaluation Frequency (MHz)	Max Power (dBm or mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WLAN 2.4GHz	2437	378.443	2.98	20	0.14953	1

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