

RF Exposure Report

Report No.: SA191031C13

FCC ID: RYK-WNFQ262ACNIBT

Test Model: WNFQ-262ACNI(BT)

Received Date: Oct. 31, 2019

Test Date: Nov. 07 ~ Dec. 20, 2019

Issued Date: Jan. 09, 2020

Applicant: SparkLAN Communications, Inc.

Address: 8F., No. 257, Sec. 2, Tiding Blvd., Neihu District, Taipei City 11493, Taiwan (R.O.C.)

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City
33383, TAIWAN

**FCC Registration /
Designation Number:** 788550 / TW0003



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Table of Contents

Release Control Record	3
1 Certificate of Conformity	4
2 RF Exposure	5
2.1 Limits for Maximum Permissible Exposure (MPE).....	5
2.2 MPE Calculation Formula	5
2.3 Classification	5
3 Calculation Result of Maximum Conducted Power	6

Release Control Record

Issue No.	Description	Date Issued
SA191031C13	Original release	Jan. 09, 2020

1 Certificate of Conformity

Product: 802.11ac/b/g/n WiFi + Bluetooth M.2 Module

Brand: SparkLAN

Test Model: WNFQ-262ACNI(BT)

Sample Status: R&D Sample

Applicant: SparkLAN Communications, Inc.

Test Date: Nov. 07 ~ Dec. 20, 2019

Standards: FCC Part 2 (Section 2.1091)

References Test IEEE C95.3 -2002

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 RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Jan. 09, 2020
Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Jan. 09, 2020
Bruce Chen / Senior Project Engineer

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				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

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

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**.

3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WLAN					
2412-2462	23.77	8.01	20	0.300	1
5180-5240	22.59	8.54	20	0.258	1
5260-5320	22.44	8.54	20	0.249	1
5500-5720	23.06	8.54	20	0.288	1
5745-5825	22.45	8.54	20	0.250	1
Bluetooth LE					
2402-2480	0.39	5.00	20	0.001	1
Bluetooth EDR					
2402-2480	9.87	5.00	20	0.006	1

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

2.4GHz: Directional gain = 5dBi + 10log(2) = 8.01dBi

5GHz: Directional gain = 5.53dBi + 10log(2) = 8.54dBi

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