RF Exposure Report

Report No.: SA190625C32

FCC ID: RYK-WPEQ262ACNIBT

Test Model: WPEQ-262ACNI(BT)

Received Date: Jun. 25, 2019

Test Date: Jul. 19 to Sep. 12, 2019

Issued Date: Sep. 17, 2019

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

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

Test Location (1): No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

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

FCC Registration / Designation Number: 198487 / TW2021

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Release Control Record

Issue No.	Description	Date Issued
SA190625C32	Original release.	Sep. 17, 2019

1 Certificate of Conformity

Product:	802.11ac/b/g/n Wi-Fi+BT Module
Brand:	SparkLAN
Test Model:	WPEQ-262ACNI(BT)
Sample Status:	R&D sample
Applicant:	SparkLAN Communications, Inc.
Test Date:	Jul. 19 to Sep. 12, 2019
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.3 -2002

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 : Annie Chang , **Date:** Sep. 17, 2019

Annie Chang / Senior Specialist

Approved by : Rex. Lai , **Date:** Sep. 17, 2019

Rex Lai / Associate 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^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

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

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 Calculation Result Of Maximum Conducted Power

Function	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
BT LE	2402-2480	2.56	3	20	0.0007	1
BT EDR	2402-2480	11.05	3	20	0.0051	1
WLAN	2412-2462	21.08	6.01	20	0.1018	1
WLAN	5180-5240	22.00	8.01	20	0.1994	1
WLAN	5260-5320	21.88	8.01	20	0.1940	1
WLAN	5500-5720	22.05	8.01	20	0.2017	1
WLAN	5745-5825	22.91	8.01	20	0.2459	1

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. 2.4GHz: Directional gain = 3dBi + 10log(2) = 6.01dBi
   5.0GHz: Directional gain = 5dBi + 10log(2) = 8.01dBi
3. 2.4GHz & 5GHz technologies cannot transmit at same time.
   WLAN & BT technologies cannot transmit at same time.

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