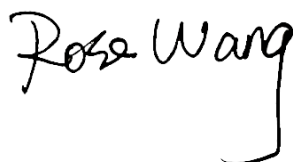


RF Exposure Evaluation Report

APPLICANT : Wingtech Group (Hong Kong) Limited
EQUIPMENT : WIFI MODULE
BRAND NAME : WINGTECH
MODEL NAME : WM118
FCC ID : 2APXW-WM118
STANDARD : 47 CFR Part 2.1091
FCC KDB 447498 D01 v06

We, Sporton International (Kunshan) Inc., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and FCC KDB 447498 D01 v06, and pass the limit. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.



Reviewed by: Rose Wang / Supervisor



Approved by: Kat Yin / Manager



Sporton International (Kunshan) Inc.

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China



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History of this test report

Report No.	Version	Description	Issued Date
FA952115	Rev. 01	Initial issue of report	Aug. 01, 2019

1. Administration Data

1.1. Testing Laboratory

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Testing Laboratory		
Test Firm	Sporton International (Kunshan) Inc.	
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958	
Test Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CN1257	314309

Applicant	
Company Name	Wingtech Group (Hong Kong) Limited
Address	Flat/RM 1903,19F,Podium Plaza 5 Hanoi Road,Tsim sha Tsim Sha Tsui Kowloon, Hong kong

Manufacturer	
Company Name	Jiaxing Yongrui Electronic Technology Co., Ltd
Address	No.777 Yazhong Road, Nanhu District, Jiaxing City, Zhejiang Province, P.R. China

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	WIFI MODULE
Brand Name	WINGTECH
Model Name	WM118
FCC ID	2APXW-WM118
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz
Mode	WLAN 2.4GHz 802.11b/g/n HT20
HW Version	51501_1_11
SW Version	SW_51501_V001_M10_GELI_WIFI_USER
WLAN Antenna	PCB Antenna with 2.61dBi
EUT Stage	Identical Prototype
Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.	

3. Maximum RF average output power among production units

<WLAN 2.4GHz>

Mode		Channel	Maximum Average Power (dBm)
2.4GHz	802.11b	1	16.50
		6	16.50
		11	16.50
	802.11g	1	12.50
		6	14.50
		11	11.50
	802.11n-HT20	1	11.50
		6	14.50
		11	12.50

4. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) 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

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



5. Radio Frequency Radiation Exposure Evaluation

5.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
WLAN2.4GHz 802.11b	2412	2.61	16.50	19.11	0.081	81.47	0.016	1.00
WLAN2.4GHz 802.11g	2412	2.61	14.50	17.11	0.051	51.40	0.010	1.00
WLAN2.4GHz 802.11n-HT20	2412	2.61	14.50	17.11	0.051	51.40	0.010	1.00

Note: For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.