

EMF TEST REPORT

Report number		RAPA19-O-046
Applicant	Name	Peace World Co., Ltd.
	Logo	
	Address	76, Hanam-daero, Hanam-si, Gyeonggi-do, Republic of Korea
Manufacturer	Name	Peace World Co., Ltd.
	Address	76, Hanam-daero, Hanam-si, Gyeonggi-do, Republic of Korea
Type of equipment		2.4G Wireless Module
Basic model name		A107
Multi model name		N/A
Serial number		N/A
FCC ID		2ATRY-A107
Test duration		August 28, 2019 to September 3, 2019
Date of issue		September 3, 2019
Total page		7 Pages (including this page)

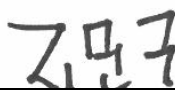
SUMMARY

The equipment complies with the regulation; FCC Part 15 Subpart C Section 15.247

This test report only contains the result of a single test of the sample supplied for the examination.
It is not a general valid assessment of the features of the respective products of the mass-production.

September 3, 2019

September 3, 2019



Tested by MinGu Ji
Tester



Reviewed by Hwan-Bum Kang
Executive Managing Director

Test Report Version History

Version	Date	Reason for revision
1.0	September 3, 2019	Original Document

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1. Description of EUT

1.1 Applicant

- Company name : Peace World Co., Ltd.
- Address : 76, Hanam-daero, Hanam-si, Gyeonggi-do, Republic of Korea
- Contact person : Sangkyu Rim / Director / gdcom11@naver.com
- Phone/Fax : +82-2-529-5954 / +82-2-577-7832

1.2 Manufacturer

- Company name : Peace World Co., Ltd.
- Address : 76, Hanam-daero, Hanam-si, Gyeonggi-do, Republic of Korea
- Phone/Fax : +82-2-529-5954 / +82-2-577-7832

1.3 Basic description

- Product name : 2.4G Wireless Module
- Basic model name : A107
- Alternative model name : N/A

1.4 General description

- Frequency Range : 2 410 MHz ~ 2 480 MHz
- Output Power : -1.40 dBm
- Modulation Type : FSK
- Number of Channel : 5
- Antenna Type : PCB Antenna
- Antenna Gain : -3.5 dBi
- Power Supply : DC 3.3 V

Frequency List	
Channel	Frequency (MHz)
1	2410
2	2420
3	2440
4	2460
5	2480

1.5 Alternative type(s)/model(s)

There is no alternative type(s) and/or model(s).

2. General information of test

2.1 Test standards and results

Applied Standards : FCC Part 15 Subpart C		
Section	Description of Test	Result
15.247 (a) (2)	Minimum 6 dB Bandwidth	Pass
15.247 (b) (3)	Maximum Peak Conducted Output Power	Pass
15.247 (d)	100 kHz Bandwidth Outside the Frequency Band	Pass
	Radiated Emission which fall in the Restricted Band	Pass
15.247 (e)	Peak Power Spectral Density	Pass
15.207	Conducted Limits	Pass
15.209	Radiated Emission Limits	Pass
15.203	Antenna Requirement	Pass

2.2 Description of EUT during the test

During the test, keep the EUT in continuously transmitting mode.

There was no mechanical or circuitry modification to improve RF and spurious characteristic, and any RF and spurious suppression device(s) was not added against the device tested.

The EUT was moved throughout the X, Y, and Z axis and worst case data was recorded in this report.

2.3 Test configuration

• Type of peripheral equipment used

Model	Manufacturer	Description	Connected to
UC-RS	Peace World Co., Ltd.	Zig Board	EUT
EliteBook 8570p	HP	Notebook	EUT
PA-1900-32HT	LITE-ON TECHNOLOGY(CHANGZHOU_Co., Ltd.	Power Adapter	Notebook

2.4 Test Facility

- FCC Registration No: 931589
- IC Company address code: 9355B
- RRA Designation Number: KR0027

• Place of Test

Anyang Test Site(RF Test Room)

#101 & B104 Anyang Megavalley, 268, Hagui-ro, Dongan-gu, Anyang-si, Gyeonggi-do, 14056, Korea

3. MAXIMUM PERMISSIBLE EXPOSURE

3.1 RF Exposure Calculation

KDB 447498 was used as the guidance.

3.2 EUT Description

Kind of EUT	2.4G Wireless Module
Operating Frequency Band	☐ Wireless Microphone: 494.000 MHz ~ 501.000 MHz and 498.200 MHz ~ 505.200 MHz ☐ WLAN: 2 412 MHz ~ 2 462 MHz ☐ WLAN: 5 180 MHz ~ 5 240 MHz ☐ WLAN: 5 745 MHz ~ 5 825 MHz ☐ Bluetooth: 2 402 MHz ~ 2 480 MHz ☐ Bluetooth BLE: 2 402 MHz ~ 2 480 MHz ☒ Other : 2410 MHz ~ 2 480 MHz
MAX. RF OUTPUT POWER	-1.40 dBm
Antenna Gain	-3.50 dBi
Exposure Evaluation Applied	☐ MPE ☒ SAR Exclusion ☐ N/A

3.3 Calculated MPE Safe Distance

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW}) / (\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3$$

$$= (0.72/5) \times \sqrt{2.440.00} = 0.22$$

Conclusion: The SAR test exclusion threshold is less than 3, so the device meets the RF Exposure Requirement.

	Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
FSK	2 440.00	-1.90± 0.5	-1.40	0.72	5	0.22

2.97

Tested by MinGu Ji
/ Tester