

# EMF TEST REPORT

Report number		RAPA19-O-036
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	SMART T-PAD	
Basic model name	UC-SS	
Multi model name	N/A	
Serial number	N/A	
FCC ID	2ATRY-UC-SS	
Test duration	April 16, 2019 to May 17, 2019	
Date of issue	June 26, 2019	
Total page	29 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.

June 26, 2019



Tested by Woo-Yeol Ryu  
Manager

June 26, 2019



Reviewed by Hwan-Bum Kang  
Executive Managing Director

## Test Report Version History

Version	Date	Reason for revision
1.0	June 26, 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 : SMART T-PAD
- Basic model name : UC-SS
- Alternative model name : N/A

### 1.4 General description

- Frequency Range : 2 410 MHz ~ 2 480 MHz
- Output Power : -1.44 dBm
- Modulation Type : FSK
- Number of Channel : 5
- Antenna Type : PCB Antenna
- Antenna Gain : -3.5 dBi
- Power Supply : DC 3 V (Battery)

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	N / A
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
-	-	-	-

### 2.4 Test Facility

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

- Place of Test

Anyang Test Site

#101 & B104 Anyang Megavalley, 268, Hagui-ro, Dongan-gu, Anyang-si, Gyeonggi-do, 431-767, Korea

### 3. MAXIMUM PERMISSIBLE EXPOSURE

#### 3.1 RF Exposure Calculation

According to the FCC rule §1.1310, the limit for General Population/Uncontrolled exposure is 1 mW/cm<sup>2</sup> for the device operating 1 500 ~ 100 000 MHz.

#### 3.2 EUT Description

Kind of EUT	SMART T-PAD
Operating Frequency Band	<input type="checkbox"/> Wireless Microphone: 494.000 MHz ~ 501.000 MHz and 498.200 MHz ~ 505.200 MHz <input type="checkbox"/> WLAN: 2 412 MHz ~ 2 462 MHz <input type="checkbox"/> WLAN: 5 180 MHz ~ 5 240 MHz <input type="checkbox"/> WLAN: 5 745 MHz ~ 5 825 MHz <input type="checkbox"/> Bluetooth: 2 402 MHz ~ 2 480 MHz <input type="checkbox"/> Bluetooth BLE: 2 402 MHz ~ 2 480 MHz <input checked="" type="checkbox"/> Other : 2410 MHz ~ 2 480 MHz
MAX. RF OUTPUT POWER	-1.44 dBm
Antenna Gain	-3.50 dBi
Exposure Evaluation Applied	<input checked="" type="checkbox"/> MPE <input type="checkbox"/> SAR <input type="checkbox"/> N/A

### 3.3 Calculated MPE Safe Distance

According to above equation, the following result was obtained.

Operating Freq. Band (MHz)	Operating Mode	Target Power W/tolerance	Max tune up power		Antenna Gain		Safe Distance (cm)	Power Density (mW/cm <sup>2</sup> ) @ 20 cm Separation	Limit (mW/cm <sup>2</sup> )
			(dBm)	(dBm)	(mW)	Log			
2 410 ~ 2 480	DSSS	-1.94 ± 0.5	-1.44	0.72	-3.5	0.447	0.05	0.000 064	1.00

According to above table, for 2 410 MHz ~ 2 480 MHz Band, safe distance,

$$D = 0.282 * \sqrt{(0.72 * 0.447) / 1.00} = 0.05 \text{ cm}$$

For getting power density at 20 cm separation in above table, following formula was used.

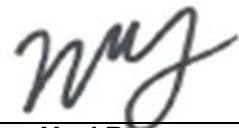
$$S = P * G / (4\pi * R^2) = 0.72 * 0.447 / (4 * 3.14 * 20^2) = 0.000 064$$

Where:

S = Power Density,

P = Power input to the external antenna (Output power from the EUT antenna port (dBm) – cable loss (dB)),

G = Gain of Transmit Antenna (linear gain), R = Distance from Transmitting Antenna



Tested by Woo-Yeol Ryu  
/ Manager