

ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

Test Report No. : OT-18N-RWD-003
AGR No. : A18OA-159
Applicant : Woosim Systems Inc.
Address : 60, Sandan-ro 388beon-gil, Galsan-myeon, Hongseong-gun, Chungcheongnam-do, Korea
Manufacturer : Woosim Systems Inc.
Address : 60, Sandan-ro 388beon-gil, Galsan-myeon, Hongseong-gun, Chungcheongnam-do, Korea
Type of Equipment : Mobile Printer
FCC ID. : QDDWSP-MC350
Model Name : WSP-MC350
Serial number : N/A
Total page of Report : 7 pages (including this page)
Date of Incoming : October 12, 2018
Date of issue : November 06, 2018

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.

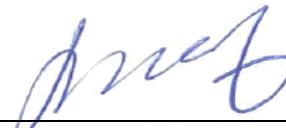
It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by:



Jae-Ho Lee / Chief Engineer
ONETECH Corp.

Approved by:



Keun-Young, Choi / Vice President
ONETECH Corp.

CONTENTS

	PAGE
1. VERIFICATION OF COMPLIANCE	4
2. GENERAL INFORMATION.....	5
2.1 PRODUCT DESCRIPTION.....	5
2.2 ALTERNATIVE TYPE(S)/MODEL(S); ALSO COVERED BY THIS TEST REPORT.....	5
3. EUT MODIFICATIONS.....	5
4. MAXIMUM PERMISSIBLE EXPOSURE.....	6
4.1 EUT DESCRIPTION.....	6
4.2 CALCULATED MPE SAFE DISTANCE.....	7

Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-18N-RWD-003	November 06, 2018	Initial Issue	All

1. VERIFICATION OF COMPLIANCE

Applicant : Woosim Systems Inc.

Address : 60, Sandan-ro 388beon-gil, Galsan-myeon, Hongseong-gun, Chungcheongnam-do, Korea

Contact Person : Moo Seung Lim / Manager

Telephone No. : +82-41-339-3726

FCC ID : QDDWSP-MC350

Model Name : WSP-MC350

Brand Name : -

Serial Number : N/A

Date : November 06, 2018

EQUIPMENT CLASS		DSS – PART 15 SPREAD SPECTRUM TRANSMITTER
E.U.T. DESCRIPTION		Mobile Printer
THIS REPORT CONCERNS		Original Grant
MEASUREMENT PROCEDURES		ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED		Pre-Production
KIND OF EQUIPMENT		Certification
AUTHORIZATION REQUESTED		
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)		FCC PART 15 SUBPART C Section 15.247
Modifications on the Equipment to Achieve Compliance		None
Final Test was Conducted On		3 m, Semi Anechoic Chamber

- The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. GENERAL INFORMATION

2.1 Product Description

The Woosim Systems Inc., Model WSP-MC350 (referred to as the EUT in this report) is a Mobile Printer. The product specification described herein was obtained from product data sheet or user's manual.

Device Type	Mobile Printer	
Operating Frequency	2 402 MHz ~ 2 480 MHz	
RF Output Power	1 Mbps	4.65 dBm
	2 Mbps	2.68 dBm
	3 Mbps	2.77 dBm
Number of Channel	79 Channels	
Modulation Type	GFSK for 1 Mbps, $\pi/4$ -DQPSK for 2 Mbps, 8-DPSK for 3Mbps	
Antenna Type	Printed Monopole Antenna	
Antenna Gain	-3 dBi	
List of each Osc. or crystal Freq.(Freq. \geq 1 MHz)	26 MHz	
Rated Supply Voltage	DC 7.4 V	

2.2 Alternative type(s)/model(s); also covered by this test report.

- None

3. EUT MODIFICATIONS

- None

4. MAXIMUM PERMISSIBLE EXPOSURE

4.1 EUT Description

Kind of EUT	Mobile Printer	
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 checked="" type="checkbox"/> Bluetooth: 2 402 MHz ~ 2 480 MHz <input type="checkbox"/> Bluetooth BLE: 2 402 MHz ~ 2 480 MHz	
MAX. RF OUTPUT POWER	1 Mbps	4.65 dBm
	2 Mbps	2.68 dBm
	3 Mbps	2.77 dBm
Antenna Gain	-3 dBi	
Exposure	<input type="checkbox"/> MPE	
Evaluation Applied	<input type="checkbox"/> SAR <input checked="" type="checkbox"/> N/A	

4.2 Calculated MPE Safe Distance

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

$$[(\text{Max. Power of channel, including tune-up tolerance, mW}) / (\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3$$
$$= (2.92/5) \times \sqrt{2.480} = 0.92$$

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

	Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
1 Mbps	2 480	4.15 ± 0.5	4.65	2.92	5	0.92
2 Mbps	2 480	2.18 ± 0.5	2.68	1.85	5	0.58
3 Mbps	2 480	2.27 ± 0.5	2.77	1.89	5	0.60



Tested by: Ha-Ram, Lee / Assistant Manager