

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

Test Report No. : OT-196-RWD-057
AGR No. : A194A-041
Applicant : LOON LAB INC.
Address : 505, 128, Unjung-ro, Bundang-gu, Seongsam-si, Gyeonggi-do, Korea
Manufacturer : LOON LAB INC.
Address : 505, 128, Unjung-ro, Bundang-gu, Seongsam-si, Gyeonggi-do, Korea
Type of Equipment : SMART MENSTRUAL CUP
FCC ID. : 2ATKQLL-LC25A1
Model Name : LOON CUP
Multiple Model Name : N/A
Serial number : N/A
Total page of Report : 7 pages (including this page)
Date of Incoming : April 22, 2019
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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:



Ha-Ram Lee / Assistant Manager
ONETECH Corp.

Approved by:



Jae-Ho Lee / Chief Engineer
ONETECH Corp.

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Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-196-RWD-057	June 21, 2019	Initial Issue	All

1. VERIFICATION OF COMPLIANCE

Applicant : LOON LAB INC.
Address : 505, 128, Unjung-ro, Bundang-gu, Seongsam-si, Gyeonggi-do, Korea
Contact Person : Hwang ryong / CEO
Telephone No. : +82-70-4164-6699
FCC ID : 2ATKQLL-LC25A1
Model Name : LOON CUP
Serial Number : N/A
Date : June 21, 2019

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM
KIND OF EQUIPMENT	SMART MENSTRUAL CUP
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
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 LOON LAB INC., Model LOON CUP (referred to as the EUT in this report) is a SMART MENSTRUAL CUP. The product specification described herein was obtained from product data sheet or user's manual.

Device Type	SMART MENSTRUAL CUP
Operating Frequency	2 402 MHz ~ 2 480 MHz
RF Output Power	-20.91 dBm
Number of Channel	40 Channel
Modulation Type	GFSK
Antenna Type	Chip Antenna
Antenna Gain	0.5 dBi
List of each Osc. or crystal Freq.(Freq. >= 1 MHz)	24 MHz, 32.768 kHz
Rated Supply Voltage	DC 3.0 V

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

-. None

3. EUT MODIFICATIONS

-. None

4. RF Exposure Evaluation

4.1 Standard Applicable

According to 1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

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

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

4.2 EUT Description

Kind of EUT	SMART MENSTRUAL CUP
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 checked="" type="checkbox"/> Bluetooth BLE: 2 402 MHz ~ 2 480 MHz
MAX. RF OUTPUT POWER	-20.91 dBm
Antenna Gain	0.5 dBi
Exposure Evaluation Applied	<input type="checkbox"/> MPE <input type="checkbox"/> SAR <input checked="" type="checkbox"/> SAR Test Exclusion Evaluation

4.3 Test Result of SAR Exclusion

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

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

$$= (0.0091/5) \times \sqrt{2.402} = 0.0028 < 3$$

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

Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
2 480	-20.91 ± 0.5	-20.41	0.0091	5	0.0028



Tested by: Yu-Seog Sim / Assistant Manager