

TEST REPORT



CTK Co., Ltd.
(Ho-dong), 113, Yejik-ro, Cheoin-gu,
Yongin-si, Gyeonggi-do, Korea
Tel: +82-31-339-9970
Fax: +82-31-624-9501

Report No.:
CTK-2021-03774
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1. Client

- Name : CVT Co., Ltd.
- Address : 306, Building D, AI Yangjae Hub, 39 Maeheon-ro 8gil Seocho-gu, Seoul Rep. of Korea
- Date of Receipt : 2021-05-17

2. Manufacturer

- Name : CVT Co., Ltd.
- Address : 306, Building D, AI Yangjae Hub, 39 Maeheon-ro 8gil Seocho-gu, Seoul Rep. of Korea

3. Use of Report : For FCC Certification

4. Test Sample / Model : RFID Wireless Device (13.56MHz) / FA-1000, FA-2000

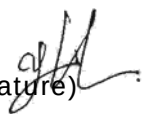
5. Date of Test : 2021-10-14

6. Test Standard(method) used : FCC 47 CFR part 2 subpart J 2.1091

7. Testing Environment: Temp.: (24 ± 1) °C, Humidity: (51 ± 5) % R.H

8. Test Results : Compliance

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full.

Affirmation	Tested by	Technical Manager
	Ji-Hye, Kim: (Signature) 	Young-taek Lee: (Signature) 

2021-10-18

Republic of KOREA **CTK Co., Ltd.**

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REPORT REVISION HISTORY

Date	Revision	Page No
2021-10-18	Issued (CTK-2021-03774)	all

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 CTK Co., Ltd. The Prime Leader of Global Regulatory Certification	CTK Co., Ltd. (Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea Tel: +82-31-339-9970 Fax: +82-31-624-9501	Report No.: CTK-2021-03774 Page (4) / (10) Pages	
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1. General Product Description

1.1 Client Information

Company	CVT Co., Ltd.
Contact Point	306, Building D, AI Yangjae Hub, 39 Maeheon-ro 8gil Seocho-gu, Seoul Rep. of Korea
Contact Person	Name : Paul Chung E-mail : paulchung@cvtinc.co.kr Tel : +82-70-4490-9388

1.2 Product Information

FCC ID	2A3FR-FA1000
Product Description	RFID Wireless Device (13.56MHz)
Model name	FA-1000
Variant Model name	FA-2000
FVIN	-
Operating Frequency Range	13.56 MHz
RF Output Power	62.4 dBuV/m @ 3 m
Antenna Type	PCB antenna(Loop antenna)
Power Source	DC 12 V
Hardware Rev	Rev1.2
Software Rev	Rev1.10210916

1.3 Model Differences

FA-1000 and FA-2000 are no technical difference from each model except for Model name and FOV of the lens because of marketing purposes.

Test model was FA-1000.

2. Facility and Accreditations

2.1 Test Facility

The measurement facility is located at (Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea.

The another measurement facility is located at 5, Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea.

2.2 Laboratory Accreditations and Listings

Country	Agency	Registration Number
USA	FCC	805871
CANADA	ISED	8737A-2
KOREA	NRRA	KR0025

2.3 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less. All test equipment calibrations are traceable to the Korea Research Institute of Standards and Science (KRISS), therefore, all test data recorded in this report is traceable to KRISS.

3. RF Exposure Assessment

3.1 Maximum Permissible Exposure

Limit

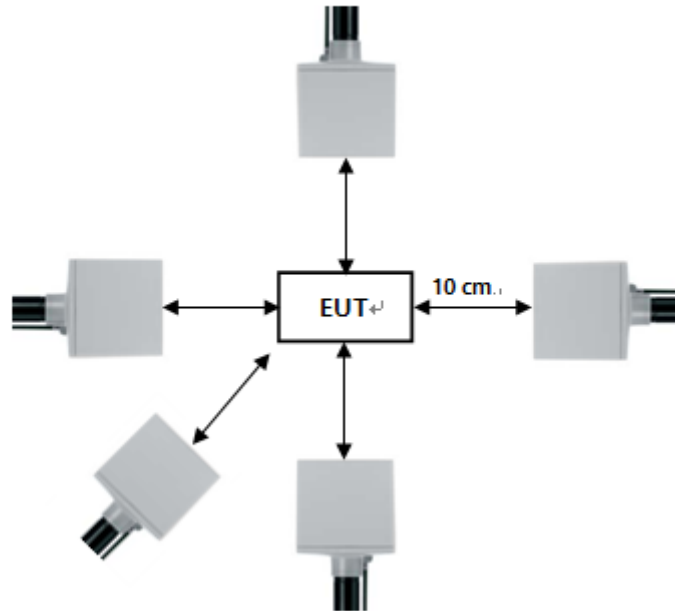
Frequency range (MHz)	Electric field strength (V / m)	Magnetic field strength (A / m)	Power density (mW / cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500	-	-	f/300	6
1,500-100,000	-	-	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
300-1,500	-	-	f/1500	30
1,500-100,000	-	-	1.0	30

Note 1 : f = frequency in MHz; *Plane-wave equivalent power density
Note 2 : For the applicable limit, see FCC 1.1310

Test method

- Performed aggregate both leakage E-field and H-field at surrounding the device from all simultaneous transmitting coils.
- During testing, the EUT was placed on a non-conductive table top and the ancillary equipment (e.g., mobile phone) was placed on the EUT for charging. Maximum E-field and H-field measurement were tested 10cm from each side of the EUT. Along the side of the EUT to side of E-field probe and H-field probe were positioned at the location to search maximum field strength.

Test Setup





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Test results

Maximum Permissible Exposure				
Charging Condition	Separation	Probe from EUT Side	E-field (V / m)	H-field (A / m)
Operating	10 cm	right	0.269	0.004
Operating	10 cm	bottom	0.498	0.012
Operating	10 cm	left	0.273	0.004
Operating	10 cm	top	0.175	0.003
Operating	10 cm	Y-axis above EUT	0.398	0.020
Limit			60.767	0.162

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APPENDIX A – Test Equipment Used For Tests

No.	Name of Equipment	Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date
1	Electric and Magnetic Field Analyzer	Narda	EHP-200AC	170WX91010	2020-10-19	2021-10-19
2	EHP200-TS Software	Narda	EHP200-TS	650.000.207	-	-
3	Note Computer	HP	15-bs563TU	CND7253R6N	-	-

APPENDIX B – Test Photos

