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

1. Applicant

◦ Name : MOBASE ELECTRONICS CO., LTD.

◦ Address : 100, Saneop-ro 156beon-gil, Gwonseon-gu, Suwon-si, Gyeonggi-do, Republic of Korea

◦ Date of Receipt : 2022-03-14

2. Manufacturer

◦ Name : MOBASE ELECTRONICS CO., LTD.

◦ Address : 100, Saneop-ro 156beon-gil, Gwonseon-gu, Suwon-si, Gyeonggi-do, Republic of Korea

3. Use of Report : For FCC Certification

4. Test Sample / Model : Wireless Charging System/ MBECNWPC2207

5. Date of Test : 2022-04-19

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

7. Testing Environment: Temp.: (22.3 ± 0.5) ℃, Humidity: (30 ± 3) % R.H

8. Test Results : Compliance

9. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
This report cannot be reproduced or copied without the written consent of CTK.

Approval	Tested by Bong-seok Kim: (Signature)	Technical Manager Young-taek Lee: (Signature)

Remark. This report is not related to KOLAS accreditation and relevant regulation.

2022-04-19

CTK Co., Ltd.

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 REVISION HISTORY

Date	Revision	Page No
2022-04-19	Issued (CTK-2022-01178)	all

CONTENTS

1. General Product Description

1.1 Client Information

Company	MOBASE ELECTRONICS CO., LTD.
Contact Point	100, Saneop-ro 156beon-gil, Gwonseon-gu, Suwon-si, Gyeonggi-do, Republic of Korea
Contact Person	Name : Hee-Tack Ryu E-mail : shadow@mobaseelec.com Tel : +82-31-8091-2611

1.2 Product Information

FCC ID	NYOMBECNWPC2207
Product Description	Wireless Charging System
Model name	MBECNWPC2207
Variant Model name	-
Charging Frequency	115 kHz
RF Output Power	88.9 dBuV/m @ 3m
Power Transfer Method	Magnetic induction and only single primary coil coupling secondary coil
Output power from each primary coil	< 15 W
That may have multiple primary coils	No
Antenna Type	Coil
Charging Method	Directly contact
Power Source	DC 12 V

2. Facility and Accreditations

2.1 Test Facility

The measurement facility is located at 142, Dongbu-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of 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

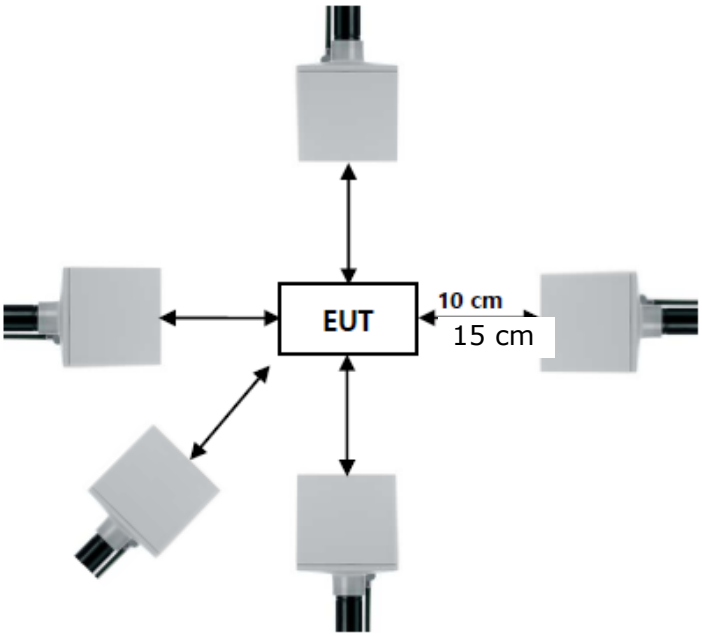
Test method

a) Performed aggregate both leakage E-field and H-field at surrounding the device from all simultaneous transmitting coils.
b) 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 15cm 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.

The Worst Condition

Ancillary Equipment	Charging Condition
WPT Load(15 W)	Charging Mode

Test Setup



Equipment approval considerations item 5.b) of KDB 680106 D01 v03

※ Equipment approval considerations (Some requirements are not met.)

(1) Power transfer frequency is less than 1 MHz.

- Meet the requirements.

  DC 12 V, 115 kHz (single frequency)

(2) Output power from each primary coil is less than or equal to 15 watts.

- Meet the requirements.

  <15 W

(3) The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.

- Meet the requirements.

  Magnetic induction and only single primary coil coupling secondary coil

(4) Client device is placed directly in contact with the transmitter.

- Meet the requirements.

  Client device is placed directly in contact with the transmitter.

(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

- Not Applicable.

(6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.

- Meet the requirements. Refer to following test result.

Test results

Maximum Permissible Exposure				
Charging Condition	**Separation**	**Probe from EUT Side**	**E-field (V/m)**	**H-field (A/m)**
Operating	15 cm	right	0.42	0.17
Operating	15 cm	bottom	0.60	0.21
Operating	15 cm	left	0.42	0.20
Operating	15 cm	top	0.59	0.22
Operating	15 cm	Y-axis above EUT	**1.63**	**0.62**
Limit			**614**	**1.63**
Margin Limit(Measurement value / Limit * 100)(%)			**0.26 %**	**38 %**

Maximum Measurement Uncertainty

The value of the measurement uncertainty for the measurement of each parameter.
Coverage factor k = 2, Confidence levels of 95 %

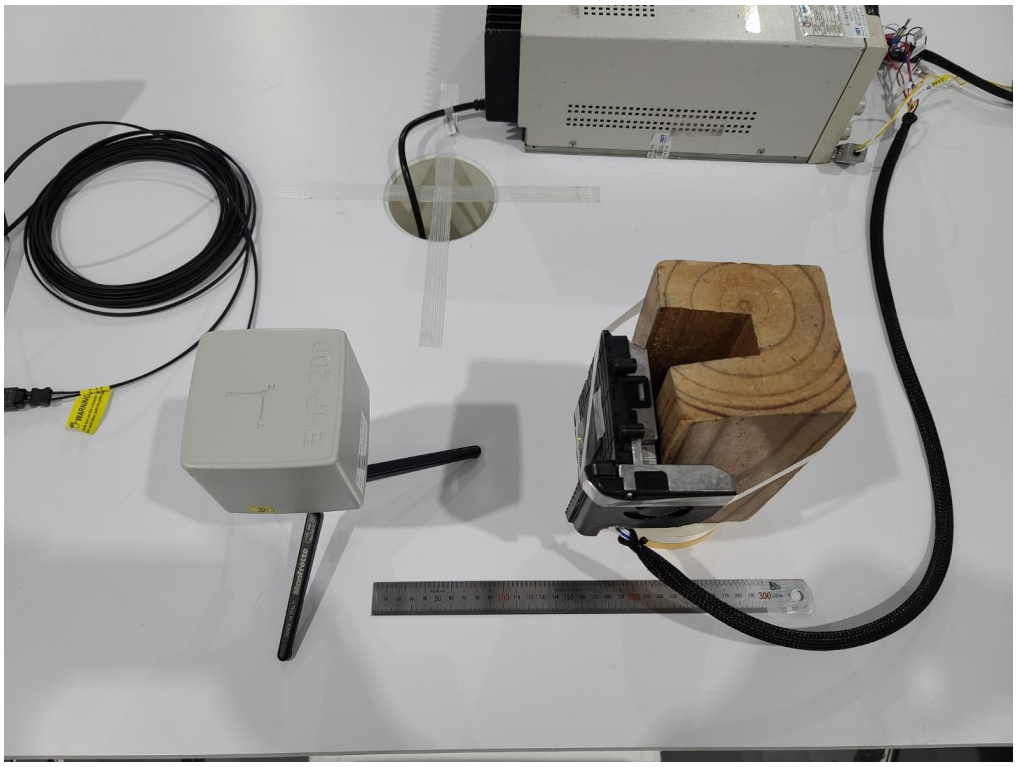
item	Uncertainty
H-field	15 % (C.L. : Approx. 95 %, k = 2)
E-field	15 % (C.L. : Approx. 95 %, k = 2)

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

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	2021-10-27	2022-10-27
2	EHP200-TS Software	Narda	EHP200-TS	650.000.207	-	-
3	Note Computer	HP	15-bs563TU	CND7253QRM	-	-

APPENDIX B – Test Photos



-END-