

RF EXPOSURE Test Report

Product: Qi2® 15W WIRELESS MAGNETIC
CHARGER WITH RING

Trade Mark: BLUEHIVE

Model Number: HKWP21071-15L

FCC ID: 2A9G4-HKWP21071

Prepared for

HANK ELECTRONICS VIETNAM LTD

Lot 74B/75A, No. 55, Road 11, VSIP Bac Ninh Industrial, Urban and Service
Park, Dai Dong Commune, Tien Du District, Bac Ninh Province, Vietnam.

Prepared by

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TEST RESULT CERTIFICATION

Applicant's Name : HANK ELECTRONICS VIETNAM LTD
Lot 74B/75A, No. 55, Road 11, VSIP Bac Ninh Industrial, Urban
Address : and Service Park, Dai Dong Commune, Tien Du District, Bac
Ninh Province, Vietnam.

Manufacturer's Name : HANK ELECTRONICS VIETNAM LTD
Lot 74B/75A, No. 55, Road 11, VSIP Bac Ninh Industrial, Urban
Address : and Service Park, Dai Dong Commune, Tien Du District, Bac
Ninh Province, Vietnam.

Product description

Product name : HKWP21071-15L

Model Number : FCC Part 15C

Standards : FCC CFR 47 PART 1 , 1.1310

Test procedure : KDB 680106 D01 Wireless Power Transfer v04

This device described above has been tested by Shenzhen HongBiao Certification& Testing Co., Ltd and the test results show that the equipment under test (EUT) is in compliance with the EMC requirements. And it is applicable only to the tested sample identified in the report.

Date of Test :

Date (s) of performance of tests : June 13, 2025~ June 19, 2025

Test Result..... : **Pass**

Testing Engineer :

Zoe Su

(Z o e S u)

Technical Manager :

Ming Liu

(Ming Liu)

Authorized Signatory :

Leo Su

(L e o S u)

[illegible]

1 General Description

1.1 Description of EUT

Product name:	Qi2® 15W WIRELESS MAGNETIC CHARGER WITH RING
Model name:	HKWP21071-15L
Series Model:	035-7443-2
Different of series model:	All the models are the same circuit and module, except the model No..
Operation frequency:	115-205kHz, 360kHz
Operational mode:	Wireless charging
Modulation type:	ASK
Antenna type:	Coil Antenna
Input:	DC 5V/3A, 9V/2.22A
Battery:	N/A
Power supply:	Input: DC 5V/3A, 9V/2.22A Wireless output: 5W, 7.5W, 15W
Adapter information:	N/A

1.2 Test Mode

Pretest Test Mode	Description of Mode
1	Wireless output: 5W
2	Wireless output: 7.5W
3	Wireless output: 15W

1.3 Test Setup

See photographs of the test setup in the report for the actual setup and connections between EUT and support equipment.

1.4 Ancillary Equipment

Equipment	Model	S/N	Manufacturer
Adapter	CD289	35810	Ugreen Group Limited
Phone	iPhone 12pro Max	FF2LDX4T60 D5H	Apple Inc

2 Test Facilities and Accreditations

2.1 Test Laboratory

Test Site	Shenzhen HongBiao Certification& Testing Co., Ltd
Test Site Location	Room 102, 201, Building 2, Yuanwanggu RFID Industrial Park, Tongguan Road, Tianliao Community, Yutang Street, Guangming District, Shenzhen, China
Telephone:	(86-755) 2998 9321
Fax:	(86-755) 2998 5110
FCC Registration No.:	CN1341
A2LA Certificate No.:	6765.01

2.2 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15°C~35°C
Relative Humidity:	20%~75%
Air Pressure:	98kPa~101kPa

2.3 Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

The data and results quoted in this document are true and accurate values, and uncertainties are not involved in the calculations.

In addition, components and mass production processes that are similar to testing equipment may introduce additional deviations, and the manufacturer is solely responsible for the continued compliance of the equipment.

Measurement Frequency Range	U, (dB)	Note
RF frequency	2×10^{-5}	
E-field	± 1.06 dB	
H-field	± 0.7 dB	
Temperature	± 1 degree	
Humidity	± 5 %	

2.4 Test Software

Software name	Manufacturer	Model	Version
EHP200-TS	Narda	EHP-200A	Rel 1.95

3 List of Test Equipment

Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	HB-E073	Electric and Magnetic Field Analyzer	Narda	EHP-200A	180ZX11013	2025-05-10	2026-05-09

Note: the calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

4 RF Exposure

4.1 Maximum Permissible Exposure

4.1.1. Limit

Frequency range(MHz)	Electric field strength(V/m)	Magnetic field strength(A/m)	Power density(mW/cm2)	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	6
300-1500			f/300	6
1500-100000			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
300-1500			f/1500	30
1500-100000			1	30

f = frequency in MHz * = Plane-wave equivalent power density

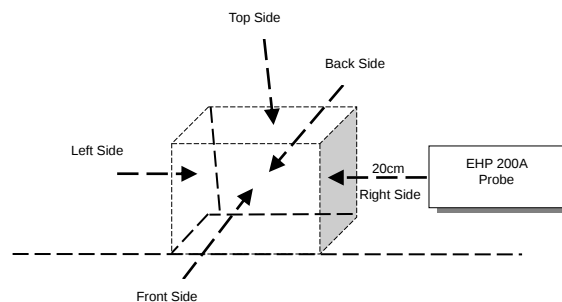
4.1.2. Test Procedures

E and H-field measurements should be made with the center of the probe at a distance of 20 cm surrounding the device and 20 cm above the top surface of the primary/client pair.

These measurements should be repeated for three different client battery levels, 1%, 50%, and 99%.

Record the test results.

4.1.3. Test Setup



4.1.4. Test Result

Test condition: Mode 2 operating mode with client device (1 %, 50%, 99% battery status of client device)

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E -field(V/m)	H-field(A/m)
<1%	Top	20	1.1710	0.0767
<1%	Left	20	0.7078	0.0621
<1%	Right	20	0.8719	0.0456
<1%	Front	20	0.7592	0.0460
<1%	Back	20	0.6748	0.0513
Limit			614	1.63
Margin Limit (%)			0.19%	4.71%

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E -field(V/m)	H-field(A/m)
<50%	Top	20	1.1701	0.0758
<50%	Left	20	0.7063	0.0614
<50%	Right	20	0.8712	0.0447
<50%	Front	20	0.7584	0.0451
<50%	Back	20	0.6736	0.0502
Limit			614	1.63
Margin Limit (%)			0.19%	4.65%

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E -field(V/m)	H-field(A/m)
<99%	Top	20	1.1695	0.0742
<99%	Left	20	0.7054	0.0605
<99%	Right	20	0.8705	0.0439
<99%	Front	20	0.7572	0.0441
<99%	Back	20	0.6728	0.0492
Limit			614	1.63
Margin Limit (%)			0.19%	4.55%

Test condition: Mode 3 operating mode with client device (1 %, 50%, 99% battery status of client device)

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E –field(V/m)	H–field(A/m)
<1%	Top	20	2.3164	0.0495
<1%	Left	20	1.3837	0.0474
<1%	Right	20	1.8770	0.0470
<1%	Front	20	1.8834	0.0470
<1%	Back	20	1.2683	0.0470
Limit			614	1.63
Margin Limit (%)			0.38%	3.04%

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E –field(V/m)	H–field(A/m)
<50%	Top	20	2.3158	0.0486
<50%	Left	20	1.3823	0.0463
<50%	Right	20	1.8764	0.0462
<50%	Front	20	1.8824	0.0463
<50%	Back	20	1.2674	0.0461
Limit			614	1.63
Margin Limit (%)			0.38%	2.98%

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E –field(V/m)	H–field(A/m)
<99%	Top	20	2.3152	0.0475
<99%	Left	20	1.3814	0.0458
<99%	Right	20	1.8753	0.0453
<99%	Front	20	1.8815	0.0455
<99%	Back	20	1.2663	0.0451
Limit			614	1.63
Margin Limit (%)			0.38%	2.91%

5 Photographs of the Test Setup

MPE



***** END OF REPORT *****