

RF Exposure Report

Applicant: LI KUM TRADING CO.,LIMITED

Address of Applicant: SHOP 185 G/F HANG WAI IND CTR NO 6 KIN TAI ST TUEN MUN NT, HK, China

Manufacturer: LI KUM TRADING CO.,LIMITED

Address of Manufacturer: SHOP 185 G/F HANG WAI IND CTR NO 6 KIN TAI ST TUEN MUN NT, HK, China

Factory: PHUC VINH ELECTRONICS COMPANY LIMITED

Address of Factory: Than Canh Phuc Street, Hung Lam 1 Residential Area, Hong Thai Ward, Viet Yen Town, Bac Giang Province, Vietnam.

Equipment Under Test (EUT)

Product Name: 3-IN-1 MAGNETIC WIRELESS CHARGER

Model No.: MWC-36/24, 663216

FCC ID: 2BNL5-663216

Applicable standards: FCC CFR Title 47 Part 1 §1.1307
FCC CFR Title 47 Part 1 §1.1310
FCC CFR Title 47 Part 2 §2.1091
KDB 680106 D01 Wireless Power Transfer v04

Date of sample receipt: February 05, 2025

Date of Test: February 06-20, 2025

Date of report issued: February 20, 2025

Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

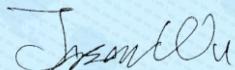
**Robinson Luo
Laboratory Manager**

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

Version No.	Date	Description
00	February 20, 2025	Original

Prepared By:



Date:

February 20, 2025

Project Engineer

Check By:



Date:

February 20, 2025

Reviewer

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4 General Information

4.1 General Description of EUT

Product Name:	3-IN-1 MAGNETIC WIRELESS CHARGER
Model No.:	MWC-36/24, 663216
Test Model No.:	MWC-36/24
Remark: All above models are identical in the same PCB layout, interior structure and electrical circuits. The differences are appearance color and model name for commercial purpose.	
Serial No.:	AA010896A
Test sample(s) ID:	GTS2025010365-1
Sample(s) Status	Engineer sample
Operation Frequency:	111.5kHz~205kHz and 320kHz
Modulation type:	MSK
Antenna Type:	Inductance Coil Antenna
Antenna gain:	ANT 1: 0dBi ANT 2: 0dBi ANT 3: 0dBi
Power supply:	Input: DC 9V/3A Phone Output: 5W, 7.5W, 10W, 15W Max Earbuds Output: 3W Max Watch Output: 2.5W Max

Remark:

1. Antenna gain information provided by the customer
2. The relevant information of the sample is provided by the entrusting company, and the laboratory is not responsible for its authenticity.

4.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC—Registration No.: 381383**

Designation Number: CN5029

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files.

- **ISED—Registration No.: 9079A**

CAB identifier: CN0091

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of ISED for radio equipment testing

- **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

4.3 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: No. 123- 128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480

Fax: 0755-27798960

4.4 Description of Support Units

Manufacturer	Description	Model	S/N
YBZ	Wireless charging test load	001	N/A
XIAOMI	USB Charger	MDY-10-EH	N/A
Apple	Watch	Ultra 2	N/A
Apple	AirPods	4	N/A

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 Requirements

Test Methodology:

The tests documented in this report were performed in accordance with FCC CFR Title 47 Part 1 §1.1307, FCC CFR Title 47 Part 1 §1.1310, FCC CFR Title 47 Part 2 §2.1091 and KDB Wireless Power Transfer v04.

Limit:

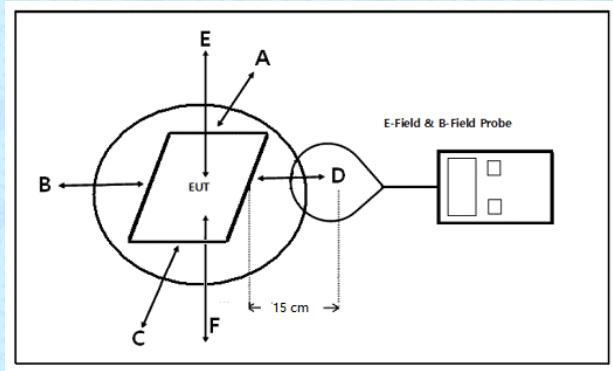
Table 1 to § 1.1310(e)(1) - Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) 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
(ii) 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

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

Method Of Measurement:

- The RF exposure test was performed in shielded chamber.
- The geometric centre of probe was placed at 15 cm test distance surrounding the device and 20 cm above the top surface.
- The measurement probe used to search of highest strength.
- The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- The EUT were measured according to the dictates of KDB 680106 D01 Wireless Power Transfer v04.

Test Setup:


Note: As bottom point is not required to test for desktop devices

Equipment Approval Considerations:

The EUT comply with 680106 D01 Wireless Power Transfer v04.

1. Power transfer frequency is less than 1 MHz.

Yes, the device operated in the frequency range from 111.5kHz to 205kHz and 320kHz.

2. Output power from each primary coil is less than or equal to 15 Watts.

Yes, The maximum output power of each primary coil is 15 watts.

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.

Yes, the client device includes four primary coil.

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

Yes, Client device is placed directly in contact with the transmitter.

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

Yes, The EUT is a Fixed-Use device.

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.

Yes; The EUT's field strength levels are less than 50% of the MPE limit.

Measuring Instrument Used:

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Electric and Magnetic Field Analyzer	Narda	EHP-200A	GTS614	2024.11.12	2025.11.11

E Field And H Field Strength Test Result:

Mode	Description	Remark
1	EUT+ Wireless load	99% load
2	EUT+ Wireless load	50% load
3	EUT+ Wireless load	1% load
4	EUT+ Watch	99% load
5	EUT+ Watch	50% load
6	EUT+ Watch	1% load
7	EUT+ Headset	99% load
8	EUT+ Headset	50% load
9	EUT+ Headset	1% load
10	EUT+ Wireless load+ Watch	99% load
11	EUT+ Wireless load+ Watch	50% load
12	EUT+ Wireless load+ Watch	1% load
13	EUT+ Wireless load+ Headset	99% load
14	EUT+ Wireless load+ Headset	50% load
15	EUT+ Wireless load+ Headset	1% load
16	EUT+ Watch+ Headset	99% load
17	EUT+ Watch+ Headset	50% load
18	EUT+ Watch+ Headset	1% load
19	EUT+ Wireless load+ Watch+ Headset	99% load
20	EUT+ Wireless load+ Watch+ Headset	50% load
21	EUT+ Wireless load+ Watch+ Headset	1% load

Note: All the modes had been tested, but only the worst data was Mode 19

H-Filed Strength at 15 cm from the edges surrounding the EUT and 20 cm above the top surface of the EUT (A/m)

15cm					20cm	Limits(A/m)	50% Limits(A/m)
Test Position A	Test Position B	Test Position C	Test Position D	Test Position E			
0.83	0.70	0.51	0.47	0.35	1.63		0.815

E-Filed Strength at 15 cm from the edges surrounding the EUT and 20 cm above the top surface of the EUT (V/m)

15cm					20cm	Limits(V/m)	50% Limits(V/m)
Test Position A	Test Position B	Test Position C	Test Position D	Test Position E			
3.70	3.42	3.14	3.46	2.63	614		307

6 Test Setup Photo

Reference to the **appendix I** for details.

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