RF EVALUATION TEST REPORT

Applicant……	:	Leader Lao Co., Ltd
Address……....	:	Lot333, Savan Park, Nongdeun, Kaysone Phomvihane, Savannakhet, Laos.
Manufacturer……..	:	Leader Lao Co., Ltd
Address……....	:	Lot333, Savan Park, Nongdeun, Kaysone Phomvihane, Savannakhet, Laos.
Factory…….....	:	Leader Lao Co., Ltd
Address……....	:	Lot333, Savan Park, Nongdeun, Kaysone Phomvihane, Savannakhet, Laos.
Product Name……	:	Wireless charger
Brand Name…….....	:	N/A
Model No. ……...	:	AB0283
FCC ID…….....	:	2BAUN-AB0283
Measurement Standard…….	:	47 CFR PART 2, Section 2.1091
Receipt Date of Samples….	:	June 08, 2023
Date of Tested……	:	June 08, 2023 to June 15, 2023
Date of Report……	:	June 16, 2023

This report shows that above equipment is technically compliant with the requirements of the standards above. All test results in this report apply only to the tested sample(s). Without prior written approval of Dongguan Nore Testing Center Co., Ltd, this report shall not be reproduced except in full.

Prepared by

Jenny Liu / Project Engineer

Approved by

Iori Fan / Authorized Signatory

Table of Contents

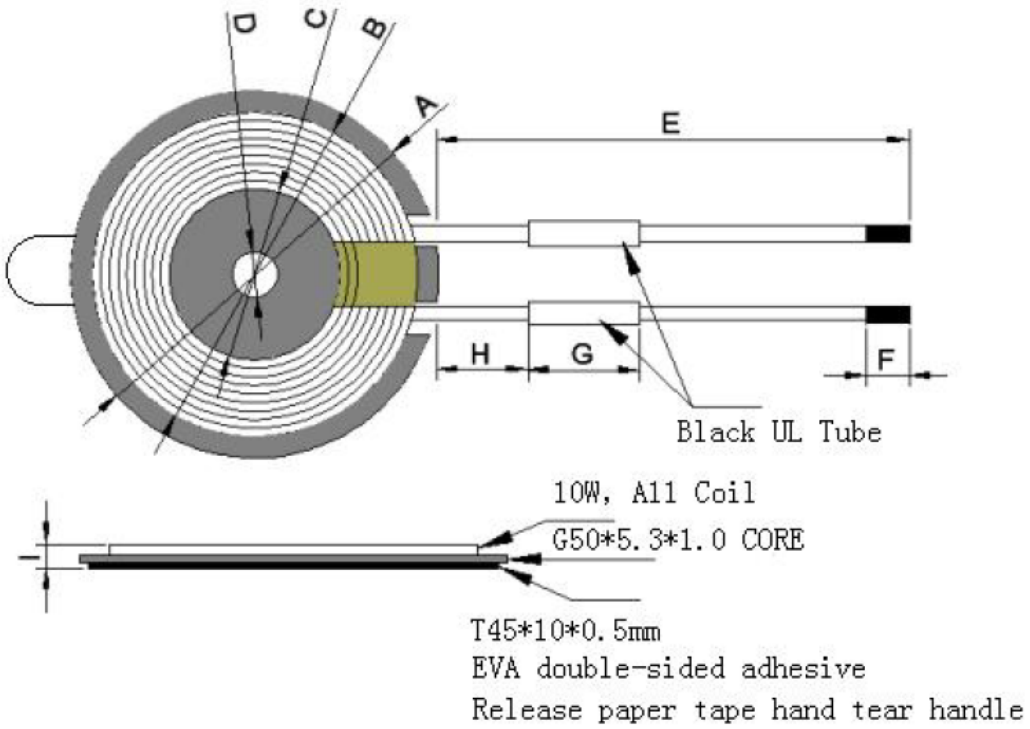
Revision History

Report Number	Description	Issued Date
NTC2306085F-1	Initial Issue	2023-06-16

1. General Description of EUT

Product Information	
Product Name:	Wireless charger
Main Model Name:	AB0283
Additional Model Name:	N/A
Model Difference:	N/A
S/N:	2306-2843
Brand Name:	N/A
Hardware Version:	Wirelesscharging-AB0283
Software Version:	Leader.2021.11
Rating:	USB Input: 5V2A, 9V1.5A Wireless Output: 5W, 7.5W, 10W
Typical Arrangement:	Table-top
I/O Port:	USB Port*1
Accessories Information	
Adapter:	N/A
Cable:	USB Line: 1m, unshielded, undetachable
Other:	N/A
Additional information	
Note:	This report only applies to wireless charging function.
Remark:	All the information above are provided by the manufacturer. More detailed feature of the EUT please refers to the user manual.

Technical Specification	
Frequency Range:	110.5-205KHz
Modulation Type:	FSK
Antenna Type:	Coil antenna
Output power for each coil:	5W, 7.5W, 10W



A	49.5±0.5
B	42.5±1.0
C	20.5±1.0
D	5.3±0.2
E	72±2
F	3.0±1.0
G	15.0±2.0
H	6±1.0
I	2.9Max

2. Test Facility and Location

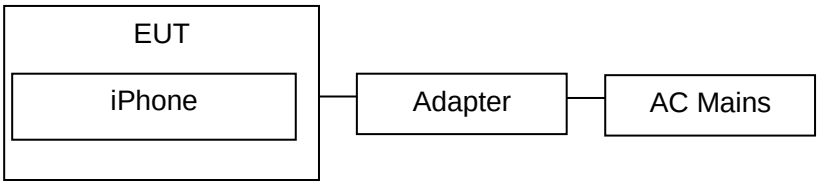
Test Site	:	Dongguan Nore Testing Center Co., Ltd. (Dongguan NTC Co., Ltd.)
Accreditations and Authorizations	:	The Laboratory has been assessed and proved to be in compliance with CNAS/CL01 Listed by CNAS, August 13, 2018 The Certificate Registration Number is L5795. The Certificate is valid until August 13, 2024 The Laboratory has been assessed and proved to be in compliance with ISO17025 Listed by A2LA, November 01, 2017 The Certificate Registration Number is 4429.01 Listed by FCC, November 06, 2017 Test Firm Registration Number: 907417 Listed by Industry Canada, June 08, 2017 The Certificate Registration Number. Is 46405-9743A
Test Site Location	:	Building D, Gaosheng Science and Technology Park, Hongtu Road, Nancheng District, Dongguan City, Guangdong Province, China

3. Test Modes Detail

Test Mode	Test Setup Configuration	Remark
1.	wireless charging (5W)	Full Load, Half Load, Empty Load
2.	wireless charging (7.5W)	Full Load, Half Load, Empty Load
3.	wireless charging (10W)	Full Load, Half Load, Empty Load
Note: For all of the test mode, only the worst case was recorded in this report.		

4. Configuration of EUT

Powered by external AC/DC Adapter



5. Modification of EUT

No modifications are made to the EUT during all test items.

6. Description of Support Device

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Equipment	Brand	M/N	S/N	Cable Specification	Remarks
1.	iPhone	APPLE	MQ8J2ZP/A	FD9VG5MGJCLP	---	Provided by the lab
2.	Adapter	HUAWEI	HW-050200C01	---	---	Provided by the lab

7. Deviations and Abnormalities from Standard Conditions

No additions, deviations and exclusions from the standard.

8. Applicable Standards and References

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

Test Standards:

47 CFR Part 1, 1.1307(b) and 1.1310

KDB 680106 D01v03

9. Equipment approval considerations

No.	Requirements	Conditions of the EUT
1.	Power transfer frequency is less than 1MHz	Yes, the operated frequency range is 110-205KHz.
2.	Output power from each primary coil is less than or equal to 15 watts	Yes, the maximum output power of the primary coil is 10W
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 transfer system includes one source primary coil pairs that can be powered on at the same time.
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 device can be used as mobile exposure condition.
6.	The aggregate H-field strengths at 20cm surrounding the device from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.	Yes, less than the limits.
Remark: □ need PAG process ■no need PAG process		

10. Measurement Uncertainty

No.	Test Item	Uncertainty	Remarks
1.	Magnetic Field Emissions	±0.15 dB	---
2.	Electric Field Emissions	±0.36 dB	---
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.			

11. Maximum Permissible Exposure

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 Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	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/f2)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,00	/	/	1.0	30

F=frequency in MHz

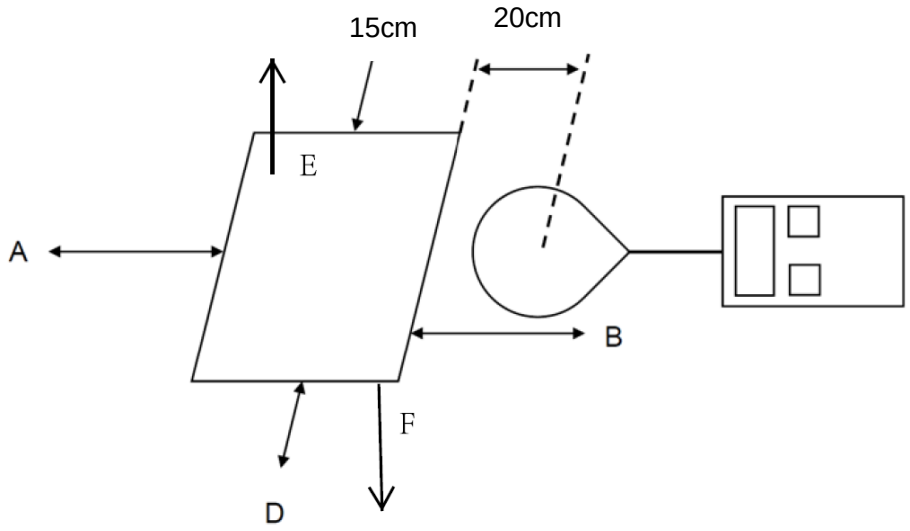
*=Plane-wave equivalent power density

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz: 614V/m,1.63A/m).

Per KDB 680106 D01 v03 r01, RF exposure evaluation at 15cm surrounding the device and 20cm above the top surface. Emission between 50 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 1.63/Am and aggregate H-field strengths from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

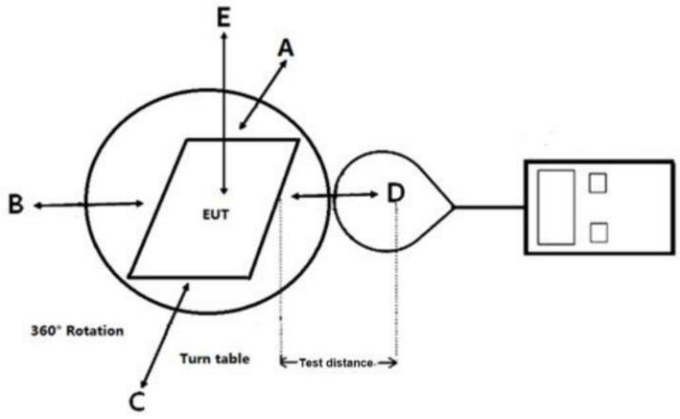
BLOCK DIAGRAM OF TEST SETUP

For Mobile:



Note: The distance of the points A/B/C/D is 15cm, and the point E is 20cm.

For Portable:



Note: The distance of the points A/B/C/D/E is 2,4,6,8,10,12,14,16,18, 20cm.

TEST PROCEDURES

For mobile exposure conditions:

a. The RF exposure test was performed in anechoic chamber;

b. E and H-field measurements should be made with the center of the probe at a distance of 15cm surrounding the EUT and 20cm above the top surface of the primary/client pair.

c. The highest emission level was recorded and compared with limit.

d. The EUT was measured according to the dictates of KDB 680106 v03r01.

For portable exposure conditions:

a. The RF exposure test was performed in anechoic chamber;

b. E and H-field measurements should be made with the probe at 0cm for all side of the EUT.

c. The highest emission level was recorded and compared with limit.

For portable exposure conditions:

Perform H-field measurements for each edge/top surface of the host/client pair at every 2cm, starting from as close as possible out to 10cm.

TEST RESULTS

PASS

Please refer to the following pages of the worst case (10W wireless charging & powered by external AC/DC Adapter).

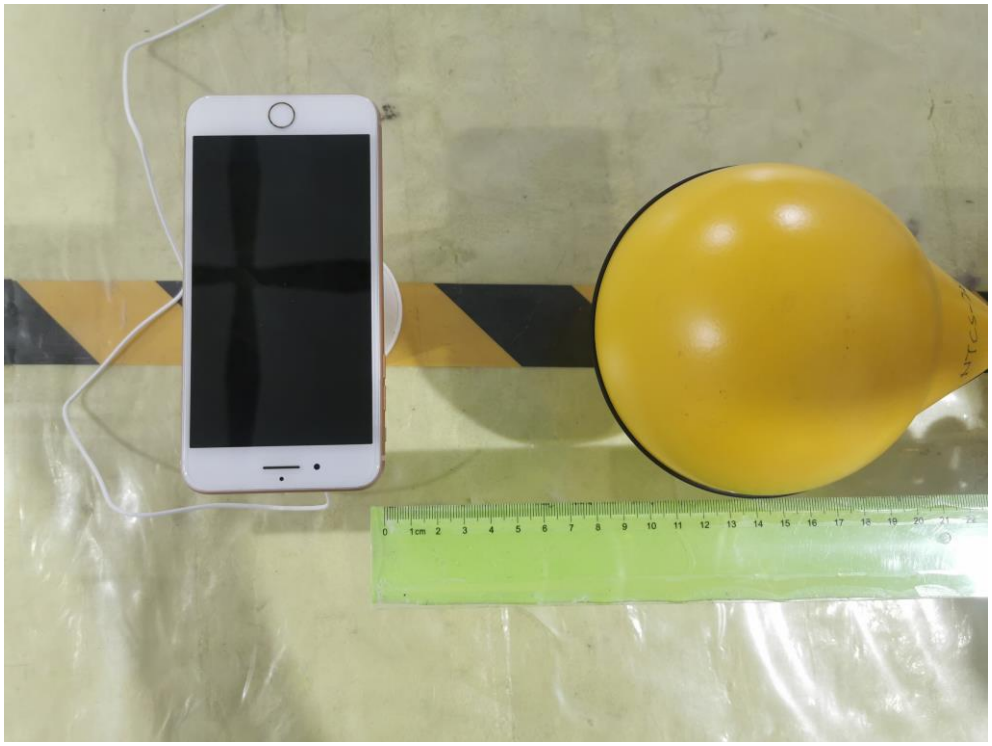
Full Load, Test Mode 3					
Test Distance (cm)	**Test Position**	**Mobile Measure Result (V/m)**	**Mobile Measure Result (A/m)**	**Limit (V/m)**	**Limit (A/m)**
15	Side A	3.32	0.21	614	0.815
	Side B	3.13	0.20	614	0.815
	Side C	3.75	0.24	614	0.815
	Side D	2.41	0.21	614	0.815
	Side E	---	---	---	---
20	Side A	---	---	---	---
	Side B	---	---	---	---
	Side C	---	---	---	---
	Side D	---	---	---	---
	Side E	2.9	0.21	614	0.815

12. Test Equipment List

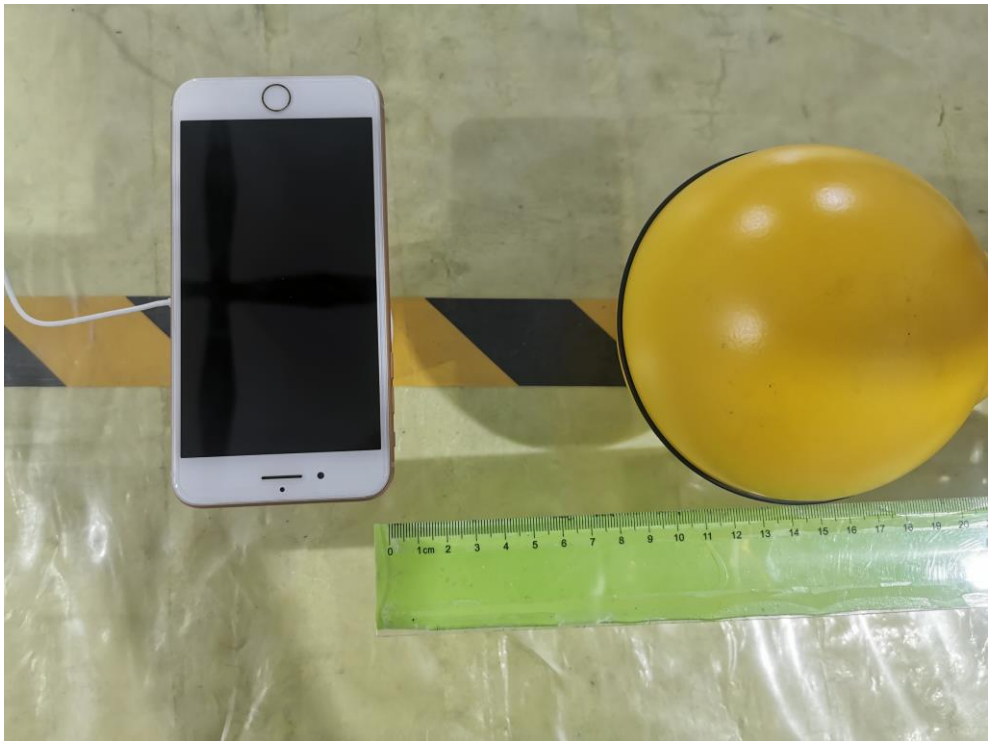
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Magnetic field probe 100cm2	Narda	ETL-400 Probe 1Hz-400KHz (r=6.2cm)	O-0167	June 28,2022	1 Year
2.	E-Field Probe	Narda	EP-601	611WX70729	Mar. 23, 2023	1 Year

13. Test Photos

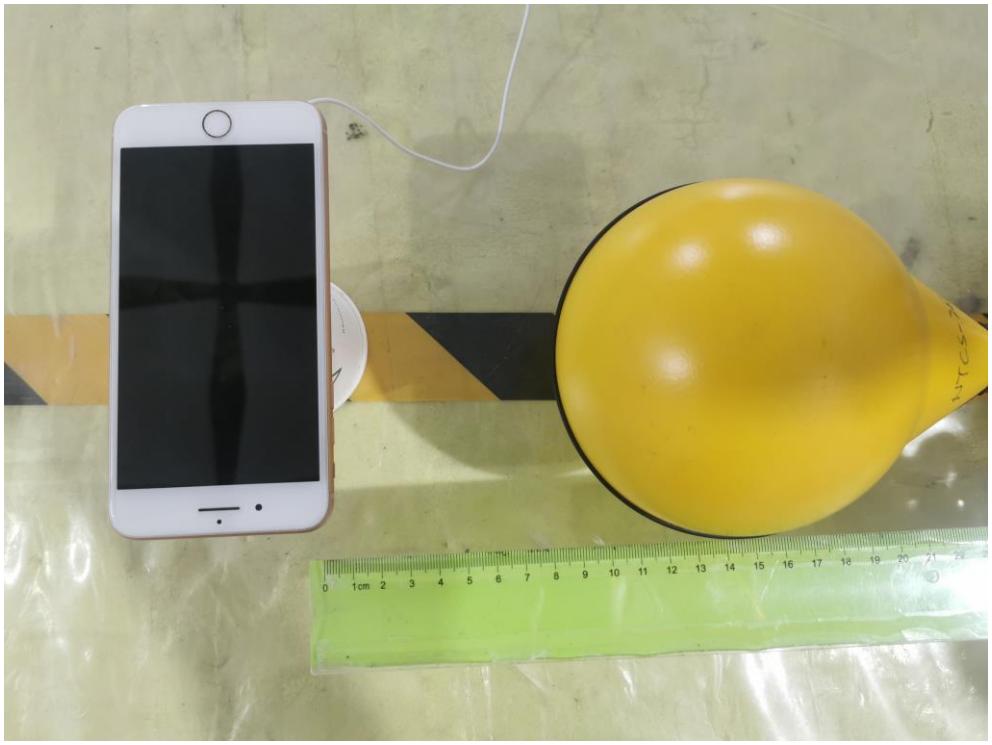
Side A: Test distance 15cm



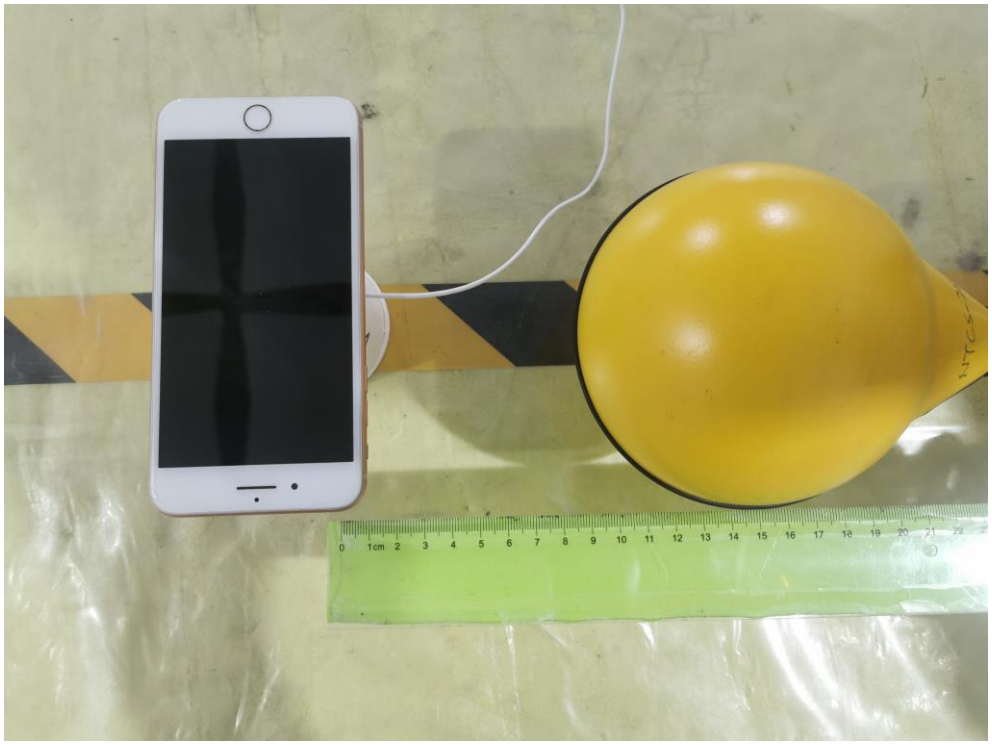
Side B: Test distance 15cm



Side C: Test distance 15cm



Side D: Test distance 15cm



Side E: Test distance 20cm

---End---