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FCC TEST REPORT

Client Name Shenzhen Lingyi Innovation Tech Co., Ltd.

12 F, Block C, Central Avenue Building, Xixiang BLVD Address

West, Baoan District, Shenzhen, China

Product Name Wireless charger

Date Nov. 08, 2019

Shenzhen Anbotek Compliance Laboratory Limited





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TEST REPORT

Applicant : Shenzhen Lingyi Innovation Tech Co., Ltd.

Manufacturer : Shenzhen Lingyi Innovation Tech Co., Ltd.

Product Name : Wireless charger

Model No. : AT1004C, AT1004L

Trade Mark : N.A.

Input: DC 15V, 3.5A

Rating(s) Wireless Output: 5W/7.5W/10W

Apple Watch Output: 5W

Type C Output: DC 5V, 3A, DC 9V, 2A, DC 12V, 1.5A

Test Standard(s) : FCC Part 1.1310, 1.1307(b)

Test Method(s) : KDB680106 D01 RF Exposure Wireless Charging Apps v03

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 1.1307 & KDB680106 D01 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt

Date of Test

Sept. 02, 2019

Sept. 02~Oct. 31, 2019

Dolly Invo

(Engineer / Dolly Mo)

Reviewer

(Supervisor / Bibo Zhang)

Approved & Authorized Signer

(Manager / Sally Zhang)

Shenzhen Anbotek Compliance Laboratory Limited





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1. General Information

1.1. Client Information

Applic	ant	Shenzhen Lingyi Innovation Tech Co., Ltd.
Addre	ss	12 F, Block C, Central Avenue Building, Xixiang BLVD West, Baoan District, Shenzhen, China
Manut	facturer	Shenzhen Lingyi Innovation Tech Co., Ltd.
Addre	SS	12 F, Block C, Central Avenue Building, Xixiang BLVD West, Baoan District, Shenzhen, China
Factor	ry	Shenzhen Lingyi Innovation Tech Co., Ltd.
Addre	SS	12 F, Block C, Central Avenue Building, Xixiang BLVD West, Baoan District, Shenzhen, China

1.2. Description of Device (EUT)

Product Name	:	Wireless charger	Anbotek Anbotek Anbotek Anbotek
Model No.	:	AT1004C, AT1004L (Note: All samples are the "AT1004C" for test only.)	same except the appearance, so we prepare
Trade Mark	:	N.A.	Anbotek Anbotek Anbotek Anbotek
Test Power Supply	:	AC 120V, 60Hz for adapte	Anbotek Anbotek Anbotek Anbotek
Test Sample No.	:	1-2-1(Normal Sample), 1-2	2-1(Engineering Sample)
		Operation Frequency:	Conventional wireless charging: 110.1-205KHz Apple Watch wireless charging: 550KHz
Product		Modulation Type:	QI Anbotek Anbotek Anbotek Anbotek
Description	otion	Antenna Type:	Inductive loop coil Antenna
		Antenna Gain(Peak):	0 dBi

Remark: 1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.



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1.3. Auxiliary Equipment Used During Test

Adapter : Model: A653-15035001

Input: 100-240V ~50-60Hz 1.5A

Output: 15V == 3500mA

1.4. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
anbote!	Magnetic field meter	NARDA	ELT-400	423623	Dec. 24, 2018	1 Year
2	E-Field Probe	Narda	EF0391	Q15221	Nov.17, 2017	3 Year
3	H-Field Probe	Narda	HF3061	Q15835	Nov.17, 2017	3 Year

1.5. Measurement Uncertainty

Radiation Uncertainty	:	Ur = 3.9 dB (Horizontal)	inbotek	Anbore Am
		Ur = 3.8 dB (Vertical)	Anbotek	Aupo, tek vipotek
		otek Anbote And botek	Anbotek	Anbo stek Anbore
Conduction Uncertainty	:	Uc = 3.4 dB	Anbore	Anbo wotek ant

1.6. Description of Test Facility

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

FCC-Registration No.: 184111

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registed and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 184111, September 27, 2019.

ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A, March 07, 2019.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China. 518102







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2. Measurement and Result

2.1. Requirements

According to the item 5.b) of KDB 680106 D01v03:

Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF exposure evaluation.

- 1) Power transfer frequency is less that 1 MHz
- 2) Output power from each primary coil is less than or equal to 15 watts.
- 3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils
- 4) Client device is inserted in or placed directly in contact with the transmitter
- 5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion)
- 6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Limits For Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)
	(A) Limits for Occ	cupational/Controlled Ex	posures	
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
300-1500	1	1	f/300	6
1500-100,000	/	1	5	6
	(B) Limits for Genera	l Population/Uncontrolle	d 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	1	1	f/1500	30
1500-100,000	/	1	1.0	30

F=frequency in MHz

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).

Shenzhen Anbotek Compliance Laboratory Limited

Code:AB-RF-05-a

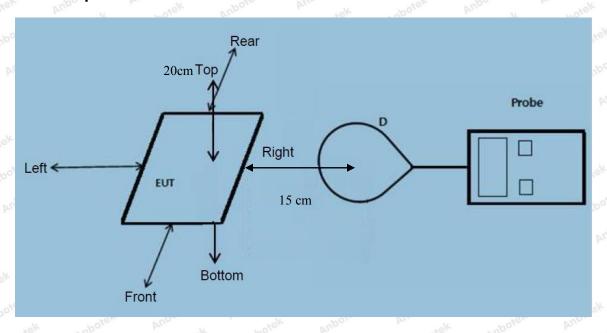
Hotline 400-003-0500 www.anbotek.com

^{*=}Plane-wave equivalent power density



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2.2. Test Setup



Note: Measurements should be made at 15 cm surrounding the EUT and 20cm above the top surface of the EUT.

2.3. Test Procedure

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The measurement probe was placed at required test distance which is between the edge of the charger and the geometric center of probe.
- 3) The highest emission level was recorded and compared with limit as soon as measurement of each points
- (A, B, C, D, E) were completed. (A is the right, B is the back, C is the left, D is the front, and E is the top.)
- 4) The EUT was measured according to the dictates of KDB 680106 D01 v03.

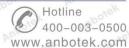
Remark

The EUT's test position A, B, C, D and E is valid for the E and H field measurements.

2.4. Test Result

- 2.4.1. Equipment Approval Considerations item 5.b of KDB 680106 D01 v03.
- 1) Power transfer frequency is less that 1 MHz
 - Conventional wireless charger operated in the frequency range 110.1~205KHz;
 - Apple Watch wireless charger operated in the frequency range 550KHz;
- 2) Output power from each primary coil is less than 15 watts
 - The maximum output power of the primary coil of Conventional wireless charger is 10W.







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- The maximum output power of the primary coil of Apple Watch wireless charger is 5W.
- 3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils
- The transfer system including a charging system with only single primary coils is to detect and allow only between individual pairs of coils-- Conventional wireless charger.
- The transfer system including a charging system with only single primary coils is to detect and allow only between individual pairs of coils-- Apple Watch wireless charger.
- 4) Client device is inserted in or placed directly in contact with the transmitter
 - Client device is placed directly in contact with the transmitter.
- Client device is placed directly in contact with the transmitter.
- 5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion)
 - The EUT is a Mobile Power Pack with Wireless Charger
- 6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.
- Conducted the measurement with the required distance and the test results please refer to the section 2.4.2



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2.4.2. Environmental evaluation and exposure limit according to FCC CFR 47 part 1 1.1307(b), 1.1310

Temperature:	23.8°C	Relative Humidity:	54%
Pressure:	1012 hPa	Test Voltage:	AC 120V, 60Hz for adapter

Note: The three coils can only work with one coil at a time, and only the worst mode (middle coil) is recorded in the report.

Conventional wireless charging:

E-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

Battery	Frequency Range	Test Position	Test Position	Test Position	Test Position	Test Position	Reference Limit	Limits Test
power	(KHz)	A	B	Crek	Door	E E	(V/m)	(V/m)
100, tek	anbotek	Aupoten	Puosek Puosek	Anbore	Anbo	alek pi	aborek Ar	boten
1%	110.1~205	0.37	0.32	0.29	0.43	0.94	307	614
Air.	Anboten	Amb	rok an	orek p	upor	Ai.	Aupoter	PUD.
Y. 27.		Pup.	rek	abotek	Aupor	Air.	Anboten	
50%	110.1~205	1.56	1.25	1.31	1.28	1.40	307	614
hoter A	ip stek	Laborek	Aupo, ak	by. Potek	Anbot	PLUD	niek na	potek
Anbotek	Anbo	Vupotek	Anboron	K Pilis	rek An	poter P	hor stek	Anborek
99%	110.1~205	2.25	2.04	2.13	2.37	2.09	307	614
Anbotek		k who	iek Ant	ofe, A	holek	Anborek	Anbo.	
ak Anbo	ek Anbo	otek N	botek	inpose sek	Arrabotek	Anborer	Alupo	jk
Stand-by	110.1~205	0.44	0.35	0.76	0.43	0.57	307	614
botek	Anbotek	supo.	Anbotek	Anbore	ak Anu	orek A	botek Ant	o tek



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H-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
tek Ant	otek Pupe	tek bii	nbotek	Anbore	Aug Polek	Anbote	Aupon	lek br
1%	110.1~205	0.047	0.046	0.054	0.039	0.051	0.815	1.63
un Potek	Anbotek	Aupo,	Anbotek	Anbore	-K Ant	notek p	obotek Ar	100.
Andhotek	Anborek	Anbo	k nbo	ick but	ole, V	hotek	Anborek	Vupo.
50%	110.1~205	0.23	0.52	0.36	0.40	0.48	0.815	1.63
-K Ann	otek Anboi	ek Anb	rek k	*nbotek	Anbore	And	Anbotek	Anb
e. Aur	hotek An	potek F	iupo.	h. abotek	Anbore	or No	rek Anbot	S.r.
99%	110.1~205	0.35	0.58	0.47	0.36	0.54	0.815	1.63
Anbote	Anticotek	Anbotek	Yupo,	ek ab	Hek Ar	bose, M	Lotek	Anbotek
Anboren	Ann	Anbotel	Aupo	rek by	obotek	Aupoten	Ann	Anbore
Stand-by	110.1~205	0.16	0.15	0.23	0.35	0.30	0.815	1.63
k Anbo	Yer Anbo	otek .	abotek	Aupor	Air.	Anboten	And	N.

Remark: All the conditions have been tested. It is found that 10W is the worst mode, and the data in the report only reflects the worst mode.



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Apple Watch wireless charging:

F-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

0711.	3	-/07	p.J -	100	0	1	100	
Battery	Frequency	Test	Test	Test	Test	Test	Reference	Limits
power	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	A Anti	В	$Anbe C^k$	An'D	E	(V/m)	(V/m)
*ek	obotek Ar	poter	yorek Potek	Anbotek	Vupo.	rek an	otek Anbr	70.
1%	550	0.35	0.30	0.27	0.45	0.92	307	614
Anbo.	A. abotek	Anbore	Y WO	ek Ant	otek A	loo.	anbotek.	Anbore
Anbo	k abotek	Anbore	P.U.	hotek	inposek	Pupo stek	nbotek	Anbore
50%	550	1.54	1.23	1.31	1.26	1.44	307	614
ek Aup	o. W.	potek p	nbote, k	Anu	Anbotek	Aupo,	rek abo	ek p
potek p	upo rek	nbotek	Anbore	Ans	L Anbo	SK VUE	o tek	botek
99%	550	2.23	2.02	2.19	2.33	2.08	307	614
Anbotek	Anbo. tek	All above	Anbot	AL AND	notek	Anbotek	Anbo.	A. abotel
Anbotek	Aupo.	k who	Hek An'	pote p	notek.	Anbotek	Vupo stek	Pa Papa
Stand-by	550	0.42	0.37	0.74	0.41	0.59	307	614
otek A	ibotek Ant	o tek	anbotek	Aupote.	Vur.	ek Anb	stek Aupo,	stek A



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H-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

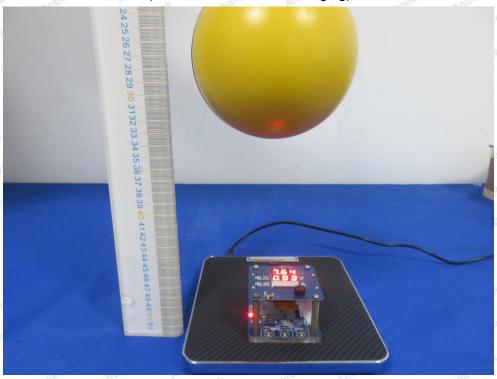
Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	550	0.045	0.044	0.056	0.037	0.053	0.815	1.63
pote F70	Ambotek	0.045	Anii abotek	O.030	W Ambr	0.055	nbotek Ar	bole
Andotek	Anbotek	Aupo	r Anbo	lek Aup	ore. b	nbotek	Anbotek	Aupo.
50%	550	0.27	0.50	0.38	0.41	0.42	0.815	1.63
K AUD	hotek Ar	potek p	inpose,	Anbotek	Anborek	by Pupo.	lek Anbo	S.K.
99%	550	0.33	0.56	0.45	0.34	0.58	0.815	1.63
Anboren	Anbe	Anbotel	Aupo	tek bu	obotek	Anborek	Aug Polek	Anbore
Stand-by	550	0.18	0.17	0.22	0.37	0.32	0.815	1.63

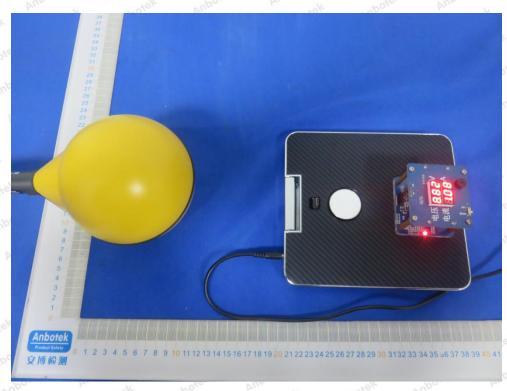


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APPENDIX I -- TEST SETUP PHOTOGRAPH

Photo of MPE Measurement (Conventional wireless charging)

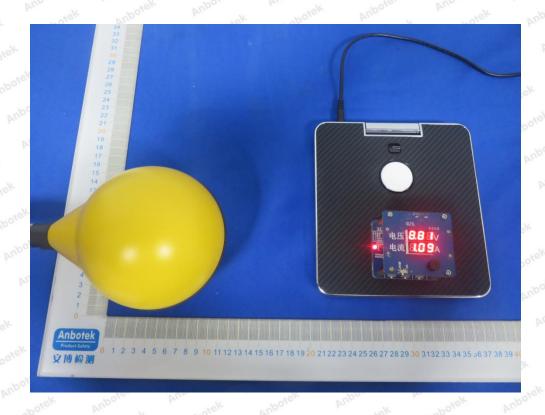




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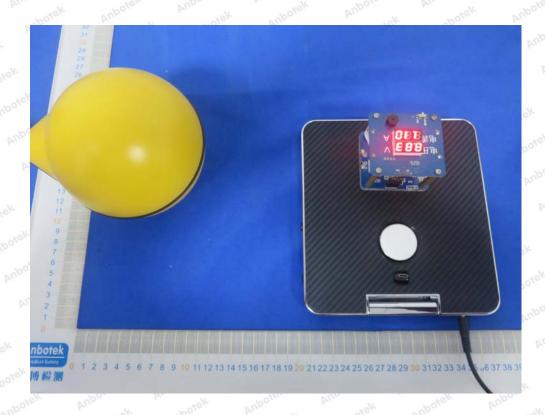




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Apple Watch wireless charging





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