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# **FCC TEST REPORT**

Client Name : Anker Innovations Limited

Address Room 1318-19, Hollywood Plaza, 610 Nathan Road,

Mongkok, Kowloon, Hong Kong

Product Name : PowerCore Magnetic 5K

Date : Jan. 30, 2021

Shenzhen Anbotek Compliance Laboratory Limited
\* Approved \*



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## TEST REPORT

Applicant : Anker Innovations Limited

Manufacturer : Anker Innovations Limited

Product Name : PowerCore Magnetic 5K

Model No. : A1619

Trade Mark : ANKER

Input: DC 5V 2.2A(with DC 3.7V, 5000mAh battery inside)

Rating(s) : USB-C Output: DC 5V 2A

Wireless Output: 5W

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	Jan. 11, 2021
Date of Test	Jan. 11~21, 2021
	Yilia Zhong
Prepared By	potek Anbors Anborek Anborek
Anbotek Anbotek Anbotek Anbo	(Engineer / Yilia Zhong)
	this thong
Reviewer	Anbotek On ak abotek An
	(Supervisor / Bibo Zhang)
	Kingkong Jin
Approved & Authorized Signer	Inposest ) Was and Manager Willows
	(Manager / Kingkong Jin)

**Shenzhen Anbotek Compliance Laboratory Limited** 

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## 1. General Information

## 1.1. Client Information

Applicant	: Anker Innovations Limited
Address	Room 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, Hongkong
Manufacturer	: Anker Innovations Limited
Address	Room 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, Hongkong
Factory	: Power7 Technology (Dong Guan) Co., Ltd.
Address	No.28 Binjiang Street.Shishuikou Village,Qiaotou Town,Dongguan City,GuangDong Province P.R.China

## 1.2. Description of Device (EUT)

260,		10° by	offer and
Product Name	•	PowerCore Magnetic 5K	Anbotek Anbotek Anbotek Anbotek
Model No.	:	A1619	Anbore Anbotek Anbotek Anbotek
Trade Mark	:	ANKER	ek abotek Anbotek Anbotek An
Test Power Supply		AC 120V, 60Hz for adapter	otek Anbotek Anbotek Anbotek
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(E	Engineering Sample)
		Operation Frequency:	111-205KHz
Product		Modulation Type:	FSK, nootek Anborek Anborek Anborek
Description		Antenna Type:	Inductive loop coil Antenna
		Antenna Gain(Peak):	0 dBi
V 1/4	No	MO. M.	740, VUA.

**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	:	M/N: A2013	· ek	abotek	Aupor
		Input: AC 100-240V, 0.7A, 50-60Hz			
		Output: 3.6-5.5V=3A/ 6.5-9V=2A/ 9-12V=	=1.5A		

## 1.4. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
Autore	Magnetic field meter	NARDA	ELT-400	423623	Dec. 24, 2018	3 Year
2. <sup>n/b</sup>	E-Field Probe	Narda	EF0391	Q15221	Nov.17, 2020	3 Year
3	H-Field Probe	Narda	HF3061	Q15835	Nov.17, 2020	3 Year

## 1.5. Measurement Uncertainty

Radiation Uncertainty	:	Ur = 3.9 dB (Horizontal)	Anbore	Anbotek Ar	botek
		Ur = 3.8 dB (Vertical)	Anbu	Anbotek	Anbore
		on Annotek Anbote	K Aug.	ik Anborek	Anbor
Conduction Uncertainty	:	Uc = 3.4 dB	ote. Ann	otek Anbotek	Anto



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#### 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 30, 2020.

#### 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, September 30, 2020.

#### **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/cm <sup>2</sup> )	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 <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500	I	I	f/300	6
1500-100,000	1	1	5	6
	(B) Limits for Genera	l Population/Uncontrolle	ed Exposure	<b>.</b>
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500	I	1	f/1500	30
1500-100,000	1	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).

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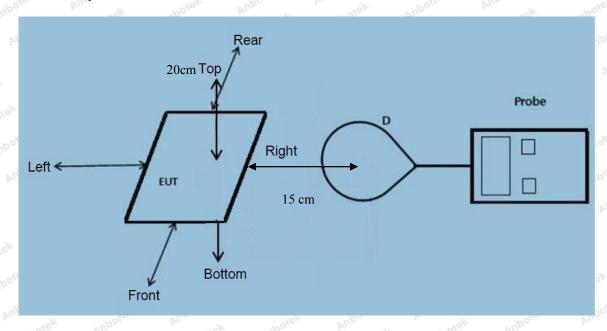
Hotline 400-003-0500 www.anbotek.com

<sup>\*=</sup>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
- The device operate in the frequency range 111-205KHz.
- 2) Output power from each primary coil is less than 15 watts
  - The maximum output power of the primary coil is 5W.

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- 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.
- 4) Client device is inserted in or 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 exposure conditions
- 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.



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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:	52 %
Pressure:	1012 hPa	Test Voltage:	AC 120V, 60Hz for adapter

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

	100	100	V.	1-01	Diff	Set	- 40	
otek Anb	Frequency	Test	Test	Test	Test	Test	Reference	Limits
Battery	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	A	В	C posto	D	otek E	(V/m)	(V/m)
Amenbotek	Aupolen	Anbo	Anbott	Anbe	Tek bu	abotek	Aupoles	Anb botek
1%	111-205	0.43	0.52	0.47	0.48	0.60	307	614
ek bi.	tek Anbore	And	-otek	Inpotek	Pupo, rek	Ai.	Anboten	N AND
rok br.		oter A	to tek	Anbotek	Aupo.	k 2000	rek Anbore	r bu
50%	111-205	1.46	1.90	1.39	1.52	1.69	307	614
Anbore		Anbotek	Anbe	e anbo	ek Aup	ore b	abotek	upoter
Aupor	pin abotek	Aupolei	Aug	otek or	potek 1	upo,	Are abotek	Anbores
99%	111-205	2.48	2.88	2.49	2.44	2.90	307	614
ek Anbol		stek An	potek p	iupo, otek	v. Vupotek	Anbore	ek hotel	Anl
botek An	DOLD VIEW	obořek	Vupoter, K	Anon	Anborel	Anbo	*6k	yek.
Stand-by	111-205	0.42	0.57	0.41	0.40	0.54	307	614
Anbotek	Anbore	Yu.	Anbotel	Anbo	otek b	nbotek	Aupore b	, botek



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

	030	2.53	las	100	100		0.00	
Battery	Frequency	Test	Test	Test	Test 📈	Test	Reference	Limits
200	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	A	otek B Ar	DOLER C	D	ant Erek	(A/m)	(A/m)
ek Aup	stek Aupo	rek bu	opotek	Aupoten	Ann	Anbotek	Aupo	14
1%	111-205	0.028	0.050	0.056	0.040	0.050	0.815	1.63
hotek		Aupo, rek		Aupoter	K And		potek Ant	*ek
Aur	Anborek	Anbo	, abot	ek Anbo	ie. bu	hotek	Anbotek	inpo.
50%	111-205	0.34	0.43	0.33	0.33	0.50	0.815	1.63
K MC	rek Anbore	K Aupo	Tek W.	nbotek	Anbore.	Andhotek	Anbotek	Anb
V. Viun	hotek Ant	lotek M	ibo stek	anbotek	Anbore	k Vur	k Anbore	P
99%	111-205	0.47	0.65	0.54	0.36	0.35	0.815	1.63
inpotek		anbotek		k Woo	ek Anb		-otek o	nbotek
Anboten	Ana	Anbotek	Anbore	rek W	potek f	inboten	rup, rotek	Anborek
Stand-by	111-205	0.53	0.35	0.45	0.57	0.43	0.815	1.63
k anbol		LOX I	potek	Inport	VII.		Anbo	



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## **APPENDIX I -- TEST SETUP PHOTOGRAPH**

Please refer to separated files for Test Setup Photos of the EUT.

----- End of Report -----