

Report No.: SZAWW190814019-02 FCC ID: 2AOKB-A2505 Page 1 of 13

# FCC TEST REPORT

Client Name : Anker Innovations Limited

- Address Room 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, Hong Kong
- Product Name : PowerWave Base Pad
- Date : Sept. 03, 2019

# Shenzhen Anbotek Compliance Laboratory Limited

#### Shenzhen Anbotek Compliance Laboratory Limited

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# TEST REPORT

Applicant	: 1)	Anker Innovations Limited
Manufacturer		Anker Innovations Limited
Product Name	ote	PowerWave Base Pad
Model No.	nb	A2505
Trade Mark	: P	ANKER
Rating(s)	ł	Input: DC 5V, 2A, DC 9V, 2A Wireless Output: 5W, 7.5W, 10W

# 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

Prepared By

Reviewer

Aug. 14, 2019 Aug. 14~22, 2019

Doly wo

(Engineer / Dolly Mo)

Snowy Meng

(Supervisor / Snowy Meng)

Sally zhang

(Manager / Sally Zhang)

# Shenzhen Anbotek Compliance Laboratory Limited

Approved & Authorized Signer

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Approved \*

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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, Hong Kong
Manufacturer	:	Anker Innovations Limited
Address	:	Room 1318-19, Hollywood Plaza, 610 Nathan Road,Mongkok, Kowloon, Hongkong
Factory	:	SHENZHEN RUIJING INDUSTRIAL CO., LTD
Address	:	Building C1, Hengli Industrial Park, Xiakeng 1st Road No.168, Longgang Street, Longgang District, Shenzhen, Guangdong, China

# 1.2. Description of Device (EUT)

Product Name	:	PowerWave Base Pad	otek Anbotek Anbote Anto
Model No.	:	A2505	pbotek Anbotek Anbotek Anbotek
Trade Mark	:	ANKER	Anbotek Anbote Antotek Anbotek Anbotek
Test Power Supply	:	AC 120V, 60Hz for adapter	Anboten Anbo
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(	Engineering Sample)
		Operation Frequency:	111-205KHz
Product		Modulation Type:	MSK
Description	ŀ	Antenna Type:	Inductive loop coil Antenna
		Antenna Gain(Peak):	0 dBi
Remark: 1) For a m	ore	detailed features description, p	blease refer to the manufacturer's specifications

or the User's Manual.

# 1.3. Auxiliary Equipment Used During Test

A	Adapter	:	Manufacturer: Anker Innovations Limited	0
3			M/N: A2013	15
			Input: 100-240V 50-60Hz 0.7A	
			Output: 3.6-6.5V - 3A/ 6.5-9V - 2A/ 9-12V 1.5A	

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# 1.4. Test Equipment List

Ce.	Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
10	1 tek	Magnetic field meter	NARDA	ELT-400	423623	Dec. 24, 2018	1 Year
100	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 (Horizo	ontal)	tek p.		nboten Ant
P		Ur = 3.8 dB (Vertic	al)	otek h.	nbotek	Anboto
		ek obotek	Anboten	Anotek	Anbotek	Anboro
Conduction Uncertainty	:	Uc = 3.4 dB	Anboten	Anotek	Anbotek	Anbor

# 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, 2018.

## 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.

1. 111				42 23.4
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	/	1	f/300	6
1500-100,000	1	1	5	6
	(B) Limits for Genera	I Population/Uncontrolle	d Exposure	
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	30

Limits For Maximum Permissible Exposure (MPE)

#### F=frequency in MHz

30-300

300-1500

1500-100,000

\*=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).

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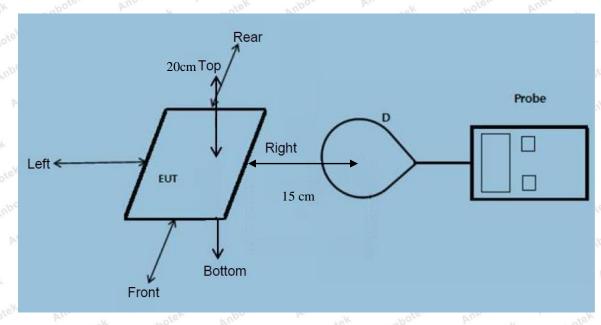
f/1500

1.0



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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 10W.

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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 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.

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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:	23.9°C	Relative Humidity:	54 %
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

- C - C - C - C - C - C - C - C - C - C								161
Battery	Frequency	Test	Test	Test M	Test	Test	Reference	Limits
	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	kek A Ant	B	С	AniDiek	ÞĚ	(V/m)	(V/m)
pton An	hotek A	nbotek	Anboth	All abotek	Anboter	K Anbo	otek Anbo	lek An
1%	111-205	0.29	0.41	0.32	0.45	0.57	307	614
Anboto	Anny wotek	Anbotek	Anbor	ek ab	otek pi	looten y	knoc r	Anbotek.
	k hotek	Anbote	K Anbo	Lek Pri		Anboten	Anbewotek	Anbotek
50%	111-205	1.35	1.73	1.26	1.40	1.68	307	614
tek Ant	Joten And	-otek	nbotek	Anbors	An	Anbote	Anbo ot	et no
botek	Anbote, Ar	in wotek	Anbotek	Anboth	A stool	ek Ant	oter Anbo	otek
99%	111-205	2.32	2.79	2.43	2.35	2.74	307	614
All abotek	Anboten	Anberge	K Anbot	ek Anb	oto An	botek	Anbotek	Anbo
Ctord b	K Anboter	Anu	otek an	potek p	nbor	Allabotek	Anboten	Anbo
Stand-b	111-205	0.37	0.55	0.38	0.46	0.53	307	614
y An	abotek An	poter P	nusatek	Anbotek	Anboro	All All	ptek Anbot	an Anb

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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)
Anboutek	Anbotek	Anboth	Aun po	tek Ant	oten Al	ibor P	obotek	Anboten
1%	111-205	0.038	0.050	0.061	0.047	0.053	0.815	1.63
Anbo	stek obc	kek Ant	pote. A	otek.	Anbotek	Anbors	Allabotek	Anbc
ten An	por pro	abotek	Anboton	Anthotek	Anbotek	Anbou	ek abot	A Ys
50%	111-205	0.28	0.45	0.24	0.33	0.48	0.815	1.63
	Anboutek	Annbotek	Anboter	And	otek ar	botek Ar	bore An	abotek
Anboten	Anbo otek	honbote	K Anbo	te. And	notek	Anbotek	Anbortek	Anobotek
99%	111-205	0.49	0.66	0.52	0.35	0.37	0.815	1.63
ek Ant	otek Anbo	stek Ar	nbotek	Anboten	And	Anbotek	Anboto	K
vote <sup>k</sup>	Anbotek Ar	100 dek	nbotek	Anboton	Anusot	ek anbol	ek Anbor	rek pi
Stand-b v	111-205	0.42	0.22	0.35	0.54	0.38	0.815	1.63
Any y	Anbotek	Anbou	A bot	ek Anbr	ster An	stek h	nbotek	Anboro

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

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

Photo of MPE Measurement



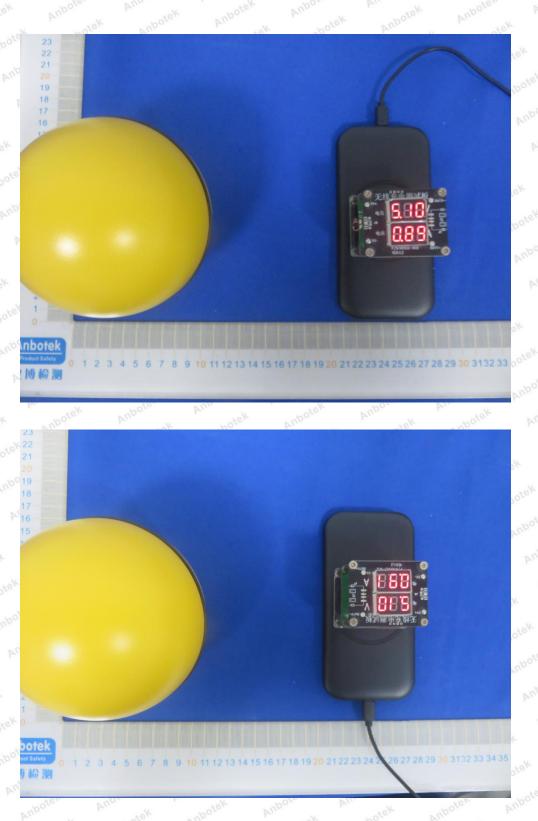


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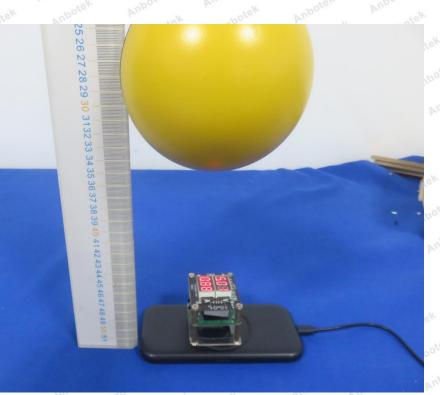
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