

Shenzhen Anbotek Compliance Laboratory Limited FCC ID: 2AOKB-A2526 Page 1 of 13 Report No.: SZAWW181214002-02

# FCC TEST REPORT

For

Anker Innovations Limited

PowerWave+ Stand

Model No.: A2526

Prepared For	Anb	Anker Innovations Limited	
Address	P	Room 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon,	
		Hong Kong	

Prepared By Address 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

Tel: (86) 755-26066440 Fax: (86) 755-26014772

Report Number	P	SZAWW181214002-02	
Date of Test	ek.	Dec. 14, 2018	
Date of Test	Lotek	Dec. 14~24, 2018	
Date of Report		Dec. 24, 2018	



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TEST	REI	POR	Ţ

Applicant	: Anker Innovations Limited
Manufacturer	Anker Innovations Limited
Product Name	: PowerWave+ Stand
Model No.	: A2526
Trade Mark	: ANKER
Rating(s)	: Input: 5V=== 2A/9V=== 2A/12V=== 1.5A Output: 5W/7.5W/10W

Test Standard(s)	No	FCC Part 1.1310, 1.1307(b)			Anbo
Test Method(s)	:	KDB680106 D01 RF Exposu	re Wireless	Charging Apps	s 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 Test	Dec. 14~24, 2018
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otek Anbolek Anbole Anbole Anbole Anbole	(Engineer / Dolly Mo)
	Snavy Meng
Reviewer	Anbolek Anbolek Anbolek Anbolek
K Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek	(Supervisor / Snowy Meng)
	Sally zhong

Approved & Authorized Signer

(Manager / Sally Zhang)

Shenzhen Anbotek Compliance Laboratory Limited Tel:(86)755-26066440 Fax:(86)755-26014772 <u>www.anbotek.com</u> Code:AB-RF-05-a Shenzhen Anbotek Compliance Laboratory Limited FCC ID: 2AOKB-A2526 Page 4 of 13 Report No.: SZAWW181214002-02

# **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, Hong Kong
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+ Stand	Anbotek Anbotek Anbotek Anbotek
Model No.	:	A2526	Anbotek Anbotek Anbotek Anbotek Anb
Trade Mark	:	ANKER	otek Anbotek Anbotek Anbotek
Test Power Supply	:	AC 120V, 60Hz for adapter	Anbotek Anbotek Anbotek Anbotek
Test Sample No.	:	S1(Normal Sample), S2(Enginee	pring Sample)
		Operation Frequency:	111~205KHz
Product		Modulation Type:	MSK Ander Ander Ander
Description		Antenna Type:	Inductive loop coil Antenna
		Antenna Gain(Peak):	0 dBi
Remark: 1) For a m	ore	detailed features description, plea	ase refer to the manufacturer's specifications or the

User's Manual.

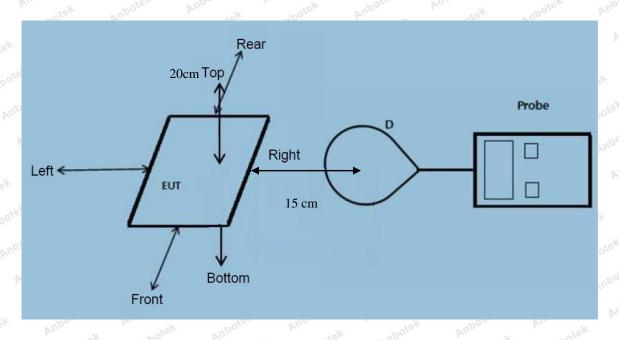
## **1.3. Auxiliary Equipment Used During Test**

Adapter	:	Model: A2013
		Input: 100-240V~ 50-60Hz 0.7A
		Output: 3.6-6.5V=== 3A/ 6.5-9V=== 2A/ 9-12V=== 1.5A
		Anboto Ann Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek
		Wireless charging full load

# Anbotek Product Safety

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#### 1.4. Description Of Test Setup



Note: Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device

Shenzhen Anbotek Compliance Laboratory Limited Tel:(86)755-26066440 Fax:(86)755-26014772 <u>www.anbotek.com</u> Code:AB-RF-05-a

#### 1.5. Test Equipment List

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

#### **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, July 31, 2017.

#### ISED-Registration No.: 8058A-1

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-1, June 13, 2016.

#### 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

# 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.

	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 Occupational/Controlled Exposures										
	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	/	/	f/300	6					
	1500-100,000	/	1	5	6					
	(B) Limits for General Population/Uncontrolled Exposure									
	0.3-1.34	614	1.63	*(100)	30					

Limits For Maximum	Permissible	Exposure	(MPE)
		Lipostie	(1.11 -)

F=frequency	in	MHz
-------------	----	-----

1.34-30

30-300

300-1500

1500-100,000

\*=Plane-wave equivalent power density

824/f

27.5

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).

2.19/f

0.073

\*(180/f<sup>2</sup>)

0.2

f/1500

1.0

30

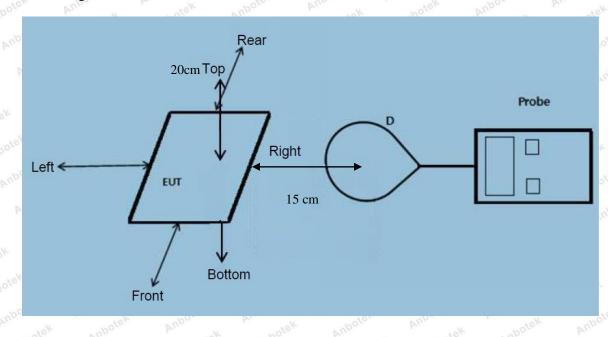
30

30

30

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## 2.2. Test Setup



Note: Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device

#### 2.3. Test Procedure

1) The RF exposure test was performed in anechoic chamber.

2) The measurement probe was placed at test distance (15 cm) 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.

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.

- The EUT E-Field Strength levels at 15 cm & The EUT H-Field Strength levels at 15 cm are less than 50% the MPE limit.

The test results please refer to the section 2.4.2

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

Temperature:	23.6° C	Relative Humidity:	53 %
Pressure:	1012 hPa	Test Voltage:	AC 120V, 60Hz for adapter

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

	0							
AnD wotek	Frequency	Test	Test	Test por	Test	Test	Reference	Limits
Battery	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	ek A Anb	B	С	Dek	E	(V/m)	(V/m)
ten Aup	otek N	botek I	nboto	Ann botek	Anbotek	Aupor	lek nbc	Lek A
1%	111~205	0.35	0.29	0.26	0.57	0.43	307	614
Anbotek		Anbotek	Anbote	Anboi	otek Ar	10- 1.	bor P	
Anbotek	Anboutek	Anbote	Anbo	otek pri	nbotek	Anbotek	Anborntek	A. nbotek
50%	111~205	1.88	o <sup>te™</sup> 1.22 №	1.34	1.51	1.65	307	614
ek Anbo	lek Anbo	dek pr	nbotek	Anboten	And	Anbotek	Anbor	
otek Ar	boten An	po tek	Anbotek	Anboro	Ann	ek Anbot	ek Anbo	. tek
99%	111~205	2.15	2.39	2.83	2.66	2.34	307 N	614
Anthotek	Anbotek	Anbor	Annbot	ek Anb	An An	potek .	Anbotek	
Am	Anbotek	Anbor	0.0	potek p	nbotenek	Annobotek	Anbotek	Anboten
Stand-by	111~205	0.51	0.44	0.52	0.07	0.53		614
Ant	otek Ant	potek A	nbo-	nbotek	Anbotek	Ano	sk anbot	ek Ar

# ANDOLEK Shenzhen Anbotek Compliance Laboratory Limited Product Safety FCC ID: 2AOKB-A2526 Page 10 of 13 Report No.: SZAWW181214002-02

Battery	Frequency	Test	Test M	Test	Test	Test	Reference	Limits
N AL	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	oten A M	В	Cek	D	E	(A/m)	(A/m)
abotek I	nbotek P	nboten	Anbubotek	Anbotek	Anboli	riek brun	otek Anb	over
1%	111~205	0.047	0.052	0.086	0.045	0.069	0.815	1.63
Anbortek	An	Anboten	Anbou	otek pr	potek	inboto A	hotek	Anbotek
Anbo	K Anbote	Anbot	en Aup	notek	Anbotek	Anbore	Am	Anbote
50%	111~205	0.34	0.33	0.48	0.31	0.49	0.815	1.63
otek Anb	ore Ant	botek	Anbotek	Anbolotek	Annbote	K Anbote	Anb	ptek I
nbotek P	nbor P	Anbotek	Anbotek	Anbo	ek anb	otek Anbr	rek Aus	botek
99%	111~205	0.23	0.78	0.60	0.66	0.42	0.815	1.63
Anbotek	Anbote	Ant	ek Anb	oten An	por p	anbotek	Anboter	Anu Lote
Anbotel	Anbor		potek P	nboten	Anbo	Anbotek	Anbore	Ans
Stand-by	111~205	0.47	0.42	0.38	0.44	0.36	0.815	1.63
notek p	abotek A	hore tok	Antobotek	Anbotek	Anbote	kek nabc	tek Anbe	te. b

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

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.



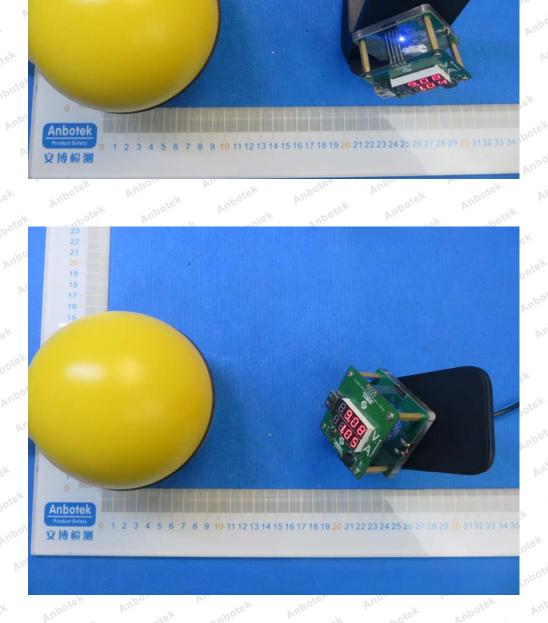
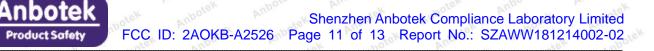
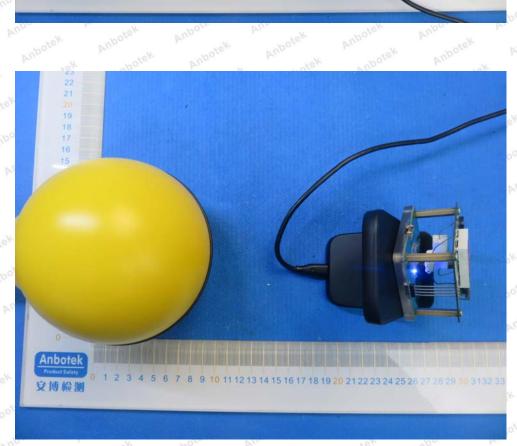
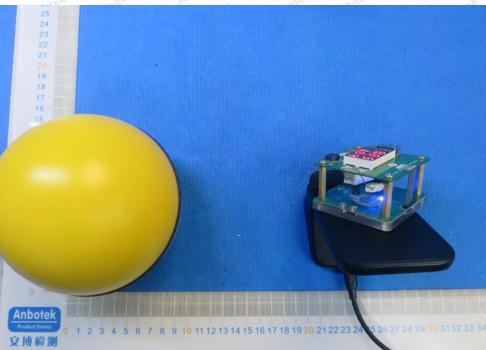


Photo of MPE Measurement

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





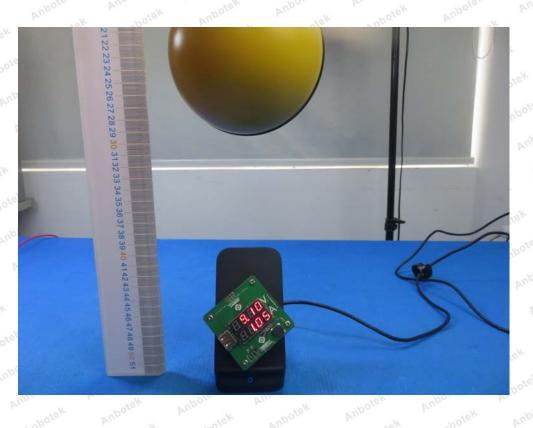


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----- End of Report -----

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