

Shenzhen Anbotek Compliance Laboratory Limited FCC ID: 2AOKB-A2570 Page 1 of 10 Report No.: SZAWW181222002-02

# FCC TEST REPORT

For

Anker Innovations Limited PowerWave Pad with Watch Holder

Model No.: A2570

Prepared For	: Anke	er Innovatio	ons Limited				
Address	: Roor	n 1318-19,	Hollywood P	laza, 610 Na	than Road, M	longkok, Kov	vloon,
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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

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Report Number	P	SZAWW181222002-02	
Date of Test	e¥:	Dec. 22, 2018	
Date of Test	oter	Dec. 22~29, 2018	
Date of Report	:00	Dec. 29, 2018	

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# **TEST REPORT**

Applicant	Anker Innovations Limited
Manufacturer	: Anker Innovations Limited
Product Name	: PowerWave Pad with Watch Holder
Model No.	: A2570
Trade Mark	: ANKER
Rating(s)	: Input: 5V=== 2.4A/ 9V=== 2A/ 12V=== 1.5A Output: 5W / 7.5W / 10W

Test Standard(s)	No	FCC Part 1.1310, 1.1307(b)			
Test Method(s)	:	KDB680106 D01 RF Exposu	re Wireless	Charging App	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. 22~29, 2018
Anbotek	Polle nu honore product
Prepared By	Anbour D. hotek Anboten Anbo
otek Anbotek Anbotek * Approved *	(Engineer / Dolly Mo)
Reviewer	Snavy Meng
Reviewer	And tak spotek Anbour Ann atek
	(Supervisor / Snowy Meng)
	Sally zhong
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Approved & Authorized Signer

(Manager / Sally Zhang)

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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, Hong Kong
Factory	:	HU NAN GIANTSUN POWER ELECTRONICS CO., LTD
Address	:	Building 16&17, Taiwan Industrial Zone, Nonferrous Metals Industrial Park, Chenzhou, Hunan, China

### **1.2. Description of Device (EUT)**

Product Name	:	PowerWave Pad with Watch Hol	Ider hotek huborek huborek
Model No.	:	A2570	Anbotek Anbotek Anbotek Anbotek Anbo
Trade Mark	:	ANKER	otek Anbotek Anbotek Anbotek A
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 Model Andread
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.

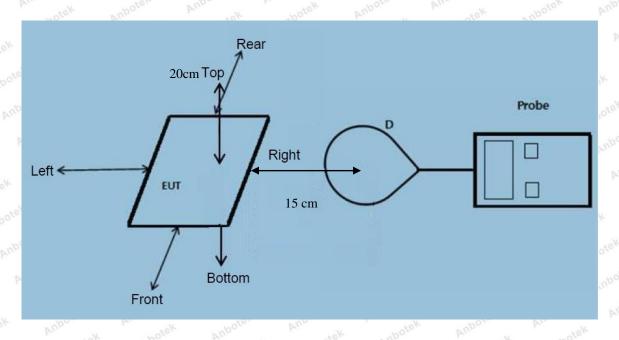
## **1.3. Auxiliary Equipment Used During Test**

	Adapter	:	Model: A2013	
1			Input: 100-240V~ 50-60Hz 0.7A	
N.			Output: 3.6-6.5V=== 3A/ 6.5-9V=== 2A/ 9-12V=== 1.5A	
1			Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek	
	Mobile Phone	:	HUAWEI Mate 20 Pro	

# 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 Occ	upational/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	/	/	f/300	6
1500-100,000	/	/	5	6
	(B) Limits for Genera	l Population/Uncontrolle	d Exposure	

#### Limits For Maximum Permissible Exposure (MPE)

(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/f <sup>2</sup> )	30				
30-300	27.5	0.073	0.2	30				
300-1500	/	/	f/1500	30				
1500-100,000	/	/	1.0	30				

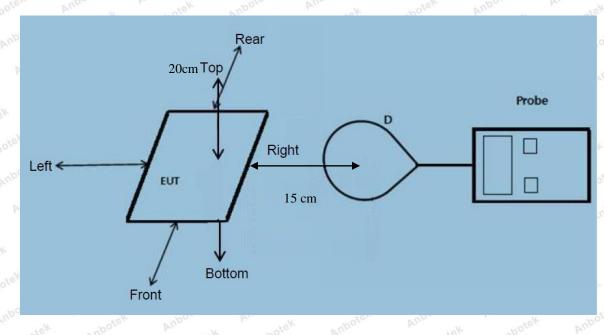
F=frequency in MHz

=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).

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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

		5-625 *	0		3.7		187	101
Anu Dettotek	Frequency	Test	Test	Test M	Test	Test	Reference	Limits
Battery	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	lek A Anb	B	C	AntDek	P.E.	(V/m)	(V/m)
en Aup	otek N	botek p	inboto.	Ann botek	Anbotek	Aupor	ek nbc	Kek P
1%	111~205	0.37	0.24	0.29	0.62	0.43 MDO	307	614
Anbotek		Anbotek	Anboten	0.29	otek Ar	10-	bor A	abotek
Anbotek	Anbor	Anbote	r Anbo	notek pri	nbotek	Anbotek	Anbo	A. nbotek
50%	111~205	1.92	o <sup>te<sup>w</sup></sup> 1.31	1.40	1 56	1.88	307	614
K Anbo	lek Anbo	stek Ar	nbotek	Anbotek	Anbotok	Anbotek	Anboro	ek An-
otek Ar	potek An	por p	Anbotek	Anboton	And hot	ek Anbot	ek Aupo	-otek A
99%	111~205	2.20	2.45	2.84	2.61	2.39	o <sup>ote<sup>N</sup>307</sup>	614
hotek	Anbotek	Anbou	All	sk Aup	sten An	po h	Anbotek	Anboto
Amenbotek	Anbotek	Aupor	1 M N N	potek P	nboten	And	Anbotek	Anboter
Stand-by	111~205	0.57	0.46	0.53	0.09	0.52		614
Anu Anu	potek Ant	potek A	hbor dek	Anobotek	Anboten	Anbe	ak Anbot	ek Ar

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					12 NO 7 1		14	
Deabotek	Frequency	Test	Test M	Test N	Test	Test	Reference	Limits
Battery	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	oten A M	В	Cek	D	E	(A/m)	(A/m)
nbotek	abotek P	nboten	Andwotek	Anbotek	Anbot	rek pur	otek Anb	oten
1%	111~205	0.049	0.055	0.087	0.041	0.070	0.815	1.63
Anborstek	All	Anboten	Anbore	otek pr	00-	N. K	hotek	Anbotek
Anbou	A photel	Anbot	en Aun	abotek	Anbotek	Anbore	Amobotek	Anbote
50%	111~205	0.32	0.35	0 4 9	0.29	0.51	0.815	1.63
stek Anb	pro An-	botek	Anbotek	Anbolet	Anbote	K Anbote	And	otek I
nbotek P	nbor A	Anbotek	Anbotek	Anbo	erk and	otek Anbr	see Ans	botek
99%	111~205	0.24	0.77	0.64	0.68	0.43	0.815	1.63
Anbotek	Anbote	Anthot	ak Anb	otek An	por p	hbotek	Anboten	Anb
Anbotel	Anbor		potek p	nbotek	Anbo	Anbotek	Anbore	Ans
Stand-by	111~205	0.45	0.40	0.39	0.42	0.38	0.815	1.63
wotek h	abotek A	1 bore	Anthotek	Anbotek	Anbote	tek abc	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.