

Report No.: SZAWW190516003-02 FCC ID: 2AOKB-A2573 Page 1 of 10

# **FCC TEST REPORT**

Client Name : Anker Innovations Limited

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

Mongkok, Kowloon, Hong Kong

Product Name : PowerWave 10 Stand with 2 USB-A Ports

Date : Jun. 01, 2019

# **Shenzhen Anbotek Compliance Laboratory Limited**



Report No.: SZAWW190516003-02 FCC ID: 2AOKB-A2573 Page 2

## **Contents**

1. C	neral Information	.4
	.1. Client Information	4
	.2. Description of Device (EUT)	. 4
	.3. Auxiliary Equipment Used During Test	7
	.4. Test Equipment List	.5
	.5. Measurement Uncertainty	.5
	.6. Description of Test Facility	5
2. 1	easurement and Result	6
	2.1. Requirements	.6
	2.2. Test Setup	. 7
	2.3. Test Procedure	. 7
	2.4. Test Result	d
	2.4.1. Equipment Approval Considerations item 5.b of KDB 680106 D01 v03	. 7
	2.4.2. Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(b	2)
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Report No.: SZAWW190516003-02 FCC ID: 2AOKB-A2573 Page 3 of 10

# **TEST REPORT**

Applicant : Anker Innovations Limited

Manufacturer : Anker Innovations Limited

Product Name : PowerWave 10 Stand with 2 USB-A Ports

Model No. : A2573

Trade Mark : ANKER

Input: DC 12V, 3A

Rating(s) : Wireless Output: 7W/7.5W/10W

USB Output: DC 5V, 2.4A(Max)

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	May 16, 2019
Date of Test Compliance	May 16~27, 2019
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Prepared By	otek Amboten J botek Ambote A
* Approved *	(Engineer / Oliay Yang)
Anbo Ak Anbotek Late	
	Snavy Meng
Reviewer	Anbot An an anbo
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Anbotek Anbotek Anbote	Sally Zhong
Approved & Authorized Signer	Tung My Morek None W. Wek upotek
	(Manager / Sally Zhang)

Shenzhen Anbotek Compliance Laboratory Limited



Report No.: SZAWW190516003-02

## 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	: Hinen Electronics(Shenzhen)Co., Ltd
Address	3/F, Building C and 4F, Building B and Building M, Licheng Technology Park,  Shajing Sub-district, Bao'an District, Shenzhen City, Guangdong Province, China

## 1.2. Description of Device (EUT)

Product Name	:	PowerWave 10 Stand with 2 USB-A Ports						
Model No.	:	A2573	Anbotek Anbotek Anbotek Annotek					
Trade Mark	:	ANKER	Aupotek Aupotek Aupo					
Test Power Supply	:	AC 120V, 60Hz for adapter						
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)						
		Operation Frequency:	111-205KHz					
Product		Modulation Type:	MSK					
Description	:	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.

## 1.3. Auxiliary Equipment Used During Test

P	dapter	:	MODEL: ASSA79A-120300	VII.		anbotek	Anbo	p.
<i>y</i> ,			INPUT: 100-240V~ 50/60Hz, 1.2A					,
			OUTPUT: 12.0V=== 3.0A		Anbore	All	Anbotel	0

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Report No.: SZAWW190516003-02 FCC ID: 2AOKB-A2573 Page 5 of 10

#### 1.4. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1 tek	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 (Horiz	contal)	rek anb	otek Anbo	YEN AN
P		Ur = 3.8 dB (Vertic	cal)	otek k	nbotek A	hote.
		ek abotek	Anboten A	nbountek	Anbotek	Anbolo
Conduction Uncertainty	:	Uc = 3.4 dB	Anbote.	Ann	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, 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

Hotline 400–003–0500 www.anbotek.com



Report No.: SZAWW190516003-02 FCC ID: 2AOKB-A2573

## 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 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	1	1	f/300	6						
1500-100,000	1	1	5	6						
	(B) Limits for Genera	l Population/Uncontrolle	ed 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	1	1	f/1500	30						
1500-100,000	/	/	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).



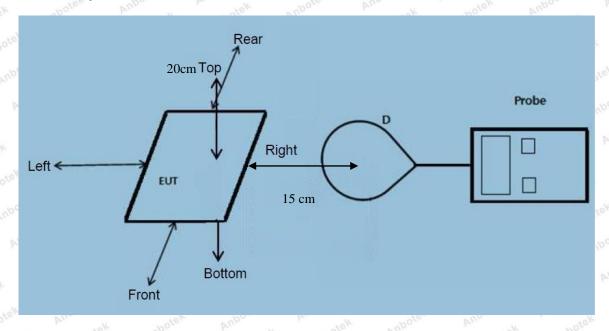
400-003-0500

<sup>=</sup>Plane-wave equivalent power density



Report No.: SZAWW190516003-02 FCC ID: 2AOKB-A2573 Page 7 of 10

#### 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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Report No.: SZAWW190516003-02 FCC ID: 2AOKB-A2573 Page 8 of 10

- 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.



Report No.: SZAWW190516003-02 FCC ID: 2AOKB-A2573 Page 9 of 10

### 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

VUP	191	" Who	by.	AC .	0/6,	100	You	100,0
Battery	Frequency	Test	Test	Test M	Test	Test	Reference	Limits
	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	kek A Ant	B A	Cx	Ant Diek	ÞÉ,	(V/m)	(V/m)
Dien Mu	wotek a	potek	Aupor	Andotek	Anbotek	N Vupos	otek Anbo	cek Ar
1%	111-205	0.36	0.34	0.21	0.43	0.83	307	614
Anbote.	And	Anbotek	Anbor	ek vi	otek M	poter	Anbo otek	Anbotek
Anbote	k And hotek	Anbote	K Aupo	Jek bi.	abotek	Anboten	Anbo	Anbotek
50%	111-205	1.44 Anh	1.26	1.23	1.32	1.25	307	614
otek Aut	Jose Ans	wotek !	inpotek	Anbo	A. botek	Anbore	Y And	ek ka
hbotek	Anbore Ar	hotek	Anbotek	Anbo	k Pri	ek Anb	Ofen K Wupa	otek
99%	111-205	2.23	2.12	2.44	2.36	2.33	307	614
Amabotek	Anbotek	Anbo	K Anbol	ek Anb	oke. An	botek	Anbotek	Anboratek
Ctondito	K Anbotes	VK VUD	otek an	potek P	upor	All	Anboten	Vupo
Stand-b y	111-205	0.32	0.43	0.56	0.45	0.42	307	614
FOK W.	abotek An	pote. P	in hotek	Anbotek	Pupor	o.k	stek Anbot	Sr. Vul



Report No.: SZAWW190516003-02 FCC ID: 2AOKB-A2573 Page 10 of 10

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

1	VC va	010, 01		Non	- 200	Pos.	2/6	"Upon
Pottory	Frequency	Test	Test	Test	Test	Test	Reference	Limits
Battery	Range	Position	Position	Position	Position	Position	Limit noo	Test
power	(KHz)	And A	AnB atel	Cabote	K D Anbo	E Am	(A/m)	(A/m)
Anbore	Anbotek	Anbotok	K Aupo	itek Ant	Ofek P.	loose, b	Anbotek	Aupotek
1%	111-205	0.045	0.053	0.073	0.045	0.052	0.815	1.63
Aupo.	otek vupc	kek Ant	ote. A	notek notek	Anbotek	Anbore	Ali nbotek	Anbo
oten Yu	potek a	botek	Anbore	Annabotek	Anbotek	Anbo	lek vupot	ex PL
50%	111-205	0.23	0.45	0.76	0.34	0.46	0.815	1.63
Anbotek	Anboratek	An.	Anboter	Anbo w	otek Ar	potek Ar	pore An	abotek
Anbotek	k Anbe	Anbote	K Anbo	rek Yun	abotek	Anbotek	Anbor	Anbotek
99%	111-205	0.55	0.51	0.48	0.33	0.33	0.815	1.63
otek Ant	lotek Anbo	stek Air	nbotek	Anboten	Anbabotek	Anbotek	Anboro	K VIII
Ctond b	Anboten Ar	loc stek	Anbotek	Anbote	And	ek Anbo	ek Aupor	rek by
Stand-b	111-205	0.46	0.24	0.38	0.57	0.39	0.815	1.63
Anbotek	Anbotek	Anbors	K All	ek Anbi	ten An	or Kek	nbotek	Anbote.

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