

Report No.: 18220WC00194602 FCC ID: 2ARI5-MJ2-01 Page 1 of 12

# **FCC TEST REPORT**

Client Name : Shenzhen Lingyi Innovation Tech Co., Ltd.

Address 12 F, Block C, Central Avenue Building, Xixiang BLVD

West, Baoan District, Shenzhen China

Product Name : Wireless Power Bank

Date : Jan. 13, 2021

Shenzhen Anbotek Compliance Laboratory Limited

\*Approved\*\*



Report No.: 18220WC00194602 FCC ID: 2ARI5-MJ2-01 Page 2 of 12

# **Contents**

1.	General Information	4
	1.1. Client Information	4
	1.2. Description of Device (EUT)	4
	1.3. Auxiliary Equipment Used During Test	5
	1.4. Test Equipment List	5
	1.5. Measurement Uncertainty	y5
	1.6. Description of Test Facility	6
2.	Measurement and Result	7
	2.1. Requirements	7
	2.2. Test Setup	8
	2.3. Test Procedure	8
	2.4. Test Result	8
	2.4.1. Equipment Approval Considerations item 5.b of KDB 680106 D01 v03	8
	2.4.2. Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.130	7(b)
	1 1310	10



Report No.: 18220WC00194602 FCC ID: 2ARI5-MJ2-01 Page 3 of 12

# TEST REPORT

Applicant : Shenzhen Lingyi Innovation Tech Co., Ltd.

Manufacturer : Shenzhen Lingyi Innovation Tech Co., Ltd.

Product Name : Wireless Power Bank

Model No. : MJ2-01

Trade Mark : SPITAKA

Type-C Input: DC 5V, 1.5A Type-C Output: DC 5V, 1.5A

Rating(s) : Type-O Guput: 500 6

Battery: 3.7V / 2800mAh / 10.36Wh

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	Dec. 24, 2020
Date of Test	Dec. 24, 2020~Jan. 06, 2021
	Tilia Zhong
Prepared By	Anbote, Ann tek spotek Anbo.
Anborek Anborek Anborek Anborek	(Engineer / Yilia Zhong)
	this thang
Reviewer	and the state Andrew
nbote Anbotek Anbotek Anbotek A	(Supervisor / Bibo Zhang)
	King Kong Jin
Approved & Authorized Signer	hotek Jupole atek autore
Anboten Anbotek Anbote	(Manager / Kingkong Jin)

**Shenzhen Anbotek Compliance Laboratory Limited** 

Code: AB-RF-05-a





Report No.: 18220WC00194602 FCC ID: 2ARI5-MJ2-01 Page 4 of 12

## 1. General Information

### 1.1. Client Information

Applicant	: Shenzhen Lingyi Innovation Tech Co., Ltd.
Address	12 F, Block C, Central Avenue Building, Xixiang BLVD West, Baoan District Shenzhen China
Manufacturer	: Shenzhen Lingyi Innovation Tech Co., Ltd.
Address	12 F, Block C, Central Avenue Building, Xixiang BLVD West, Baoan District Shenzhen China
Factory	: Shenzhen Lingyi Innovation Tech Co., Ltd.
Address	12 F, Block C, Central Avenue Building, Xixiang BLVD West, Baoan District Shenzhen China

# 1.2. Description of Device (EUT)

Product Name	:	Wireless Power Bank	k Anbotek Anbotek Anbotek Anbote
Model No.	:	MJ2-01	otek Anborek Anbotek Anboten Ant
Trade Mark	:	<b>♦</b> PITAKA	Inboto Ambotek Anbotek Anbotek
Test Power Supply	:	AC 120V, 60Hz for adapter	r/ DC 3.7V battery inside
Test Sample No.	:	1-2-1(Normal Sample), 1-2	-1(Engineering Sample)
		Operation Frequency:	110.1-205KHz
Product		Modulation Type:	QI Anbotek Anbotek Anbotek
Description		Antenna Type:	Inductive loop coil Antenna
		Antenna Gain(Peak):	0 dBi dorek Anborek Anborek

**Remark:** 1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

Shenzhen Anbotek Compliance Laboratory Limited

Hotline 400-003-0500 www.anbotek.com



Report No.: 18220WC00194602 FCC ID: 2ARI5-MJ2-01 Page 5 of 12

## 1.3. Auxiliary Equipment Used During Test

NI/A	
IN/A : notek Anbor Anbor Anbore Anv	Arra

### 1.4. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
760.	Magnetic field meter	. No.	ELT-400	423623	Dec. 24, 2018	3/0.
2	E-Field Probe	Narda	EF0391	Q15221	Nov.17. 2020	3 Year
3.00	H-Field Probe	Narda	HF3061	Q15835	Nov.17, 2020	3 Year

### 1.5. Measurement Uncertainty

Radiation Uncertainty	:	Ur = 3.9 dB (Horizon	tal)	Pur Pur	obotek A	botek
		Ur = 3.8 dB (Vertical)	lotek b	upo, tek	aborek	Aupoten
		And botek	Anborek	Anbo. otek	Anbotek	Anbore
Conduction Uncertainty	:	Uc = 3.4 dB	Anbotek	Anbo	Napotek	Anboy



Report No.: 18220WC00194602 Page 6 of 12 FCC ID: 2ARI5-MJ2-01

### 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

www.anbotek.com



Report No.: 18220WC00194602 FCC ID: 2ARI5-MJ2-01 Page 7 of 12

### 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
- 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)

D0.	PS. 40	Y	D'A.	181 - Vb.
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	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	•
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	I	I	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).

Shenzhen Anbotek Compliance Laboratory Limited

Code:AB-RF-05-a

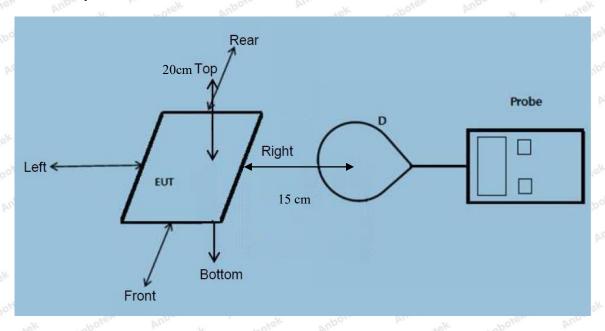
Hotline 400-003-0500 www.anbotek.com

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



Report No.: 18220WC00194602 FCC ID: 2ARI5-MJ2-01 Page 8 of 12

#### 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 110.1~205KHz
- 2) Output power from each primary coil is less than 15 watts
  - The maximum output power of the primary coil is 5W.

**Shenzhen Anbotek Compliance Laboratory Limited** 

Code:AB-RF-05-a





Report No.: 18220WC00194602 FCC ID: 2ARI5-MJ2-01 Page 9 of 12

- 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 2.4.2

Code: AB-RF-05-a



Report No.: 18220WC00194602 FCC ID: 2ARI5-MJ2-01 Page 10 of 12

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

Temperature:	23.3° 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

75.0	A COLOR		2000	Por.		70	-	
Battery	Frequency	Test	Test	Test	Test	Test	Reference	Limits
Pres.	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	Anbote	B Ambe	С	<sub>mbote</sub> Ď	AupoE **	(V/m)	(V/m)
Aupore	*ek Pupo,	ak Anb	PLEAR VI	potek	Anbotek	Aupor	k spotek	Anb
1%	110.1~205	0.67	0.07	-0.06	0.26	0.57	307	614
	upote Vi	abotek	Aupoten	Anbu	Anbo	ek Aut	ole Min	botek
Anbotek	Anbou	anbotek .	Anbore	Y AUD	otek Ar	potek	rupo, by	anbotek
50%	110.1~205	1.68	1.91	0.76	1.27	1.57	307	614
	Anbore	ek vpc	rek An	poten A	nosek	Anbotek	Auporg	Air.
ak Anbo	lek Aupo	rek hi	botek	Anbores	Vur.	Anbore	Anbo.	SK.
99%	110.1~205	2.58	2.34	2.44	2.47	2.55	307	614
	Anbotek	Auporg	Air	Anbores	-k Anbo	orek p	obotek An	port
And hotek	Anborek	Pupo,	Anbore .	k Aupo	ie. Vu	hotek	Anbotek	Aupo.
Stand-by	110.1~205	0.83	0.14	1.08	0.82	0.21	307	614
	ek Anbore	k Anbo	*ek bu	abotek	Aupolen	Anbe	Anbotek	Anbo

400-003-0500 www.anbotek.com

Code: AB-RF-05-a



Report No.: 18220WC00194602 FCC ID: 2ARI5-MJ2-01 Page 11 of 12

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

							- 61	
Battery	Frequency	Test	Test	Test	Test	Test	Reference	Limits
200.	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	Α	otek B	No te C	Aupa D'ek	Entek	(A/m)	(A/m)
tek Ant	otek Anbe	-tek	nbotek	Anboren	Ano hotel	Anbote	Aupon	iek "
1%	110.1~205	0.15	0.68	0.66	0.41	0.29	0.815	1.63
hotek	Anbotek	Aupo, stek	Arnbotek	Anborr	ok Anti	notek A	upotek Ar	po,
Am	Anbotek	Aupo	r napo	lek Aut	or A	botek	Anborek	Anbo. otel
50%	110.1~205	0.04	0.56	0.46	0.49	0.27	0.815	1.63
-K PUL	otek Anboi	ek Anb	o. K	anbotek	Anbore.	And	Anbotek	Anbi
V. Bur	hotek Ar	potek p	upo.	Anbotek.	Anbore	ok Pur	rek Anbot	ek b
99%	110.1~205	0.45	0.81	0.50	0.18	0.32	0.815	1.63
Anboten	Anoshok	Anbotek	Anbor	ek up	stek Ar	poter A	botek	Anbotek
Aupolen	Ann	Anbotel	Vupo.	-tek	obotek	Anbore	Ann	Anborek
Stand-by	110.1~205	0.52	0.71	0.35	0.77	0.44	0.815	1.63
ek Anbo	Ano	stek .	obotek	Aupo,	Pr. Potek	Anboten	Anu	. V



Report No.: 18220WC00194602 FCC ID: 2ARI5-MJ2-01 Page 12 of 12

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

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

# **APPENDIX II -- EXTERNAL PHOTOGRAPH**

Please refer to separated files for External Photos of the EUT.

# **APPENDIX III -- INTERNAL PHOTOGRAPH**

Please refer to separated files for Internal Photos of the EUT.

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