# FCC TEST REPORT

For

#### SUNVALLEYTEK INTERNATIONAL, INC.

### WTRELESS CHARGER CAR MOUNT

Model No.: ONA19WI702

Prepared For : SUNVALLEYTEK INTERNATIONAL, INC.

Address : 46724 Lakeview Blvd, Fremont, California, United States 94538-6529

Prepared By : Shenzhen Anbotek Compliance Laboratory Limited

Address : 1/F, Building D, Sogood Science and Technology Park, Sanwei

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Report Number : SZAWW181128004-01

Date of Receipt : Nov. 28, 2018

Date of Test : Nov. 28~Dec. 07, 2018

Date of Report : Dec. 10, 2018



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# **TEST REPORT**

Applicant : SUNVALLEYTEK INTERNATIONAL, INC.

Manufacturer : Shenzhen NearbyExpress Technology Development Company Limited

Product Name : WTRELESS CHARGER CAR MOUNT

Model No. : ONA19WI702

Trade Mark : RAVPOWER

Rating(s) : Input: 5V == 2A

Output: 5W

Test Standard(s) : FCC Part15 Subpart C 2018, Paragraph 15.209

**Test Method(s)** : **ANSI C63.10: 2013** 

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 15 Subpart C 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	Nov. 28~Dec. 07, 2018
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ek Anbotek Anbote Anb	(Supervisor / Snowy Meng)
	Anbotek Anbotek Anbotek Anbotek
	Sally Zhong
Anbotek Anbotek Anbo	The stek waster to the world
Approved & Authorized Signer	thotek Anbo A week subote Anb
	(Manager / Sally Zhang)

## 1. General Information

## 1.1. Client Information

Applicant	:	SUNVALLEYTEK INTERNATIONAL, INC.
Address	:	46724 Lakeview Blvd, Fremont, California, United States 94538-6529
Manufacturer	:	Shenzhen NearbyExpress Technology Development Company Limited
Address	:	333 Bulong Road, Jialianda Industrial Park, Building 1, Bantian, Longgang District, Shenzhen, China
Factory	:	Shenzhen NearbyExpress Technology Development Company Limited
Address	:	333 Bulong Road, Jialianda Industrial Park, Building 1, Bantian, Longgang
		District, Shenzhen, China

### 1.2. Description of Device (EUT)

Yes	Product Name	:	WTRELESS CHARGER CAR MOUNT
5	Model No.	:	ONA19WI702
X	Trade Mark	:	RAVPOWER
	Test Power Supply	:	AC 240V, 60Hz for adapter/ AC 120V, 60Hz for adapter
V	Test Sample No.	•	S1(Normal Sample), S2(Engineering Sample)
0			Operation Frequency: 111~205KHz
Š	Product		Modulation Type: MSK
Description		Antenna Type: Inductive loop coil Antenna	
6			Antenna Gain(Peak): 0 dBi
1.	8,0		

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

	Adapter	:	M/N: ETA-U90CBC
3			S/N: RT6FB17ZS/B-E
			Input: 100-240V~ 50-60Hz, 0.35A
a)			Output: DC 5V, 2A
	Mobile Phone	:	iPhone

#### 1.4. Description of Test Modes

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

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.

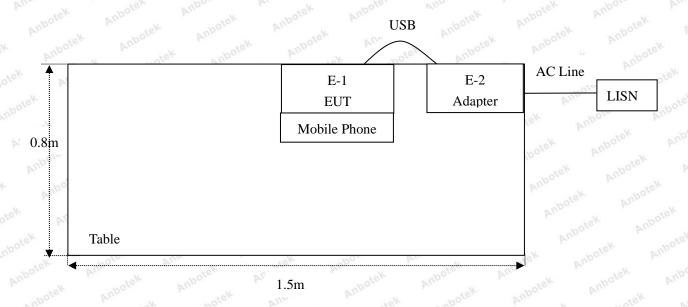
) (	Pretest Mode			Description		
Aupo	Mode 1	upote, Yun	Ke Ke	eeping TX mode	rek VI	botek

	For Conducted Emission
Final Test Mode	Description
Mode 1	Keeping TX mode

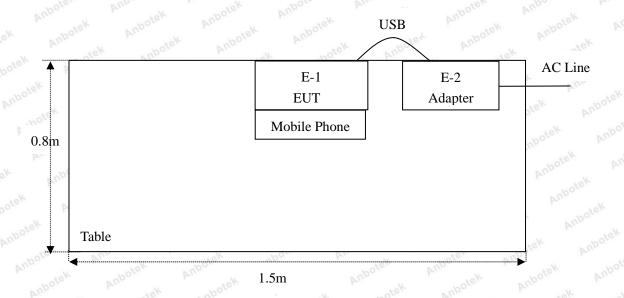
	For Radiated Emission
Final Test Mode	Description
Mode 1	Keeping TX mode

#### 1.5. Description Of Test Setup

CE



RE





## 1.6. Test Equipment List

ber	K Lote.	VUR	10 No.	Dir.	Ter	2000
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
otek 1. nbotek	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	Nov. 05, 2018	1 Year
2.00	EMI Test Receiver	Rohde & Schwarz	ESPI3	101604	Nov. 05, 2018	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Nov. 05, 2018	1 Year
4.	Spectrum Analysis	Agilent	E4407B	US39390582	Nov. 05, 2018	1 Year
10 <sup>K</sup> 5.	MAX Spectrum Analysis	Agilent	N9020A	MY51170037	Nov. 05, 2018	1 Year
6.	Preamplifier	SKET Electronic	BK1G18G30D	KD17503	Nov. 05, 2018	1 Year
Anbox 7.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Nov. 20, 2018	1 Year
8.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Nov. 19, 2018	1 Year
9.	Loop Antenna	Schwarzbeck	FMZB1519B	00053	Nov. 20, 2018	1 Year
10.	Horn Antenna	A-INFO	LB-180400-K F	J211060628	Nov. 20, 2018	1 Year
11.	Pre-amplifier	SONOMA	310N	186860	Nov. 05, 2018	1 Year
12.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A
13.	RF Test Control System	YIHENG	YH3000	2017430	Nov. 05, 2018	1 Year
14.	Power Sensor	DAER	RPR3006W	15I00041SN045	Nov. 05, 2018	1 Year
15.	Power Sensor	DAER	RPR3006W	15I00041SN046	Nov. 05, 2018	1 Year
16.	MXA Spectrum Analysis	Agilent	N9020A	MY51170037	Nov. 05, 2018	1 Year
17.	MXG RF Vector Signal Generator	Agilent	N5182A	MY48180656	Nov. 05, 2018	1 Year
18.	Signal Generator	Agilent	E4421B	MY41000743	Nov. 05, 2018	1 Year
19.	DC Power Supply	IVYTECH	IV3605	1804D360510	Apr. 02, 2018	1 Year
20.	Constant Temperature Humidity Chamber	ZHONGJIAN	ZJ-KHWS80B	N/A	Nov. 01, 2018	1 Year

#### 1.7. 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. Summary of Test Results

Standard Section	Test Item	Result	
FCC Part 15, Paragraph 15.207	Conducted Emission Test	PASS	
FCC Part 15, Paragraph 15.209(a)(f)	Spurious Emission	PASS	
Part 15.203	Antenna Requirement	PASS	



## 3. Conducted Emission Test

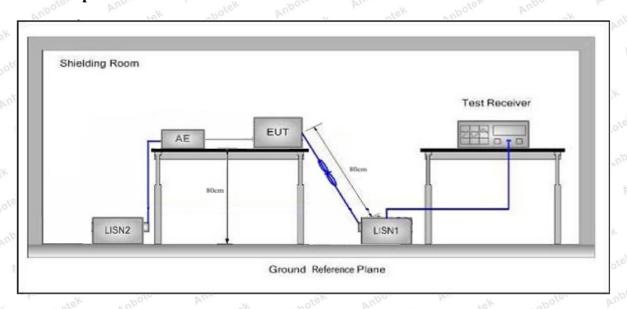
#### 3.1. Test Standard and Limit

Test Standard	FCC Part15 Section 15.20	07 Anbote Ame	Anbotek Anbo tek			
	E	Maximum RF Line Voltage (dBuV)				
h	Frequency	Quasi-peak Level	Average Level			
Test Limit	150kHz~500kHz	66 ~ 56 *	56 ~ 46 *			
<del>\</del>	500kHz~5MHz	56	46			
	5MHz~30MHz	60	50			

**Remark:** (1) \*Decreasing linearly with logarithm of the frequency.

(2) The lower limit shall apply at the transition frequency.

### 3.2. Test Setup



#### 3.3. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.10-2013 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

#### 3.4. Test Data

Please to see the following pages

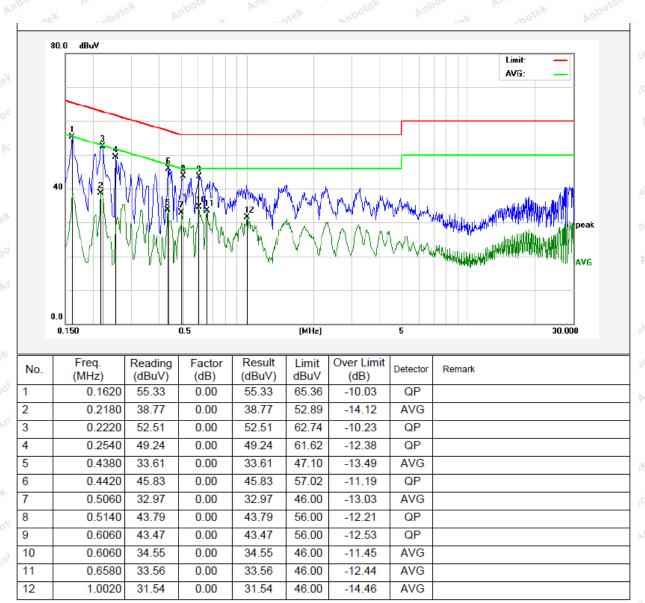


Test Site: 1# Shielded Room
Operating Condition: Keeping TX mode

Test Specification: AC 240V, 60Hz for adapter

Comment: Live Line

Tem.: 24.1℃ Hum.: 52%



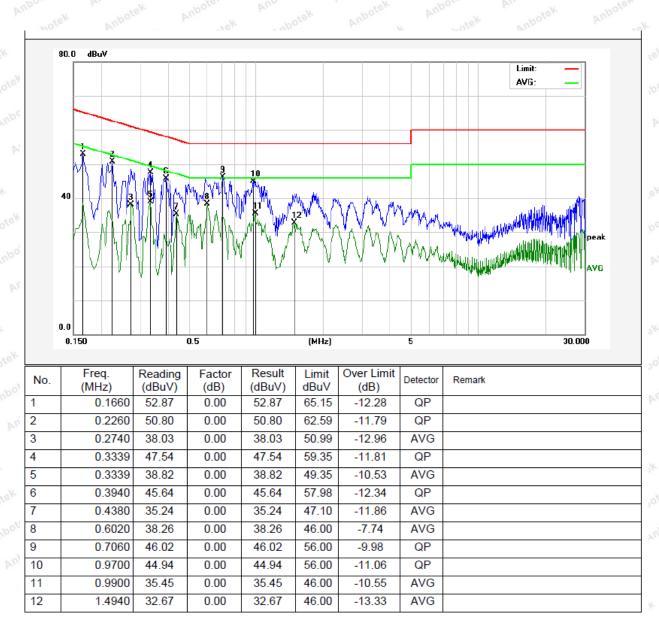


Test Site: 1# Shielded Room
Operating Condition: Keeping TX mode

Test Specification: AC 240V, 60Hz for adapter

Comment: Neutral Line

Tem.: 24.1℃ Hum.: 52%



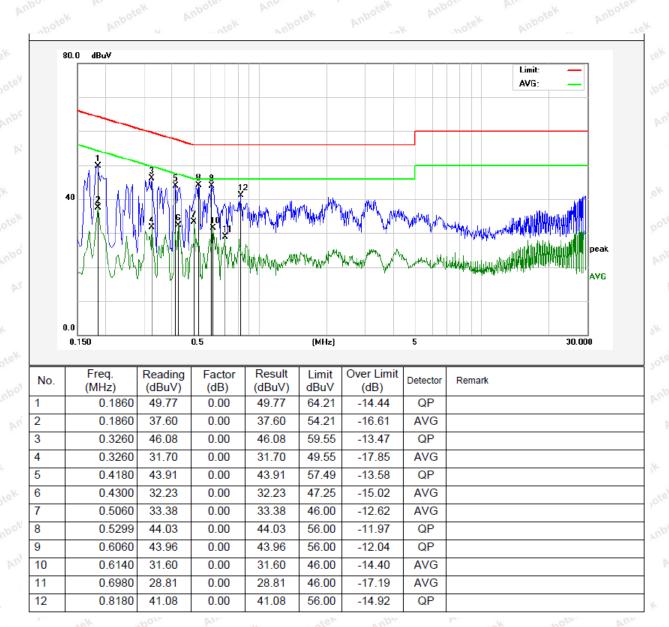


Test Site: 1# Shielded Room
Operating Condition: Keeping TX mode

Test Specification: AC 120V, 60Hz for adapter

Comment: Live Line

Tem.: 24.1℃ Hum.: 52%



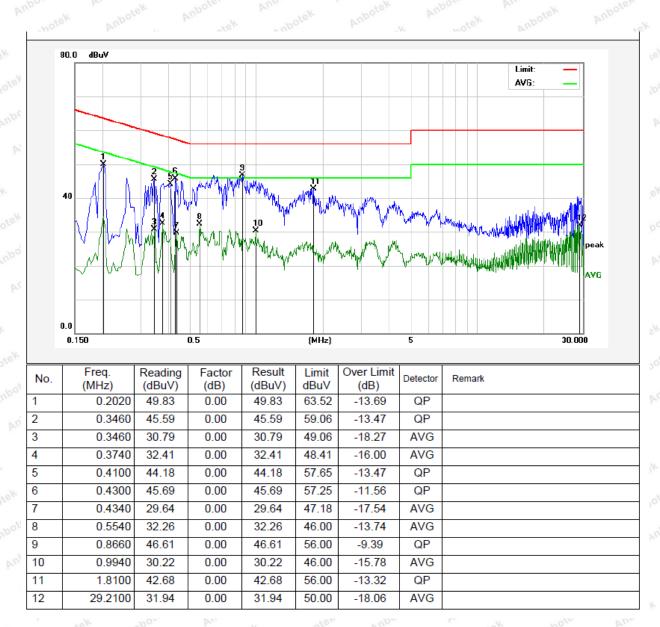


Test Site: 1# Shielded Room
Operating Condition: Keeping TX mode

Test Specification: AC 120V, 60Hz for adapter

Comment: Neutral Line

Tem.: 24.1 °C Hum.: 52%





## 4. Radiation Spurious Emission and Band Edge

### 4.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.20	99 and 15.205			
	Frequency (MHz)	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz~0.490MHz	2400/F(kHz)	tek Anbor	ek abote	300
	0.490MHz-1.705MHz	24000/F(kHz)	nbotek Anbo	rek wh	30
	1.705MHz-30MHz	30	Anbotek A	loos ki	notek 30 Anbi
Test Limit	30MHz~88MHz	100	40.0	Quasi-peak	Anbote3 A
	88MHz~216MHz	150	43.5	Quasi-peak	3.01
	216MHz~960MHz	200	46.0	Quasi-peak	3,000
	960MHz~1000MHz	500	54.0	Quasi-peak	tek 3 Anboten
	1000 41	500	54.0	Average	botek 3 Anbo
	Above 1000MHz	Ann hotek	74.0	Peak	3

#### Remark:

- (1)The lower limit shall apply at the transition frequency.
- (2) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

#### 4.2. Test Setup

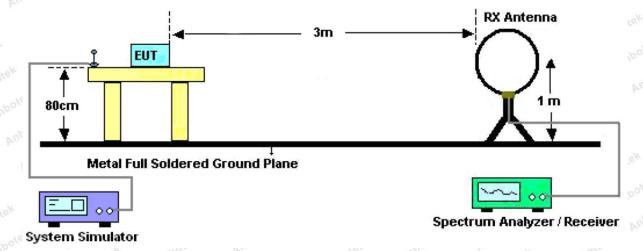


Figure 1. Below 30MHz

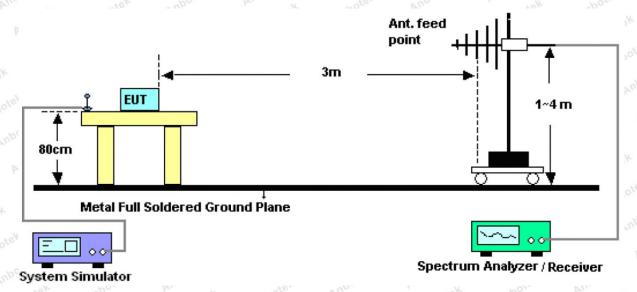


Figure 2. 30MHz to 1GHz

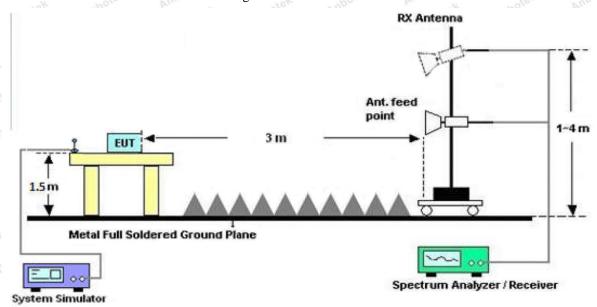


Figure 3. Above 1 GHz

#### 4.3. Test Procedure

For below 1GHz: The EUT is placed on a turntable, which is 0.8m above the ground plane.

For above 1GHz: The EUT is placed on a turntable, which is 1.5m above the ground plane.

The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Rotated the EUT through three orthogonal axes to determine the maximum emissions, both horizontal and vertical polarization of the antenna are set on test. The EUT is tested in 9\*6\*6 Chamber. The device is evaluated in xyz orientation.

For 9kHz to 150kHz, Set the spectrum analyzer as:

RBW = 200Hz, VBW = 1kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 150kHz to 30MHz, Set the spectrum analyzer as:

RBW = 9KHz, VBW = 30kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 30MHz to 1000MHz, Set the spectrum analyzer as:

RBW = 100kHz, VBW =300kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

4.4. Test Data

**PASS** 



#### **Test Results**

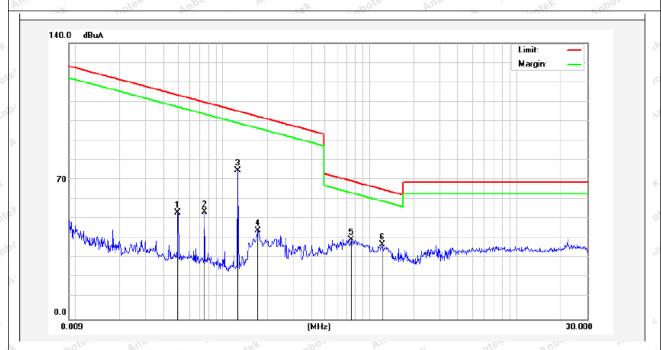
(Between 9KHz - 30MHz)

Job No.: SZAWW181128004-01

Standard: FCC PART15 C \_3m Power Source: AC 120V, 60Hz for adapter

Test item: Radiation Test Temp.(C)/Hum.(%RH): 24.1 °C/52 %RH

Test Mode: Mode 1 Distance: 3m



										20
o	Frequency (MHz)	Read Level (dBuV)	Antenna Factor	Cable Loss (dB)	Preamp Factor	Level (dBuV/m)	Limit (dBuV/m)	Over Limit	Detector	degree
	(MHZ)	(dbuv)	(dB/m)	(Ш)	(dB)	(dbuv/m)	(dbuv/iii)	(dB)		(dge)
N	0.0497	52.06	19.30	2.53	0	73.89	133.57	-59.68	Peak	100
	0.0497	32.14	19.30	2.53	0	53.97	113.57	-59.60	AV	100
	0.0756	45.95	19.35	2.55	0	67.85	129.94	-62.09	Peak	250
	0.0756	32.42	19.35	2.55	0	54.32	109.94	-55.62	AV	250
4	0.1270	63.05	20.01	2.60	0	85.66	125.46	-39.80	Peak	110
	0.1270	52.77	20.01	2.60	0	75.38	105.46	-30.08	AV	110
10	0.1737	42.27	20.01	2.61	0	64.89	122.76	-57.87	Peak	15
0.	0.1737	22.35	20.01	2.61	0	44.97	102.76	-57.79	AV	15
	0.7459	16.78	21.03	2.72	0	40.53	70.15	-29.62	QP	90
0	1.2137	14.07	21.06	2.74	0	37.87	65.92	-28.05	QP	90
Ι.	3-65	~~			- AV	IV.V.		10	U V	

**Remark:** According to FCC PART 15.209 (d), the emission limits for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz, Radiated emission limits in these three bands are based on measurements employing an average detector.

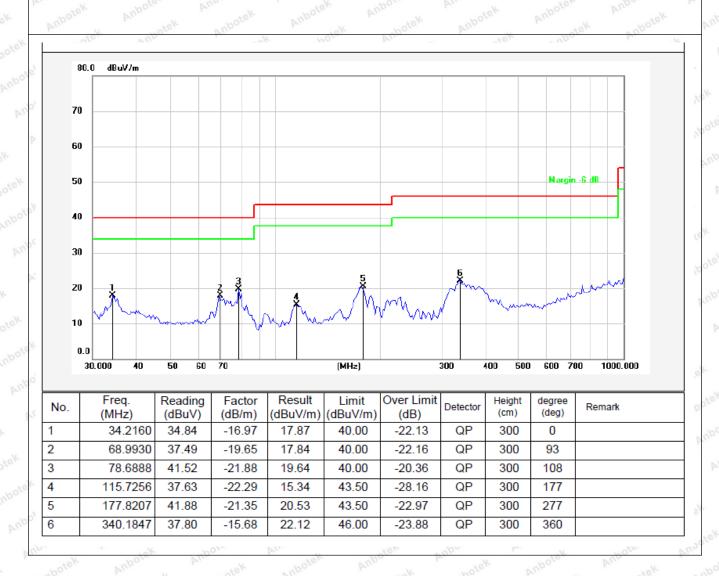


(Between 30MHz -1000 MHz)

Job No.: SZAWW181128004-01 Polarization: Horizontal

Standard: FCC PART15 C \_3m Power Source: AC 120V, 60Hz for adapter

Test item: Radiation Test Temp.(C)/Hum.(%RH): 23.2°C/65%RH

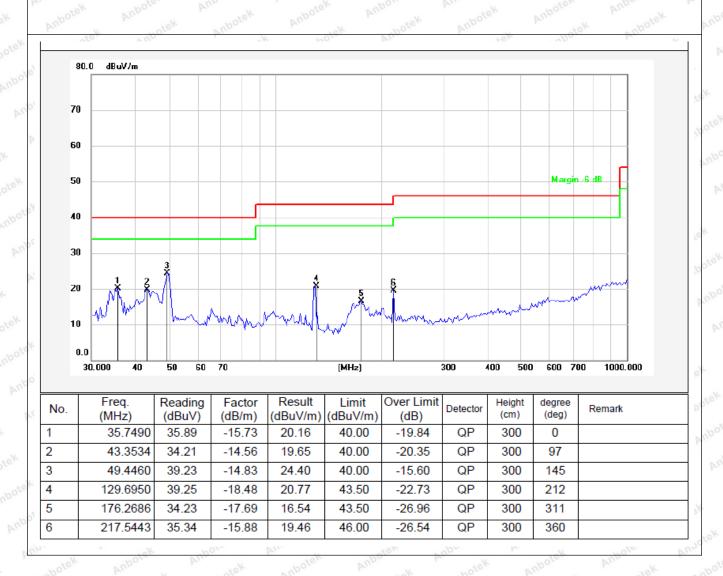




Job No.: SZAWW181128004-01 Polarization: Vertical

Standard: FCC PART15 C \_3m Power Source: AC 120V, 60Hz for adapter

Test item: Radiation Test Temp.(C)/Hum.(%RH): 23.2°C/65%RH

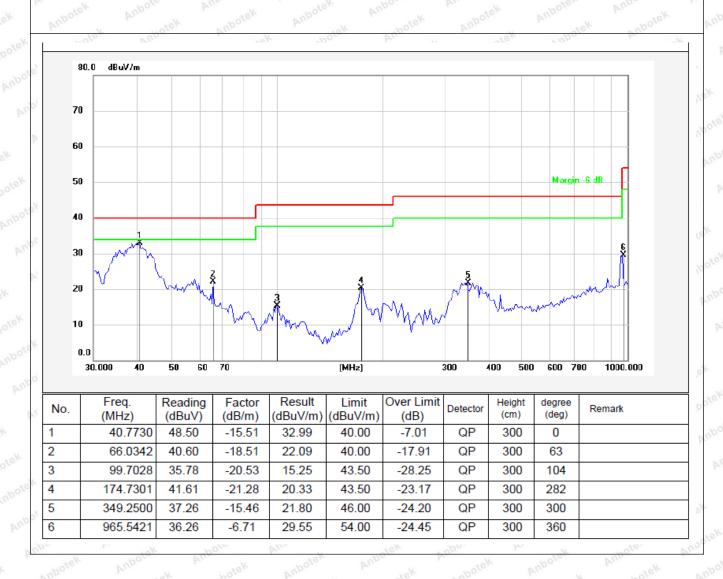




Job No.: SZAWW181128004-01 Polarization: Horizontal

Standard: FCC PART15 C \_3m Power Source: AC 240V, 60Hz for adapter

Test item: Radiation Test Temp.(C)/Hum.(%RH): 23.2 °C/65%RH

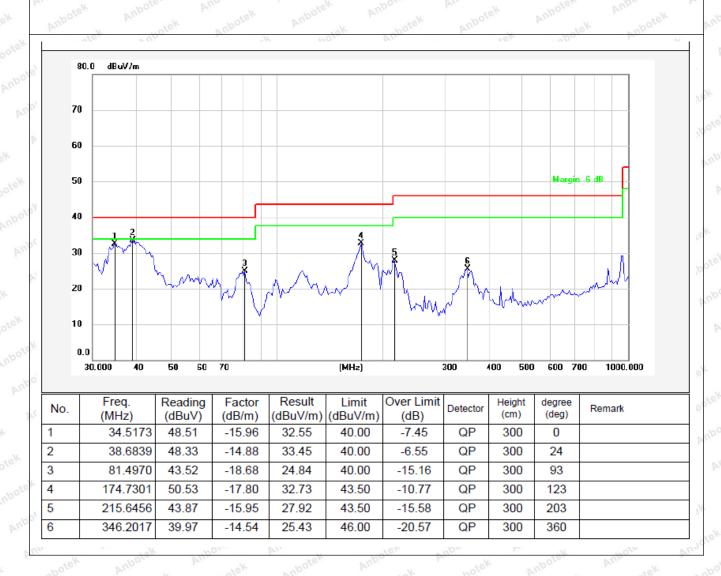




Job No.: SZAWW181128004-01 Polarization: Vertical

Standard: FCC PART15 C \_3m Power Source: AC 240V, 60Hz for adapter

Test item: Radiation Test Temp.(C)/Hum.(%RH): 23.2°C/65%RH





## 5. Antenna Requirement

## **5.1. Test Standard and Requirement**

Test Standard	FCC Part15 Section 15.203
Requirement	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard

#### 5.2. Antenna Connected Construction

The antenna is a Inductive loop coil Antenna which permanently attached, and the best case gain of the antenna is 0 dBi. It complies with the standard requirement.



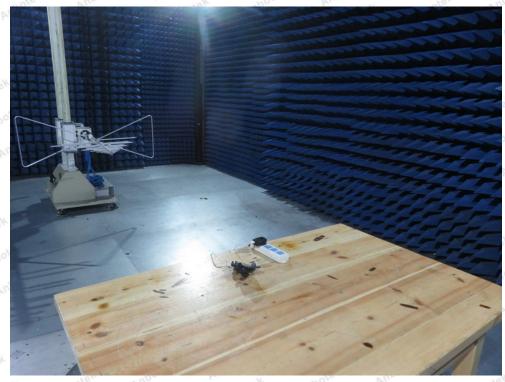


## APPENDIX I -- TEST SETUP PHOTOGRAPH





Photo of Radiation Emission Test







## APPENDIX II -- EXTERNAL PHOTOGRAPH















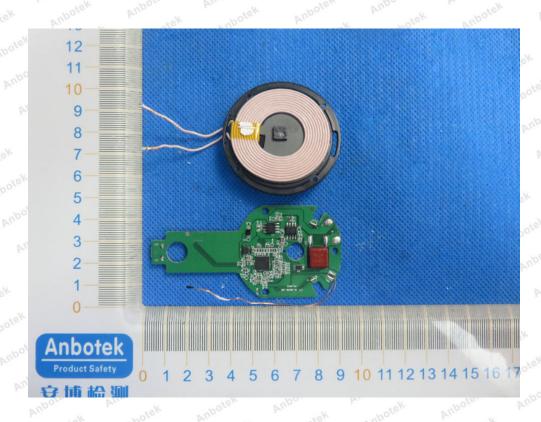


## APPENDIX III -- INTERNAL PHOTOGRAPH

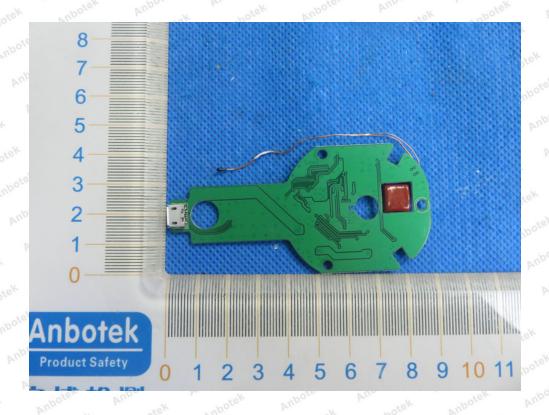


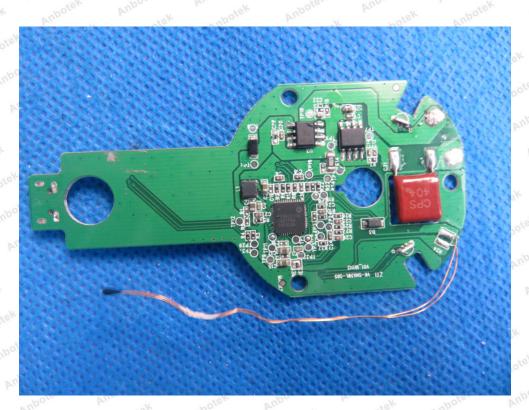




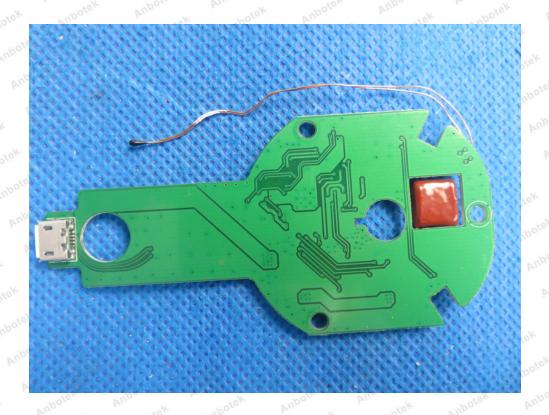


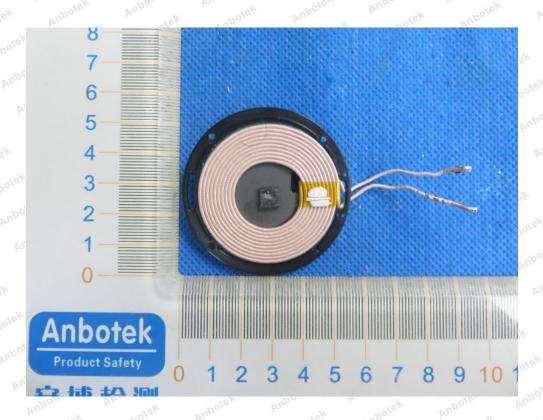












----- End of Report -----