

FCC TEST REPORT

For

Hamedata Technology Co., Limited
Wireless Charging Power Bank
Model No.: P51W

Prepared For : Hamedata Technology Co., Limited

Address : 1st Zone, 3F, Plant#1, Huahan Industrial Park, No.16, Jinniu West Rd.,

Pingshan New District, Shenzhen, China, 518118

Prepared By : Shenzhen Anbotek Compliance Laboratory Limited

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Report Number : SZAWW180711002-01

Date of Receipt : Jul. 10, 2018

Date of Test : Jul. 10~20, 2018

Date of Report : Jul. 20, 2018





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TEST REPORT

Applicant : Hamedata Technology Co., Limited

Manufacturer : Hamedata Technology Co., Limited

Product Name : Wireless Charging Power Bank

Model No. : P51W

Trade Mark : HAME.

Rating(s) : Battery Capacity: 10000mAh/ 3.7V, 37Wh

Rated Capacity: 6800mAh/5V(TYP 1A)

Input: Micro 5V = 2A/9V = 2A Input: Type-C: PD 5V = 3A/9V = 2A Output: Wireless charger: 5V/5W, 9V/10W

Output: Type-C: PD 5V = 3A/9V = 2A/12V = 1.5A Output: QC3.0 5V = 3A/9V = 2A/12V = 1.5A

USB Output2: 5V=3A

Test Standard(s) : FCC Part15 Subpart C 2017, 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	Jul. 10~20, 2018
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Approved & Authorized Signer	atek photen Anbo k. notel
	(Manager / Tom Chen)

1. General Information

1.1. Client Information

Applicant	:	Hamedata Technology Co., Limited
Address	:	1st Zone, 3F, Plant#1, Huahan Industrial Park, No.16, Jinniu West Rd., Pingshan
		New District, Shenzhen, China, 518118
Manufacturer	:	Hamedata Technology Co., Limited
Address	:	1st Zone, 3F, Plant#1, Huahan Industrial Park, No.16, Jinniu West Rd., Pingshan
e e		New District, Shenzhen, China, 518118

1.2. Description of Device (EUT)

Product Name	•	Wireless Charging Power Bank	hotek Anbotek Anbot An abotek
Model No.	:	P51W	Anbotek Anbotek Anbotek anbotel
Trade Mark	:	HAME!	Anbotek Anbotek Anbotek Anbotek Anb
Test Power Supply	:	AC 120V, 60Hz for adapter / AC	240V, 60Hz for adapter/ DC 3.7V battery inside
Test Sample No.	:	S1, S2	otek Anbotek Anbotek
		Operation Frequency:	120-205KHz
4		Number of Channel:	18 Channels
Product Description	:	Modulation Type:	MSK
		Antenna Type:	Loop Antenna
		Antenna Gain(Peak):	O dBi Anhouse Ambotek Anhotek

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	:	Model: A2013	otek.
		Input: 100-240V 50-60Hz 0.7A Output: 3.6-6.5V== 3A/ 6.5-9V== 2A/ 9-12V== 1.5A	notek .
Anbore And	,eK	Output. 5.0-0.5 v 5A/ 6.3-9 v 2A/ 9-12 v 1.3A	Andabotek
Mobile Phone	:	Samsung	Anbote

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.

pš	Pretest Mode	Description
D.	Mode 1	cH01 Anbotek Anbotek Anbotek Anbotek
	Mode 2	CH09
	Mode 3	CH18 Anbotek Anbotek Anbotek
N _S	Mode 4	Keeping TX+Charging mode

	For Conducted Emission	
Final Test Mode	Description	
Mode 4	Keeping TX+Charging mode	ŀ

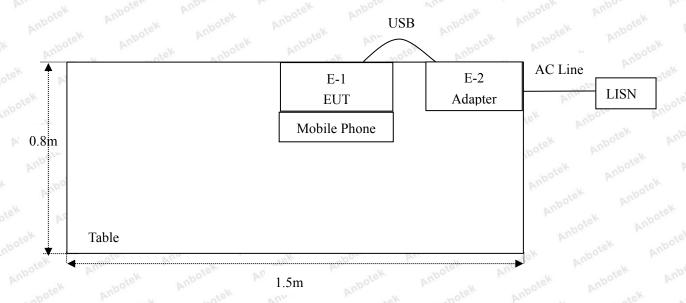
	For Radiated Emission
Final Test Mode	Description
Mode 1	CH01 And
Mode 2	botek And CH09 Andout And Botek
Mode 3	Anbore CH18 Anborek
Mode 4	Keeping TX+Charging mode

1.5. List of channels

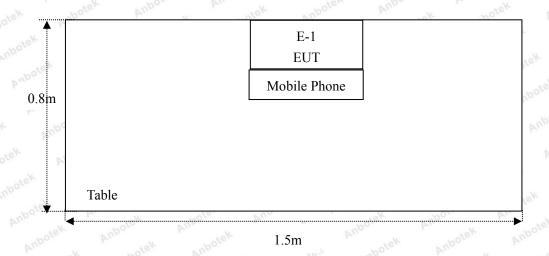
Champal	Freq.	Champal	Freq.	Cl 1	Freq.	Channal	Freq.	
Channel	(MHz)	Channel	(MHz)	Channel	(MHz)	Channel	(MHz)	
Anbore	0.120	Let 6	0.145	11	0.170	16	0.195	
e ^K 2 Anbo	0.125	nek7	0.150	Anbo 12	0.175	170	0.200	
otek 3	0.130	8	0.155	13	0.180	18,000	0.205	
4	0.135	Anboy	0.160	14	0.185	tek at	lotek An	
Ambs 5	0.140	10	0.165	ek 15 anbo	0.190	rak k	abotek	

1.6. Description Of Test Setup

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1.7. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
o ^{tek} 1.	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	Nov. 17, 2017	1 Year
2.00	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Nov. 17, 2017	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Nov. 17, 2017	1 Year
4.	Spectrum Analysis	Agilent	E4407B	US39390582	Nov. 17, 2017	1 Year
5.	Spectrum Analysis	Agilent	N9038A	MY53227295	Nov. 17, 2017	1 Year
6.	Preamplifier	SKET Electronic	BK1G18G30D	KD17503	Nov. 17, 2017	1 Year
17.00	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Nov. 17, 2017	1 Year
8.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Nov. 20, 2017	1 Year
9.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Nov. 20, 2017	1 Year
10.	Loop Antenna	Schwarzbeck	HFH2-Z2	100047	Nov. 17, 2017	1 Year
MI.	Horn Antenna	Schewarzbeck	BBHA9170	9170-375	Nov. 17, 2017	1 Year
12.	Pre-amplifier	SONOMA	310N	186860	Nov. 17, 2017	1 Year
13.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A
14.	RF Test Control System	YIHENG	YH3000	2017430	Nov. 18, 2017	1 Year
15.	Power Sensor	DAER	RPR3006W	15I00041SN045	Nov. 17, 2017	1 Year
16.	Power Sensor	DAER	RPR3006W	15I00041SN046	Nov. 17, 2017	1 Year
17.	MXA Spectrum Analysis	Agilent	N9020A	MY51170037	Nov. 18, 2017	1 Year
18.	MXG RF Vector Signal Generator	Agilent	N5182A	MY48180656	Nov. 18, 2017	1 Year
19.	Signal Generator	Agilent	E4421B	MY41000743	Nov. 18, 2017	1 Year
20.	DC Power Supply	Ambote LW Ambos	TPR-6410D	349315	Nov. 01, 2017	1 Year
21.	Constant Temperature Humidity Chamber	Sertep	ZJ-HWHS80B	ZJ-17042804	Nov. 01, 2017	1 Year

1.8. Measurement Uncertainty

Radiation Uncertainty	:	Ur = 3.9 dB (Horizontal)	0
		Ur = 3.8 dB (Vertical)	
		Anbotek Anbote Am Hotek Anbotek Anbo	P
Conduction Uncertainty	:	Uc = 3.4 dB	

1.9. 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

All Emissions tests were performed at Shenzhen Anbotek Compliance Laboratory Limited. at 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



3. Conducted Emission Test

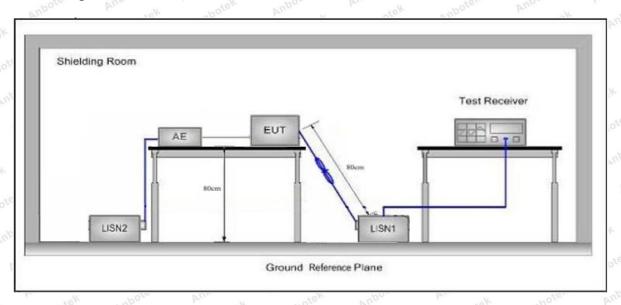
3.1. Test Standard and Limit

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

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

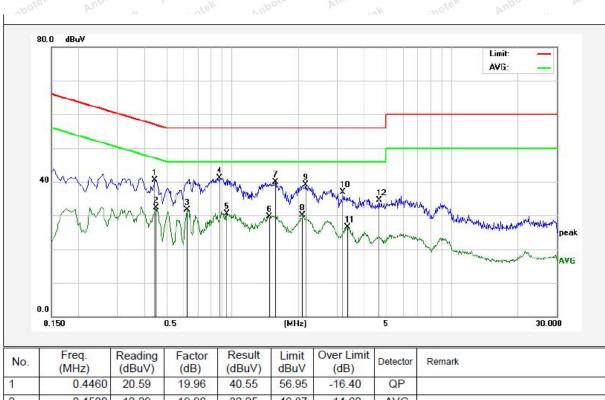
Please to see the following pages

Test Site: 1# Shielded Room

Operating Condition: Keeping TX+Charging mode
Test Specification: AC 240V, 60Hz for adapter

Comment: Live Line

Tem.: 22.2°C Hum.: 60%



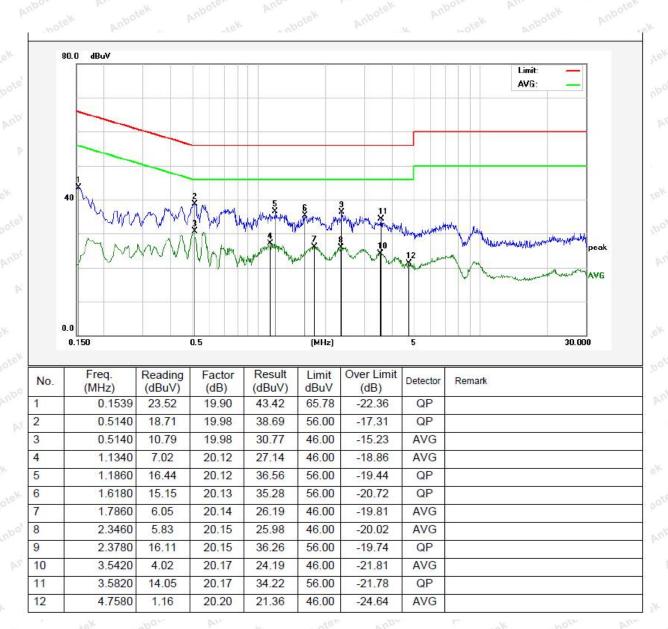
No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.4460	20.59	19.96	40.55	56.95	-16.40	QP	
2	0.4500	12.29	19.96	32.25	46.87	-14.62	AVG	
3	0.6220	11.59	20.02	31.61	46.00	-14.39	AVG	
4	0.8780	21.06	20.09	41.15	56.00	-14.85	QP	
5	0.9460	10.46	20.11	30.57	46.00	-15.43	AVG	
6	1.4660	9.67	20.13	29.80	46.00	-16.20	AVG	
7	1.5700	19.74	20.13	39.87	56.00	-16.13	QP	
8	2.0980	9.90	20.14	30.04	46.00	-15.96	AVG	
9	2.1660	18.95	20.14	39.09	56.00	-16.91	QP	
10	3.2060	16.65	20.16	36.81	56.00	-19.19	QP	
11	3.3460	6.31	20.17	26.48	46.00	-19.52	AVG	
12	4.6860	14.35	20.20	34.55	56.00	-21.45	QP	

Test Site: 1# Shielded Room

Operating Condition: Keeping TX+Charging mode
Test Specification: AC 240V, 60Hz for adapter

Comment: Neutral Line

Tem.: 22.2°C Hum.: 60%

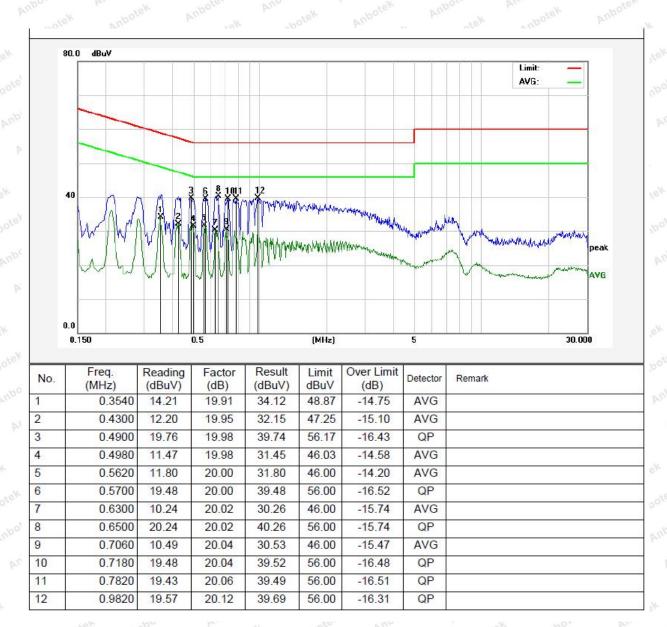


Test Site: 1# Shielded Room

Operating Condition: Keeping TX+Charging mode
Test Specification: AC 120V, 60Hz for adapter

Comment: Live Line

Tem.: 22.2℃ Hum.: 60%



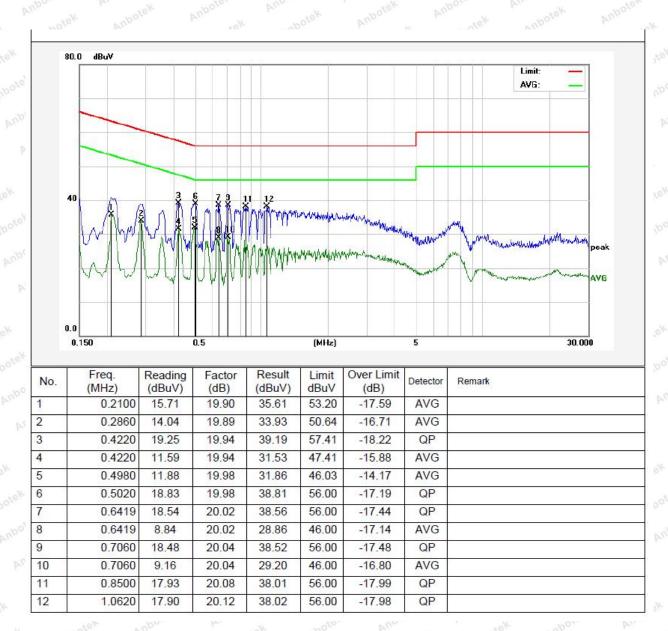
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Test Site: 1# Shielded Room

Operating Condition: Keeping TX+Charging mode
Test Specification: AC 120V, 60Hz for adapter

Comment: Neutral Line

Tem.: 22.2℃ Hum.: 60%



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 Ali	300		
	0.490MHz-1.705MHz	24000/F(kHz)	nbotek Anbo	rek vo	30 1000		
Test Limit	1.705MHz-30MHz	30	Aupotek A	lpo. Vek	about 30 Andre		
	30MHz~88MHz	100	40.0	Quasi-peak	Anbote3 A		
	88MHz~216MHz	150	43.5	Quasi-peak	Anb 3 ^{tek}		
	216MHz~960MHz	200	46.0	Quasi-peak	3 botek		
	960MHz~1000MHz	500	54.0	Quasi-peak	tek 3 Anboten		
	41 1000MH	500	54.0	Average	botek 3 Anbo		
	Above 1000MHz	Ver Potek	74.0	Peak	nbote 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

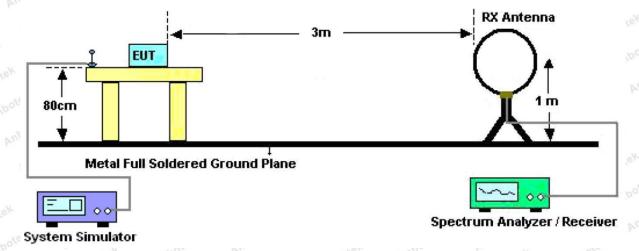


Figure 1. Below 30MHz

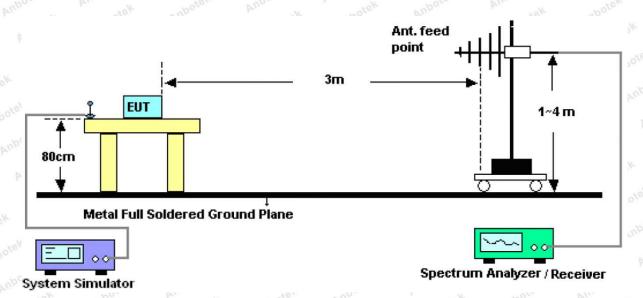


Figure 2. 30MHz to 1GHz

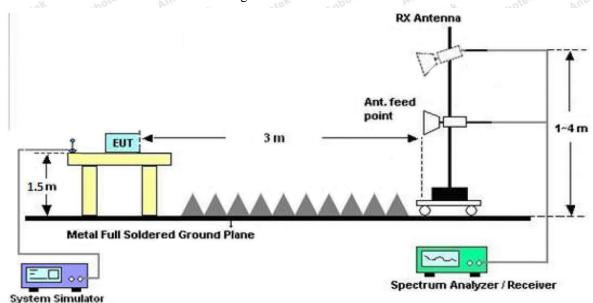


Figure 3. Above 1 GHz

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

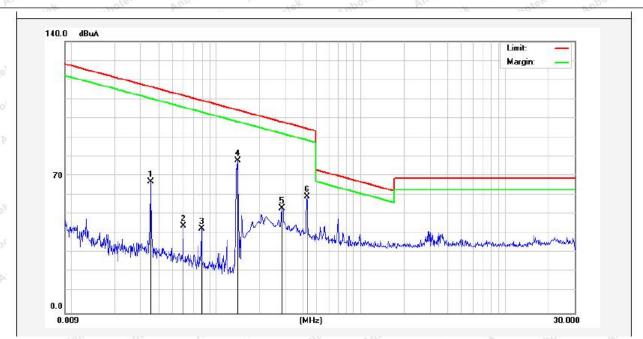
(Between 9KHz - 30MHz)

Job No.: SZAWW180711002-01

Standard: FCC PART15 C 3m Power Source: AC 120V, 60Hz for adapter

Test item: Radiation Test Temp.(C)/Hum.(%RH): 24.4(C)/50%RH

Test Mode: Mode 4 Distance: 3m



Frequency (MHz) Read Leve (dBuV)	Read Level	Factor	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	degree
	(dBuv)								(dge)
0.3530	55.41	19.30	2.53	0	77.24	136.52	-59.28	Peak	143
0.3530	45.75	19.30	2.53	0	67.58	116.52	-48.94	AV	143
0.0593	34.52	19.30	2.53	0	56.35	132.04	-75.69	Peak	28
0.0593	23.30	19.30	2.53	0	45.13	112.04	-66.91	AV	28
0.0793	30.86	19.29	2.54	0	52.69	129.53	-76.84	Peak	65
0.0793	21.61	19.29	2.54	0	43.44	109.53	-66.09	AV	65
0.1409	67.14	19.63	2.59	0	89.36	124.56	-35.20	Peak	224
0.1409	56.25	19.63	2.59	0	78.47	104.56	-26.09	AV	224
0.2860	41.77	19.63	2.59	0	63.99	118.45	-54.46	Peak	316
0.2860	31.86	19.63	2.59	0	54.08	98.45	-44.37	AV	316
0.4260	47.90	19.63	2.59	0	70.12	115.01	-44.89	Peak	236
0.4260	37.88	19.63	2.59	0	60.10	95.01	-34.91	AV	236

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.

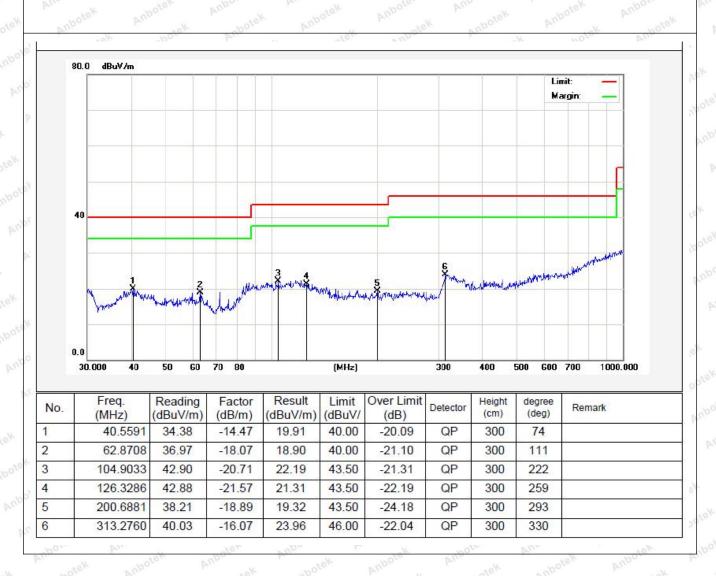
(Between 30MHz –1000 MHz)

Job No.: SZAWW180711002-01 Polarization: Horizontal

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

Test item: Radiation Test Temp.(C)/Hum.(%RH): 24.4(C)/50%RH

Test Mode: Mode 4 Distance: 3m



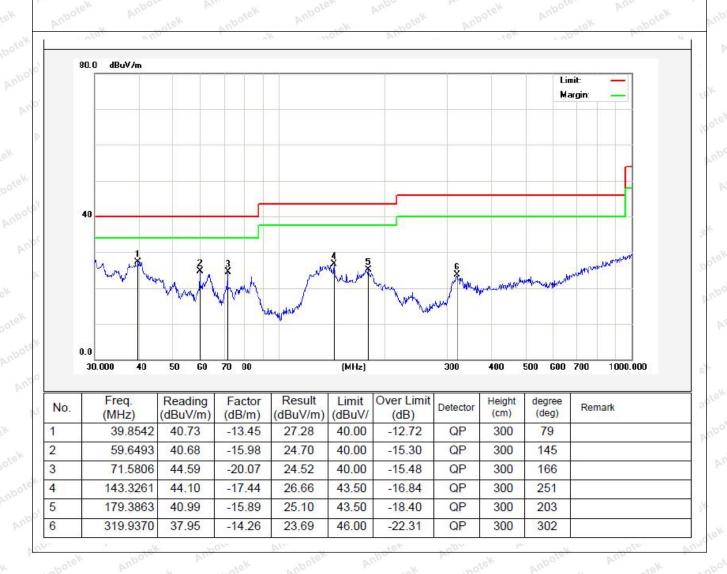


Job No.: SZAWW180711002-01 **Polarization:** Vertical

FCC PART15 C 3m **Power Source:** AC 240V, 60Hz for adapter Standard:

Test item: **Radiation Test** Temp.(C)/Hum.(%RH): 24.4(C)/50%RH

Test Mode: Mode 4 Distance: 3m



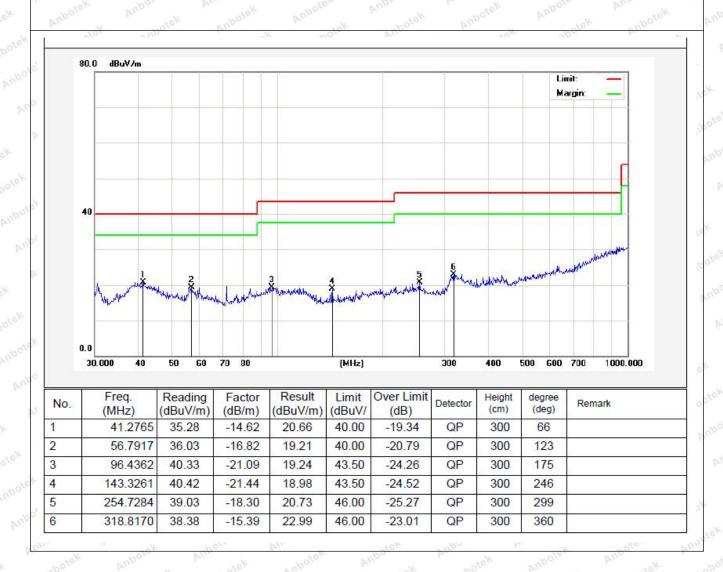


Job No.: SZAWW180711002-01 Polarization: Horizontal

Standard: FCC PART15 C_3m Power Source: AC 120V, 60Hz for adapter

Test item: Radiation Test Temp.(C)/Hum.(%RH): 24.4(C)/50%RH

Test Mode: Mode 4 Distance: 3m



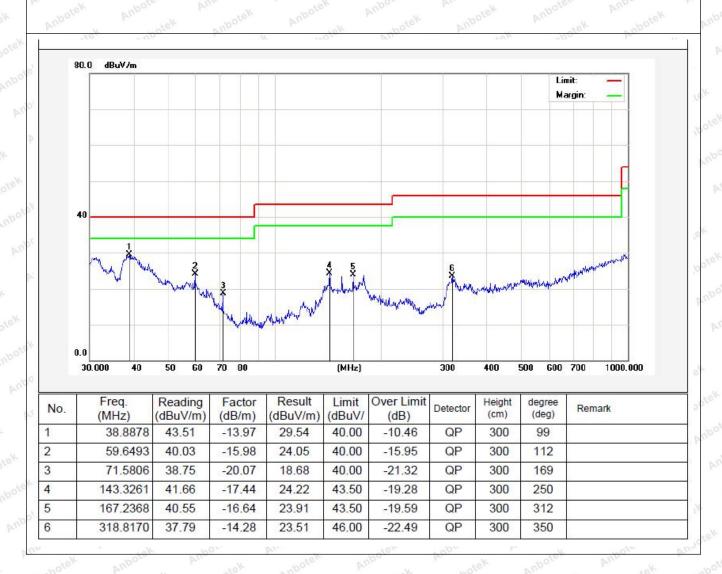


Job No.: SZAWW180711002-01 **Polarization:** Vertical

FCC PART15 C 3m **Power Source:** AC 120V, 60Hz for adapter Standard:

Test item: **Radiation Test** Temp.(C)/Hum.(%RH): 24.4(C)/50%RH

Test Mode: Mode 4 Distance: 3m





APPENDIX I -- TEST SETUP PHOTOGRAPH

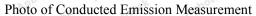
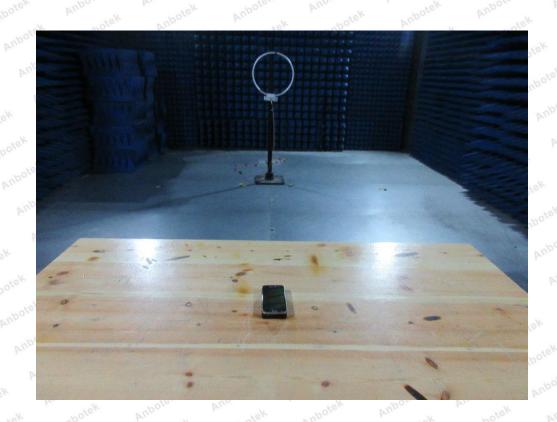




Photo of Radiation Emission Test









APPENDIX II -- EXTERNAL PHOTOGRAPH





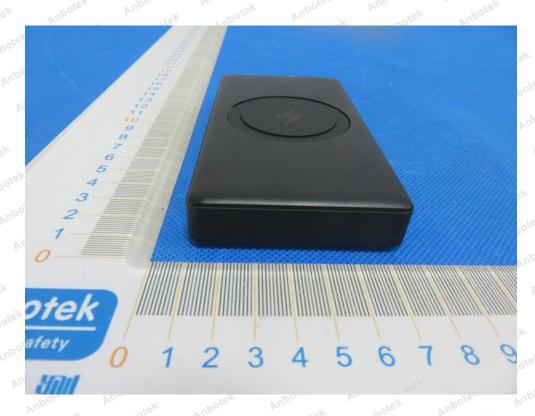












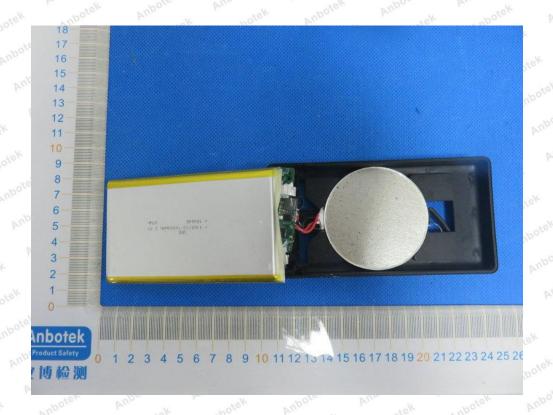


APPENDIX III -- INTERNAL PHOTOGRAPH









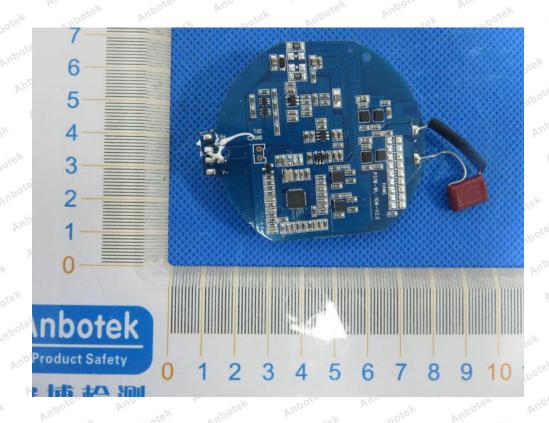












-- End of Report ---