

# FCC TEST REPORT

For

Adam Elements International Co., LTD.

OMNIA Q 10W Wireless Charging Pad with Breathing lights

Model No.: OMNIA Q

Prepared For : Adam Elements International Co., LTD.

Address : Rm. 3, 10F., No.54, Songjiang Rd., Zhongshan Dist., Taipei City 104,

Taiwan

Prepared By : Shenzhen Anbotek Compliance Laboratory Limited

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Report Number : SZAWW181115012-02

Date of Test : Nov. 15, 2018

Date of Test : Nov. 15~Dec. 04, 2018

Date of Report : Dec. 04, 2018



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# **TEST REPORT**

Applicant : Adam Elements International Co., LTD.

Manufacturer : Adam Elements International Co., LTD.

Product Name : OMNIA Q 10W Wireless Charging Pad with Breathing lights

Model No. : OMNIA Q

Trade Mark : N.A.

Rating(s) : Input: DC 5V, 2.1A / 9V, 2A

Output: DC 5V, 1A / 9V, 1.1A

**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.

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N. W.	* Approved *	(Engineer /	Dolly Mo)	
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Reviewer	k abotek Anbor	de Yes	otek Anbotek	Anv
		(Supervisor /	Snowy Meng)	
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		(Ivialiagei / L	sally Zhang)	



# 1. General Information

### 1.1. Client Information

App	licant	:	Adam Elements International Co., LTD.
Add	lress	:	Rm. 3, 10F., No.54, Songjiang Rd., Zhongshan Dist., Taipei City 104, Taiwan
Mar	nufacturer	:	Adam Elements International Co., LTD.
Add	lress	•	Rm. 3, 10F., No.54, Songjiang Rd., Zhongshan Dist., Taipei City 104, Taiwan
Fact	tory	:	Adam Elements International Co., LTD.
Add	lress	:	Rm. 3, 10F., No.54, Songjiang Rd., Zhongshan Dist., Taipei City 104, Taiwan

### 1.2. Description of Device (EUT)

USO PAY		100	V 010 All
Product Name	:	Wireless Charger	boten Anbotek Anbotek Anbotek
Model No.	:	OMNIA Q	Anbotek Anbotek Anbotek Anbotek
Trade Mark	:	N.A.	Anbotek Anbotek Anbotek Anbo
Test Power Supply	:	AC 120V, 60Hz for adapter	Anbotek Anbotek Anbotek Ar
Test Sample No.	:	S1(Normal Sample), S2(Enginee	ring Sample)
		Operation Frequency:	111~205KHz
Product		Modulation Type:	MSK MSK
Description		Antenna Type:	Inductive loop coil Antenna
		Antenna Gain(Peak):	0 dBi
D. W. E. A. F. Abo	e;	1.4.11.1 f. 4 1 1 1 1 1	

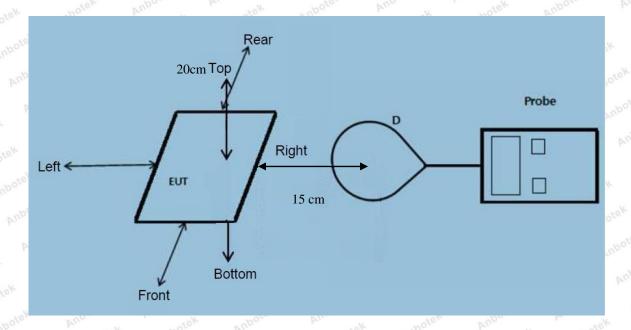
**Remark:** 1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

### 1.3. Auxiliary Equipment Used During Test

0	Adapter	:	Manufacturer: ZTE
			M/N: STC-A2050I1000USBA-C
			S/N: 201202102100876
			Input: 100-240V~50/60Hz 0.3A
			Output: DC 5V, 1000mA
1	Mobile Phone	:	Samsung
			tek bote And stek about All sk



#### 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



#### 1.5. Test Equipment List

Ite	m	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	an	Magnetic field meter	NARDA	ELT-400	423623	Dec. 24, 2018	1 Year
2	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.

Limits For Maximum Permissible Exposure (MPE)

Frequency range Electric field strength (MHz) (V/m)		Magnetic field strength (A/m)	Power density (mW/cm²)	Averaging tim (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	/	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	1	1.0	30	

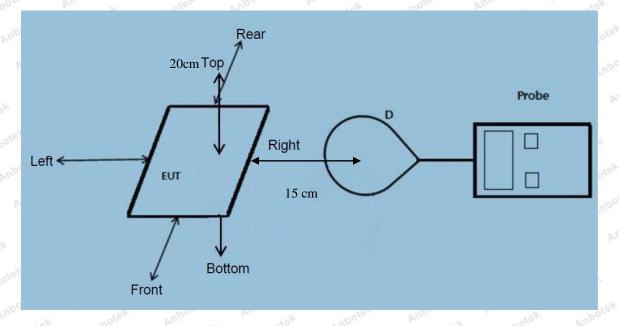
F=frequency in MHz

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).

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



#### 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

14.17	100	5-50.7				- OV		
Pottotek Dottotek	Frequency	Test	Test	Test N	Test	Test	Reference	Limits
Battery	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	ek A Ant	B	C	$\mathbf{D}_{ek}$	AUE TOK	(V/m)	(V/m)
ier Aup.	wotek Ar	botek	inpose.	An	Anbotek	Aupos	lek Vupc	rex b
1%	111~205	0.35	0.28	0.36	0.64	0.41	307	614
Anbotek	Anbo. otek	Anbotek	Anbote	ak And	otek Ar	hotek Ar	por A	nbotek
Anboten	Anbotek	Anbote	k Anbo	tek Vu	abotek	Anbotek	Anbo	
50%	111~205	1.87	1.72	1.47	1.61	1.83	307	614
ek Anbo	tek Anbo	otek k.	nbotek	bu.	Ann	Anbotek	Anbor	
potek Ar	poter An	ovek k	Anbotek	Anboten	Y No.	ek Anbot	ek Aupo	No.
99%	111~205	2.28	2.09	2.91	2.67	2.16	307	614
And	Anbotek	Anbore	An	ek Aup	yer An	potek k.	Anbotek	Anbore.
An	Anbotek	k Vupor	160	potek p	nbote	And	Anbotek	Anbore
Stand-by	111~205	0.23	0.80	0.54	0.82	0.67	307	614
Ant Ant	notek An	otek A	upo.	A. nbotek	Anboten	K Anbo	anboli	ek Ar



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

	6	1000		VC 440	10	I .	101	200
Battery	Frequency	Test	Test	Test	Test	Test	Reference	Limits
	Range	Position	Position	Position	Position	Position	Limit	Test
power	(KHz)	A Ando	bote KB	C C	Anbord D	Entek	(A/m)	(A/m)
tek Ant	otek Yup	or by	nbotek	Anboten	Anbe	k Anbote	Anbore	rek A
1%	111~205	0.058	0.062	0.043	0.049	0.098	0.815	1.63
, bo otek	Anbotek	Anbote.	And	k Anbo	lek Yup	or Au.	abotek P	nboten
Andhotek	Anbotek	Anbou	ek up	orek bu	poter	inpo potek	Anbotek	Anbote
50%	111~205	0.36	0.32	0.55	0.47	0.49	0.815	1.63
Anbo	stek Anb	otek An	pote. I	in botek	Anbotek	Anborratel	An	E P
	hotek P	nbotek	Anbore	All	Anbote	Anbo M	itek Anb	tek
99%	111~205	0.25	0.41	0.57	0.40	0.48	0.815	1.63
	Anbountek	Anbotek	Anbote	And And	otek	nbotek A	upore b	nbotek
Anboten	Ands	Anbot	ek Aup	or Au	abotek	Anbotek	Anbo	Nupo,
Stand-by	111~205	0.39	0.45	0.36	0.06	0.35	0.815	1.63
ek Anbe	stek Anbe	rek Air	abotek	Aupolen	Anbe	Anbotek	Anbore	ok Ar

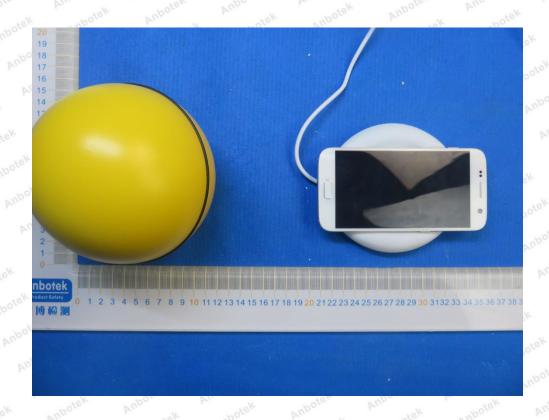
Remark: All the conditions have been tested. It is found that 10W is the worst mode, and the data in the report only reflects the worst mode.



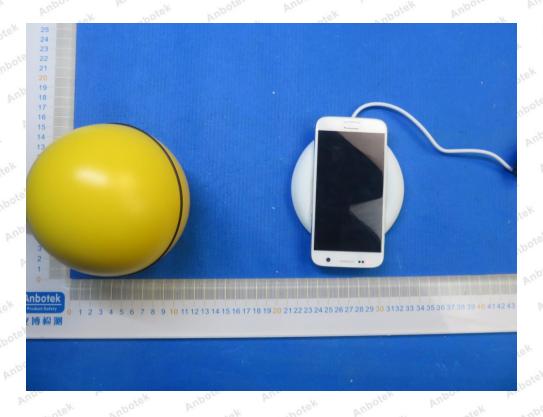
### APPENDIX I -- TEST SETUP PHOTOGRAPH

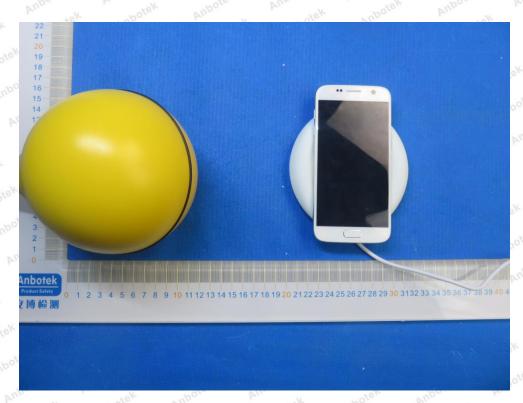
Photo of MPE Measurement



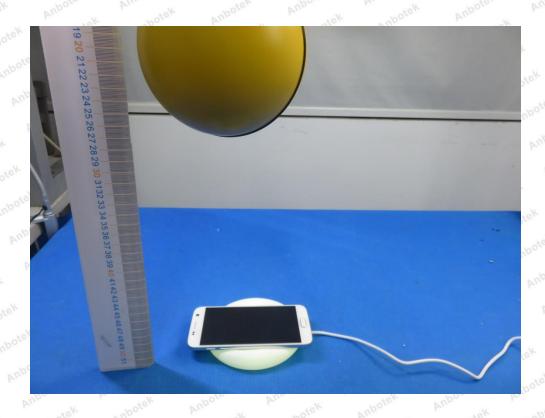












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---- End of Report ----