

FCC TEST REPORT

For

SHENZHEN HOTA TECHNOLOGY CO.,LTD

Dual Channel Smart Charger

Model No.: D6

Prepared For : SHENZHEN HOTA TECHNOLOGY CO.,LTD

Address A, Floor 2, Building 2, Guorun Industrial Park, Min Zhi, Longhua District,

Shenzhen, China

Prepared By : Shenzhen Anbotek Compliance Laboratory Limited

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Report Number : SZAWW180517003-02

Date of Test : May 18~23, 2018

Date of Report : May 23, 2018



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TEST REPORT

Applicant : SHENZHEN HOTA TECHNOLOGY CO.,LTD

Manufacturer : SHENZHEN HOTA TECHNOLOGY CO.,LTD

Product Name : Dual Channel Smart Charger

Model No. : D6

Trade Mark : N.A.

Input: DC 6.5~30v, 0~30A;

Rating(s) Output: 0~30V, 0.1~15AX2, 650W;

USB Output: DC 5V, 2.1A;

Wireless Charging output: DC 5V, 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.

Date of Test:	Mark	May 18~2	23, 2018	
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Approved & Authorized Sig	gner:	ek Anbotek Anbo		
	Anboten Ans	(Manager / '	Γom Chen)	ek Aupotes



1. General Information

1.1. Client Information

Applicant	:	SHENZHEN HOTA TECHNOLOGY CO.,LTD
Address	:	A, Floor 2, Building 2, Guorun Industrial Park, Min Zhi, Longhua District, Shenzhen, China
Manufacturer	:	SHENZHEN HOTA TECHNOLOGY CO.,LTD
Address	:	A, Floor 2, Building 2, Guorun Industrial Park, Min Zhi, Longhua District, Shenzhen, China

1.2. Description of Device (EUT)

		1 a C
• •	Dual Channel Smart Charger	hotek Anbotek Anbot An botek
:	D6 Anbotek Anbotek	And Anbotek Anbotek Anbote
÷	N.A. Anbotek Anbou	Anbotek Anbote, Anb
:	DC 12V by battery/DC 24V by b	attery
	Operation Frequency:	110-205KHz
	Number of Channel:	20 Channels
:	Modulation Type:	MSK
	Antenna Type:	Loop Antenna
	Antenna Gain(Peak):	0 dBi
		: D6 : N.A. : DC 12V by battery/DC 24V by b Operation Frequency: Number of Channel: : Modulation Type: Antenna Type:

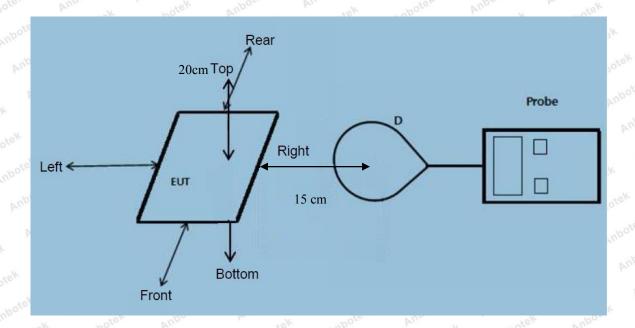
Remark: 1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

1.3. Auxiliary Equipment Used During Test

Mobile Phone	:	Manufacturer: NOKIA	Anbotek	Anbore	Ann	Anbotek Anb	
		M/N: N920	abotek	Anbo	Ar. Potek	Anboter A	S
		S/N: 356355051634804					
		CE, FCC, DOC					



1.6. 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



1.7. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Magnetic field meter	NARDA	ELT-400	423623	May 27, 2017	1 Year

1.8. 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. 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 Occ	cupational/Controlled Ex	posures		
0.3-3.0	614	1.63	*(100)	6	
3.0-30	1842/f	4.89/f	*(900/f ²)	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	Population/Uncontrolle	ed Exposure		
0.3-1.34	614	1.63	*(100)	30	
1.34-30	824/f	2.19/f	*(180/f ²)	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	

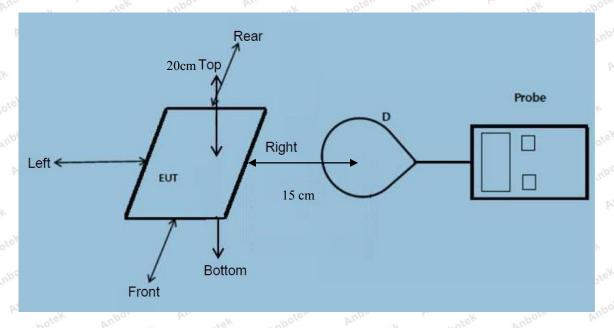
F=frequency in MHz

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).

⁼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 from 110 KHz to 205 KHz
- 2) Output power from each primary coil is less than 15 watts
 - The maximum output power of the primary coil is 5W.
- 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

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

Battery	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Referenc e Limit	Limits Test (V/m)
Anbo	stek Wupotek	lek Anhote	otek And	lbotek tek	Anbotek	Anbotek Anbotek	(V/m)	K Anbotes
1%	110~ 205	0.35	0.34	0.30	0.27	0.26	307	614
50%	110~ 205	1.16	1.27	1.26	1.29	1.28	307	614
Anbore	tek Anbotek	Aupote	otek Anbo	potek A.	Anbotek Anbotek	Anbotek	Anbotek	k Anbotek
99%	110~ 205	2.43	2.38	2.35	2.40	2.29	307	614
Anbotek	Anbotek	Anbotek anbotek	Anbotek Anbotek		otek Anbo	potek Ann	oorek 1	nbotek
Stand-by	110~ 205	0.45	0.37	0.29	0.28	0.25	307	614



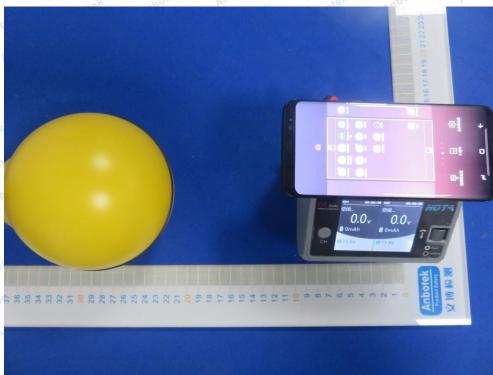
H-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

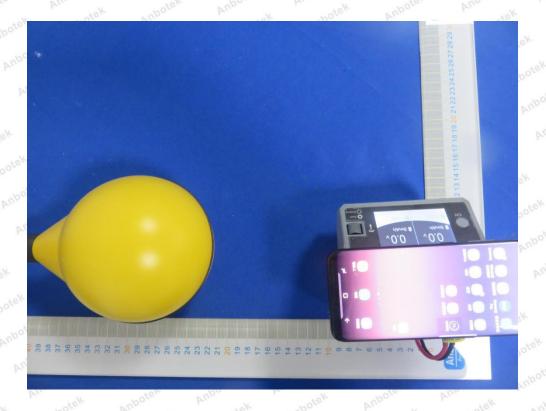
Battery	Frequency	Test	Test	Test	Test	Test	Referenc	Limits
No.	Range	Position	Position	Position	Position	Position	e	Test
power	(KHz)	A	B nbb	otek C	bote ^K D	kupore E	Limit (A/m)	(A/m)
	k Anbote	Anbo Anbo	notek h	inbotek	Anbote.	Annabotek	Anbotek	Anbe
1%	110~ 205	0.077	0.090	0.085	0.087	0.089	0.816	1.63
ye. Aur	notek p	upotek	Aupor	Al. abotek	Anbote	K Anbo	stek Ar	botek
upore l	abotek	Anbotek	Anbo	k Anbot	ek Anb	ote. Aun	hotek	Anbotek
50%	110~ 205	0.15	0.17	0.16	0.14	0.12	0.814	1.63
	Anbe	Anbot	ek Anb	ore Vu	abotek	Ambotek	Anbo	V. Vupo
	rek Pur	tek An	potek P	upo. otek	Anbotek	Anboter	Anb	ek N
99%	110~ 205	0.23	0.25	0.35	0.37	0.26	0.815	1.63
	upoten A	hotek	Anbotek	Anbore	K An	rek Anbr	ick An	ocek
anbotek	Anbores	Ans	Anbotel	Anbot	otek An	obotek A	hoter	Anbonotek
Stand-by	110~ 205	0.13	0.15	0.14	0.16	0.18	0.814	1.63
	Anbotek	Aupor	rok by	hotek	anbote.	Ann	nbotek	Anbo



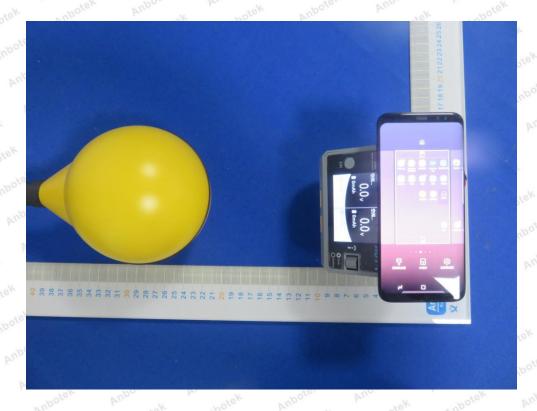
APPENDIX I -- TEST SETUP PHOTOGRAPH

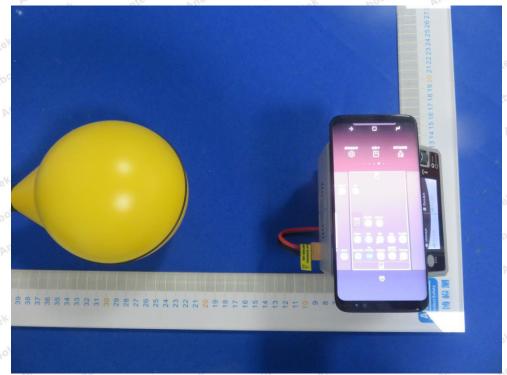
Photo of MPE Measurement















End of Report