



RF Exposure Report

For

Applicant Name: Guangdong Fenenergy Technology Co., Ltd
Address: Building 35, Zone 5, Huaide Cuigang Industrial Park, Fuyong Street, Bao'an District, Shenzhen
EUT Name: 55W Wireless Charging Station
Brand Name: atomi
Model Number: AT1705

Issued By

Company Name: Shenzhen BANTEK Testing Co., Ltd.
Address: A5&A6, Building B1&B2, No.45 Gangtou Road, Bogan Community, Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518104
Report Number: BTEK231020009AE002
Test Standards: 47 CFR PART 1, Subpart I, Section 1.1310
47 CFR PART 2, Subpart J, Section 2.1091
FCC ID: 2BDF9-AT1705
Test Conclusion: Pass
Test Date: 2023-11-16 to 2023-12-05
Date of Issue: 2023-12-05

Prepared By:

Elma Yang

Date:

Elma Yang / Project Engineer
2023-12-05

Approved By:

Damon Su

Date:

Damon Su / EMC Manager
2023-12-05

* In the configuration tested, the EUT complied with the standards specified above.





Revision History		
Version	Issue Date	Revisions Content
R_V0	2023-12-05	Original
Note:	Once the revision has been made, then previous versions reports are invalid.	





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1. Introduction

1.1 Identification of Testing Laboratory

Company Name:	Shenzhen BANTEK Testing Co., Ltd.
Address:	A5&A6,Building B1&B2,No.45 Gangtou Road,BoganCommunity, Shajing Street,Bao'an District, Shenzhen,Guangdong,China 518104
Phone Number:	+86(755) 2334 4200
Fax Number:	+86(755) 2334 4200

1.2 Identification of the Responsible Testing Location

Test Location:	Shenzhen BANTEK Testing Co., Ltd.
Address:	A5&A6,Building B1&B2,No.45 Gangtou Road,BoganCommunity, Shajing Street,Bao'an District, Shenzhen,Guangdong,China 518104
Description:	All measurement facilities used to collect the measurement data are located at A5&A6,Building B1&B2,No.45 Gangtou Road,BoganCommunity, Shajing Street,Bao'an District, Shenzhen,Guangdong,China 518104
FCC Registration Number:	264293
Designation Number:	CN1356

1.3 Laboratory Condition

Ambient Temperature:	20°C to 25°C
Ambient Relative Humidity:	45% to 55%
Ambient Pressure:	100 kPa to 102 kPa

1.4 Announcement

- (1) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (2) This document may not be altered or revised in any way unless done so by BANTEK and all revisions are duly noted in the revisions section.
- (3) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (4) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.





2. Product Information

2.1 Application Information

Company Name:	Guangdong Fenenergy Technology Co., Ltd
Address:	Building 35, Zone 5, Huaide Cuigang Industrial Park, Fuyong Street, Bao'an District, Shenzhen

2.2 Manufacturer Information

Company Name:	Guangdong Fenenergy Technology Co., Ltd
Address:	Building 35, Zone 5, Huaide Cuigang Industrial Park, Fuyong Street, Bao'an District, Shenzhen

2.3 Factory Information

Company Name:	Guangdong Fenenergy Technology Co., Ltd
Address:	Building 35, Zone 5, Huaide Cuigang Industrial Park, Fuyong Street, Bao'an District, Shenzhen

2.4 General Description of Equipment under Test (EUT)

EUT Name	55W Wireless Charging Station
Under Test Model Name	AT1705
Hardware Version	REV3.0
Software and Firmware Version	V3.0

2.5 Technical Information

Power Supply	Input:100-240V~50/60Hz 1.2A Wireless Output: 15W PD Output: DC 5V 3A, 9V 2.22A, 12V 1.67A, 20W Max. Type-C+USB Output: DC 5V 2.4A(Each Port), Total DC 5V 4A max.
Modulation Type	FSK
Frequency Range	The frequency block is 110.0 KHz to 205.0KHz.
Antenna Type	Coil antenna





3. Test Requirement

KDB 680106 D01 Wireless Power Transfer v04

According to KDB 680106 D01:

Requirements of KDB 680106 D01	Description
WPT operating frequency (or frequencies).	The device operate in the frequency range 110KHz~205KHz
Number of radiating structure(Coil)	Only one radiated Coil
Conducted power for each radiating structure.	Maximum 15W
§ 2.1091-Mobile or § 2.1093-Portable demonstrated scenarios of operation, including RF exposure compliance information	Mobile Device
Maximum distance from the WPT transmitter at which, by design, a load can be charged (including slow-charging operations)	Charing with the load directly contact

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
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
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled 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
300-1,500			f/1500	30
1,500-100,000			1.0	30

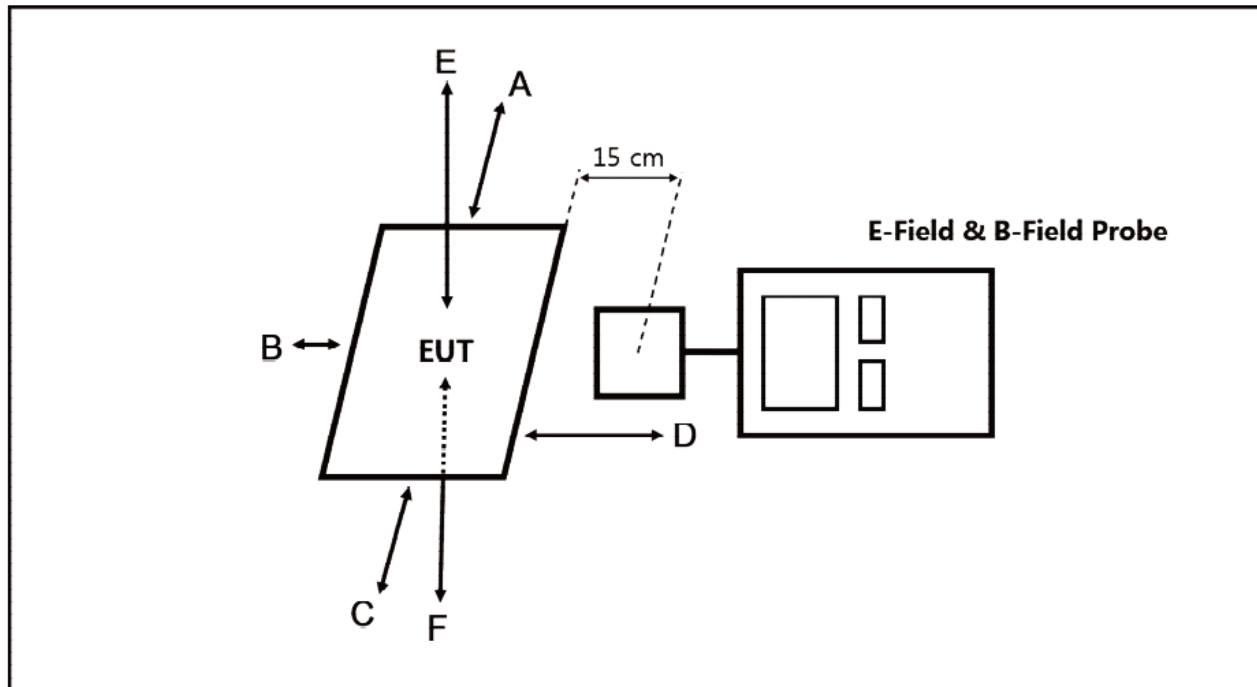
f = frequency in MHz * = Plane-wave equivalent power density



Test Equipment List

Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. (mm-dd-yy)	Next Cal. (mm-dd-yy)
Magnetic Field Analyzer	Narda	ETL-400	N-0231	2023.06.12	2024.06.12

Test Setup



Note: Measurements should be made from all sides and the top of the primary/client pair, with the 15cm measured from the center of the probe(s) to the edge of the device.

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The measurement probe was placed at test distance (15 cm from all sides and 20 cm from the top) 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.
- 4) The EUT was measured according to the dictates of KDB 680106 D01 v04.





3.1 Assessment Result

☒ Passed ☐ Not Applicable

Note: All test modes were pre-tested, but we only recorded the worst case in this report.

H-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Charging Battery Level	Unit	Frequency Range (MHz)	Measured E-Field Strength Values (A/m)					FCC H-Field Strength 50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
			Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
1%	uT	0.126	0.1512	0.1579	0.1548	0.1592	0.1574	--	--
1%	A/m	0.126	0.1200	0.1254	0.1260	0.1225	0.1249	0.815	1.63
50%	uT	0.126	0.1355	0.1307	0.1312	0.1345	0.1330	--	--
50%	A/m	0.126	0.1006	0.1041	0.1048	0.1068	0.1095	0.815	1.63
99%	uT	0.126	0.1277	0.1299	0.1247	0.1259	0.1201	--	--
99%	A/m	0.126	0.0921	0.0985	0.0975	0.0999	0.0963	0.815	1.63

$uT = 1.25 \times A/m$

H-Field Strength at 20cm from the top surface of the EUT

Charging Battery Level	Unit	Frequency Range (MHz)	Measured E-Field Strength Values (A/m)	FCC H-Field Strength 50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
			Test Position E		
1%	uT	0.126	0.1070	--	--
1%	A/m	0.126	0.1023	0.815	1.63
50%	uT	0.126	0.1010	--	--
50%	A/m	0.126	0.1047	0.815	1.63
99%	uT	0.126	0.1055	--	--
99%	A/m	0.126	0.1037	0.815	1.63

Note: $A/m = uT / 1.25$

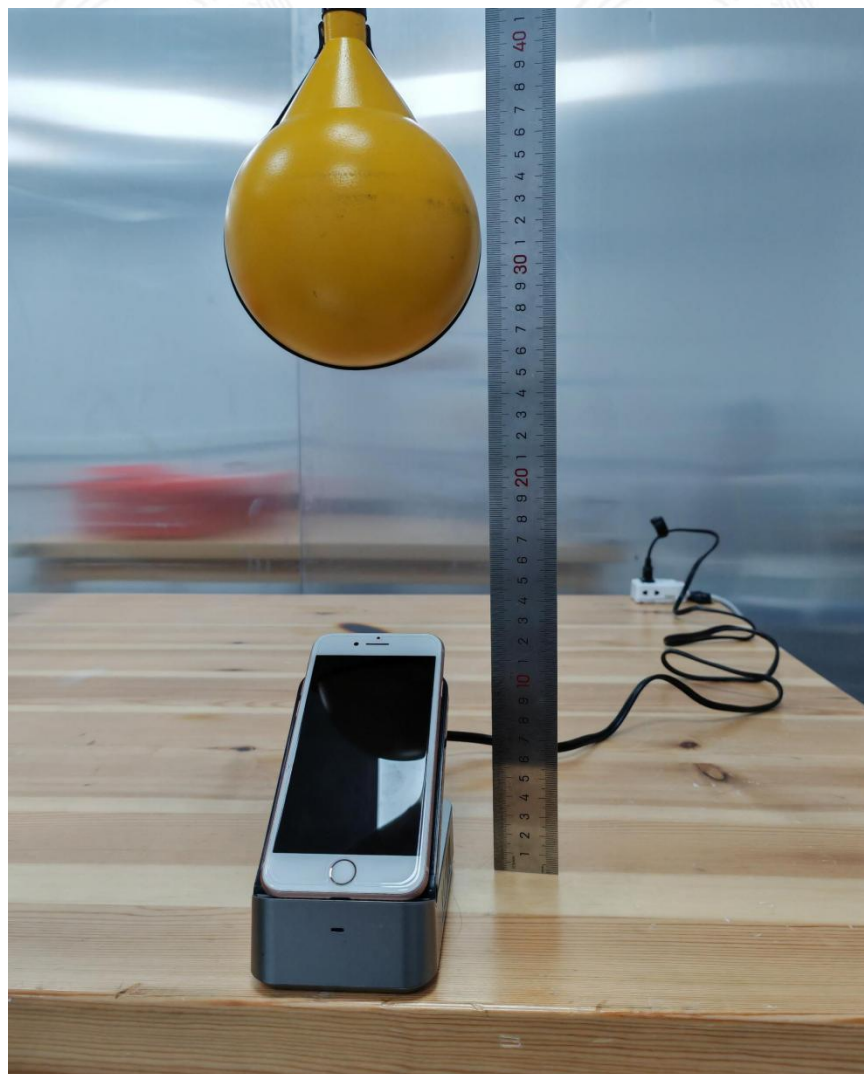
Note:

- All test modes were pre-tested, but we only recorded the worst case in this report.
- During test the frequencies less than 1 MHz and E/H ratio less than 1/10 of the 377-ohm free space wave impedance, only record H-field measurements result.



3.2 Test Set-up Photo

Top 20cm



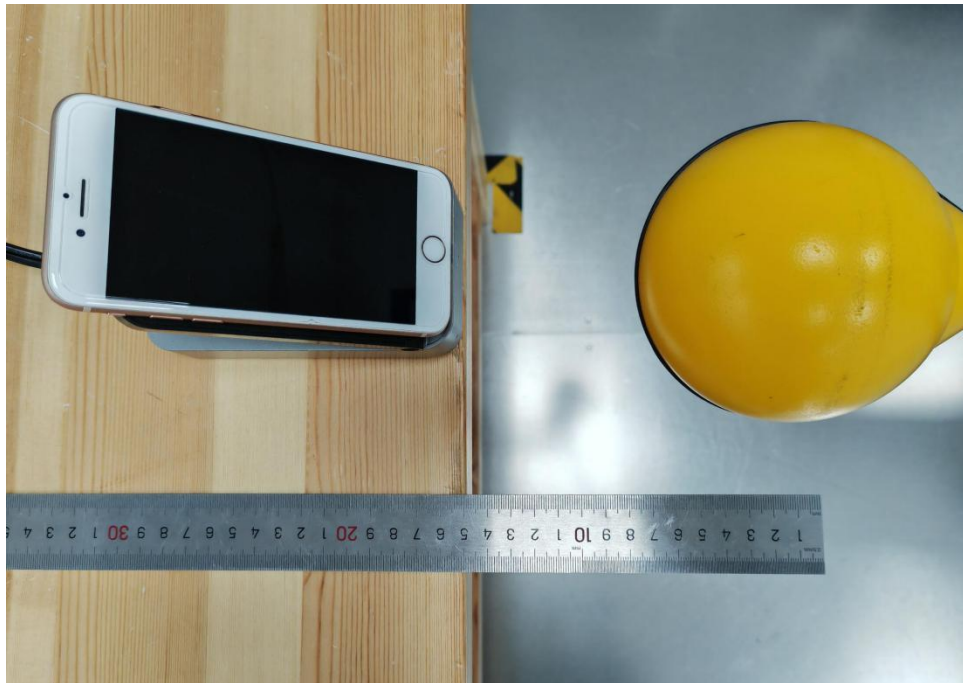


Top 15cm

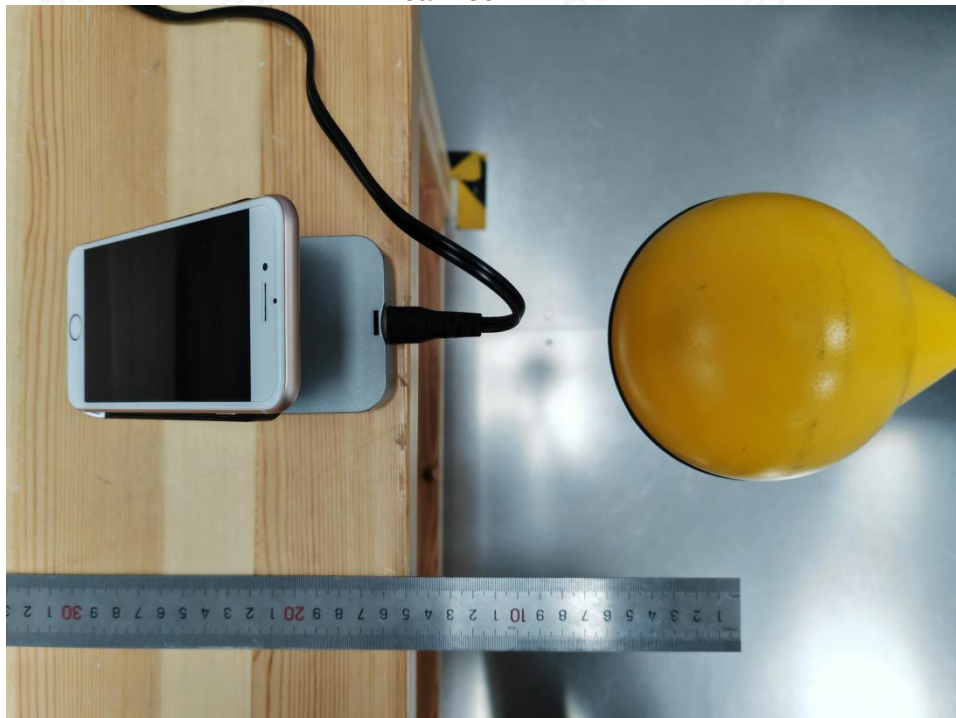




Front 15cm

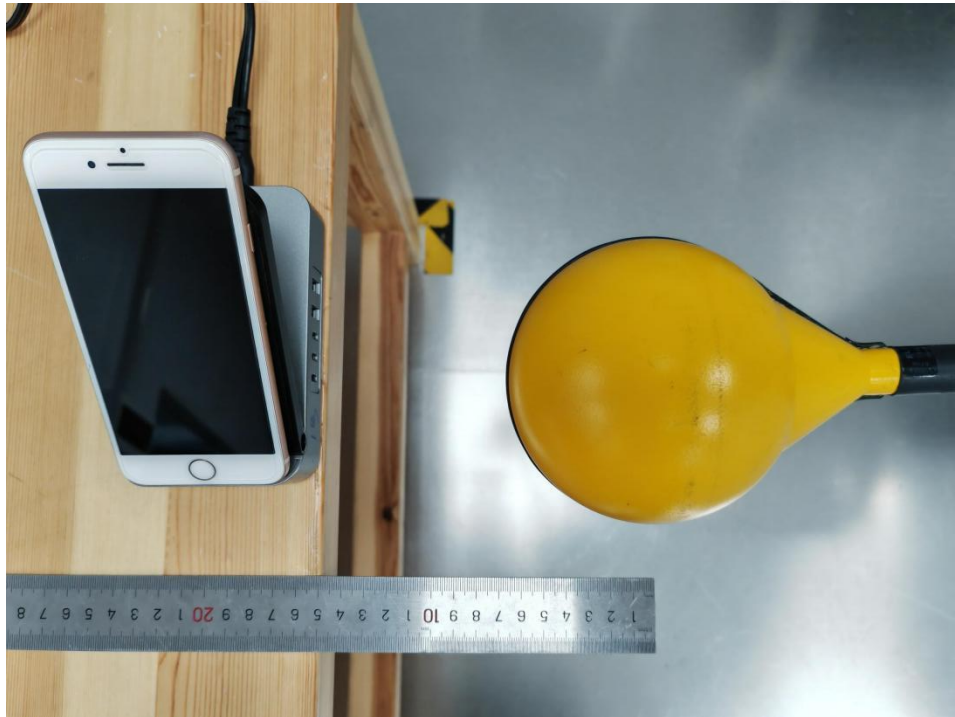


Rear 15cm

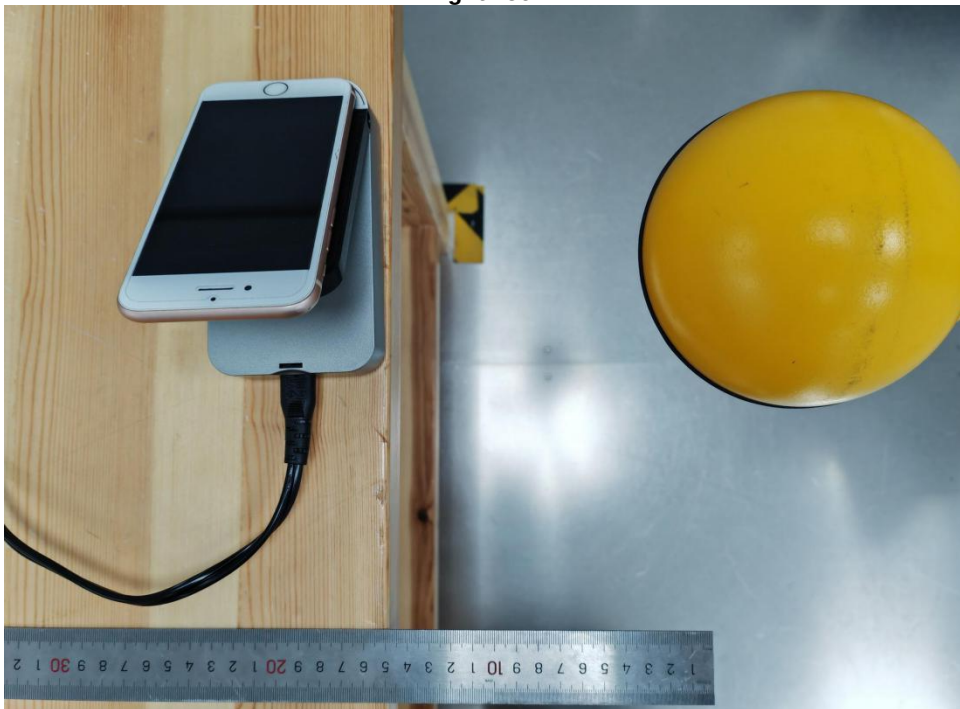




Left 15cm



Right 15cm



--END OF REPORT--

