



Shenzhen BANTEK Testing Co., Ltd.

Report No.: BTEK240401013AE002

Page: 1 of 13

FCC ID: 2BDF9-AT1645

TEST REPORT

Application No.: BTEK240401013AE
Version Number: V0
Applicant: Guangdong Fenergy Technology Co., Ltd
Address of Applicant: Building 35, Zone 5, Huaide Cuigang Industrial Park, Fuyong Street, Bao 'an District, Shenzhen
Manufacturer: Guangdong Fenergy Technology Co., Ltd
Address of Manufacturer: Building 35, Zone 5, Huaide Cuigang Industrial Park, Fuyong Street, Bao 'an District, Shenzhen
Factory: Guangdong Fenergy Technology Co., Ltd
Address of Factory: Building 35, Zone 5, Huaide Cuigang Industrial Park, Fuyong Street, Bao 'an District, Shenzhen
Equipment Under Test (EUT):
EUT Name: 5000mAh Battery Bank
Model No.: AT1645
Trade Mark: atomi
Standard(s) : 47 CFR PART 1, Subpart I, Section 1.1310
47 CFR PART 2, Subpart J, Section 2.1091
Date of Receipt: 2024-04-09
Date of Test: 2024-04-09 to 2024-06-05
Date of Issue: 2024-06-05

Test Result:	Pass*
---------------------	--------------

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

Lion Cai
EMC Laboratory Manager

ShenZhen BANTEK Testing Co.,Ltd.

Add : A5&A6, Building B1&B2, No.45 Gangtuo Road, Bogang Community, Shajing Street
Bao'an District, Shenzhen, Guangdong, China 518104

Tel : +(86)755-2334 4200

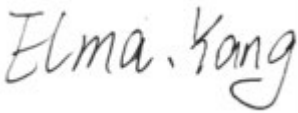
E-mail : Service@btek-lab.com

Web : www.btek-lab.com





Revision Record				
Version	Chapter	Date	Modifier	Remark
V0		2024-06-05		Original

Authorized for issue by				
				
		Daivd.Zhuang/Project Engineer		
				
		Elam.Yang/Reviewer		



2 Contents

	Page
1 Cover Page	1
2 Contents	3
3 General Information.....	4
3.1 Details of E.U.T.....	4
3.2 Description of Support Units	4
3.3 Test Location.....	5
3.4 Deviation from Standards.....	5
3.5 Abnormalities from Standard Conditions	5
4 Test Requirement.....	6
4.1 Assessment Result.....	7
4.2 Test Set-up Photo	10



3 General Information

3.1 Details of E.U.T.

Power Supply	Battery Capacity: 5000mAh 3.7V 18.5Wh USB-C Input: 5V=2A USB Output: 5V=2.1A Wireless Charger Output: 5W
Modulation Type	FSK
Operating frequency	112kHz-205kHz
Antenna Type	Coil antenna
Hardware Version	V1.0
Software Version	V1.0
Sample number	BTEK240401013AE-01
Remark: The information in this section is provided by the applicant or manufacturer, BANTEK is not liable to the accuracy, suitability, reliability or/and integrity of the information.	

3.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
WPC charging load	EESON	2S	/
Adapter	FUSHIGANG	AS1201A05020000USU	/



3.3 Test Location

All tests were performed at:

Shenzhen BANTEK Testing Co., Ltd.,

A5&A6, Building B1&B2, No.45 Gangtou Road, Bogang Community, Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518104

Tel:0755-2334 4200

Fax: 0755-2334 4200

FCC Registration Number: 264293

Designation Number: CN1356

No tests were sub-contracted.

3.4 Deviation from Standards

None

3.5 Abnormalities from Standard Conditions

None



4 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).	112kHz-205kHz
Number of radiating structure(Coil)	Two radiated Coil
Conducted power for each radiating structure.	Maximum 5W
§ 2.1091-Mobile or § 2.1093-Portable demonstrated scenarios of operation, including RF exposure compliance information	Portable 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

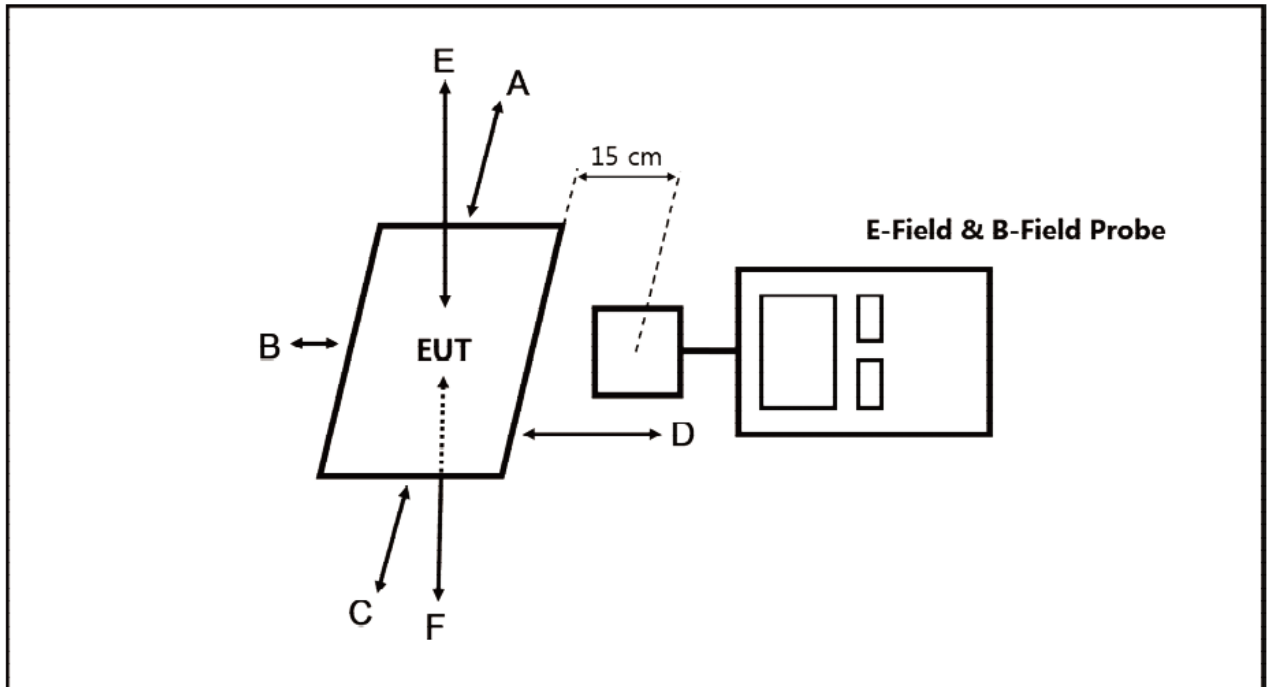
TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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 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.

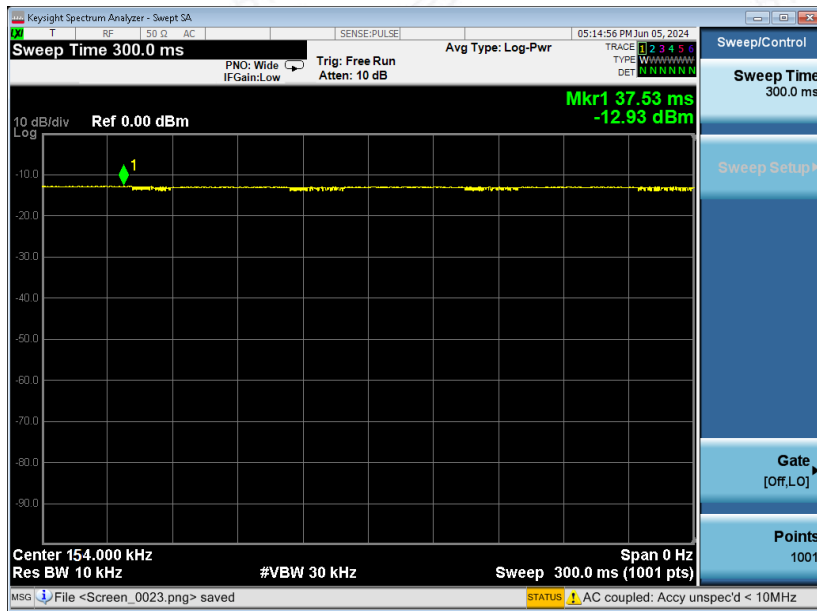
- 1) The RF exposure test was performed in anechoic chamber.
- 2) The measurement probe was placed at test distance (15cm) which is between the edge of the charger and the geometric center of probe.
- 3) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E, F) were completed.
- 4) The EUT was measured according to the dictates of KDB 680106 D01 v04.

4.1 Assessment Result

Test Mode	Description	Remark
1	Full charge+Wireless 5W output	1%,50%,100% battery
2	Wireless 5W output	100% battery
Remark:Worst case at mode 1, 100% battery		

☒ **Passed** ☐ **Not Applicable**
Duty cycle=100%





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

Test Distance	Charging Battery Level	Unit	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	Test Position F		
20	100%	uT	0.121	0.120	0.119	0.124	0.122	0.123	--	--
20	100%	A/m	0.097	0.096	0.096	0.099	0.098	0.098	0.815	1.63
18	100%	uT	0.123	0.120	0.125	0.126	0.125	0.119	--	--
18	100%	A/m	0.099	0.096	0.100	0.100	0.100	0.096	0.815	1.63
16	100%	uT	0.121	0.121	0.120	0.122	0.124	0.120	--	--
16	100%	A/m	0.096	0.097	0.096	0.098	0.099	0.096	0.815	1.63
14	100%	uT	0.121	0.128	0.125	0.122	0.123	0.120	--	--
14	100%	A/m	0.097	0.103	0.100	0.098	0.098	0.096	0.815	1.63
12	100%	uT	0.124	0.120	0.123	0.122	0.123	0.113	--	--
12	100%	A/m	0.099	0.096	0.099	0.097	0.098	0.091	0.815	1.63
10	100%	uT	0.123	0.119	0.124	0.125	0.125	0.136	--	--
10	100%	A/m	0.098	0.095	0.099	0.100	0.100	0.109	0.815	1.63
8	100%	uT	0.122	0.120	0.124	0.125	0.133	0.158	--	--
8	100%	A/m	0.097	0.096	0.099	0.100	0.106	0.126	0.815	1.63
6	100%	uT	0.205	0.220	0.243	0.236	0.252	0.220	--	--
6	100%	A/m	0.164	0.176	0.194	0.189	0.202	0.176	0.815	1.63
4	100%	uT	0.243	0.254	0.225	0.218	0.243	0.223	--	--
4	100%	A/m	0.194	0.203	0.180	0.174	0.194	0.178	0.815	1.63
2	100%	uT	0.258	0.225	0.215	0.208	0.205	0.204	--	--
2	100%	A/m	0.206	0.180	0.172	0.166	0.164	0.163	0.815	1.63
0	100%	uT	0.235	0.236	0.245	0.251	0.234	0.255	--	--
0	100%	A/m	0.188	0.189	0.196	0.201	0.187	0.204	0.815	1.63

Note:A/m=uT/1.25



E-Field Strength at 15 cm from the edges surrounding the EUT and 20cm from the top surface of the EUT
Frequency Range(MHz): 112~205 KHz

Test Distance	Charging Battery Level	Unit	Measured E-Field Strength Values (V/m)						FCC E-Field Strength 50% Limits (V/m)	FCC E-Field Strength Limits (V/m)
			Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F		
20	100%	V/m	36.494	36.252	36.011	37.429	36.795	36.976	307	614
18	100%	V/m	37.217	36.041	37.549	37.881	37.760	36.011	307	614
16	100%	V/m	36.343	36.584	36.132	36.825	37.489	36.222	307	614
14	100%	V/m	36.554	38.695	37.790	36.825	37.127	36.222	307	614
12	100%	V/m	37.489	36.162	37.157	36.705	36.976	34.201	307	614
10	100%	V/m	37.097	35.890	37.398	37.700	37.700	41.018	307	614
8	100%	V/m	36.644	36.132	37.248	37.610	39.962	47.683	307	614
6	100%	V/m	61.828	66.352	73.289	71.178	76.003	66.352	307	614
4	100%	V/m	73.289	76.606	67.860	65.749	73.289	67.257	307	614
2	100%	V/m	77.813	67.860	64.844	62.733	61.828	61.526	307	614
0	100%	V/m	70.876	71.178	73.892	75.702	70.574	76.908	307	614

Note: V/m= A/m *377

$$B = \frac{\mu_0 * I * N * R^2}{2 * (R^2 + x^2)^{3/2}}$$

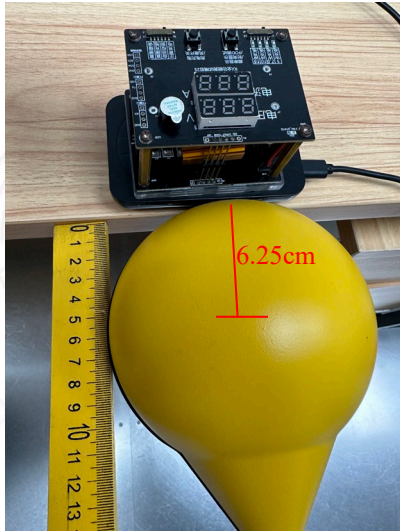
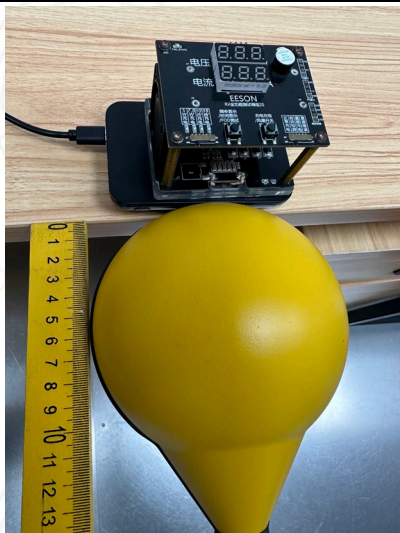
;

$$B = \frac{\mu_0 * I * N}{2 * x}$$

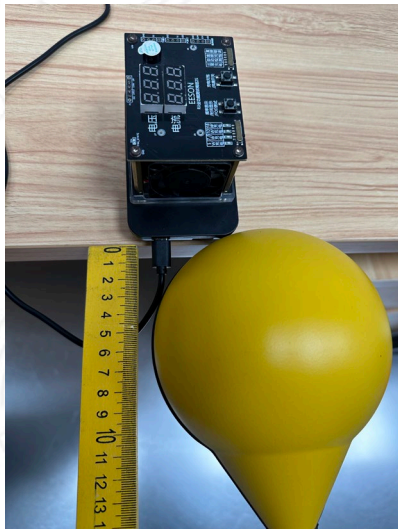
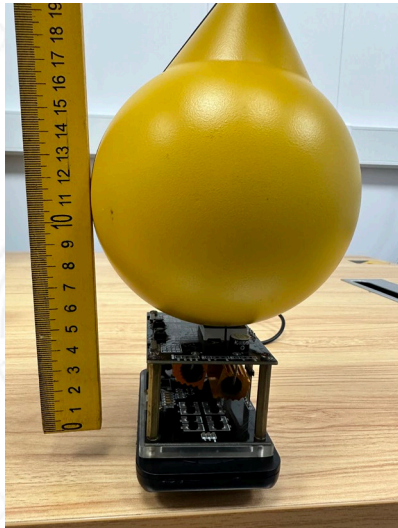
;X=6.25cm



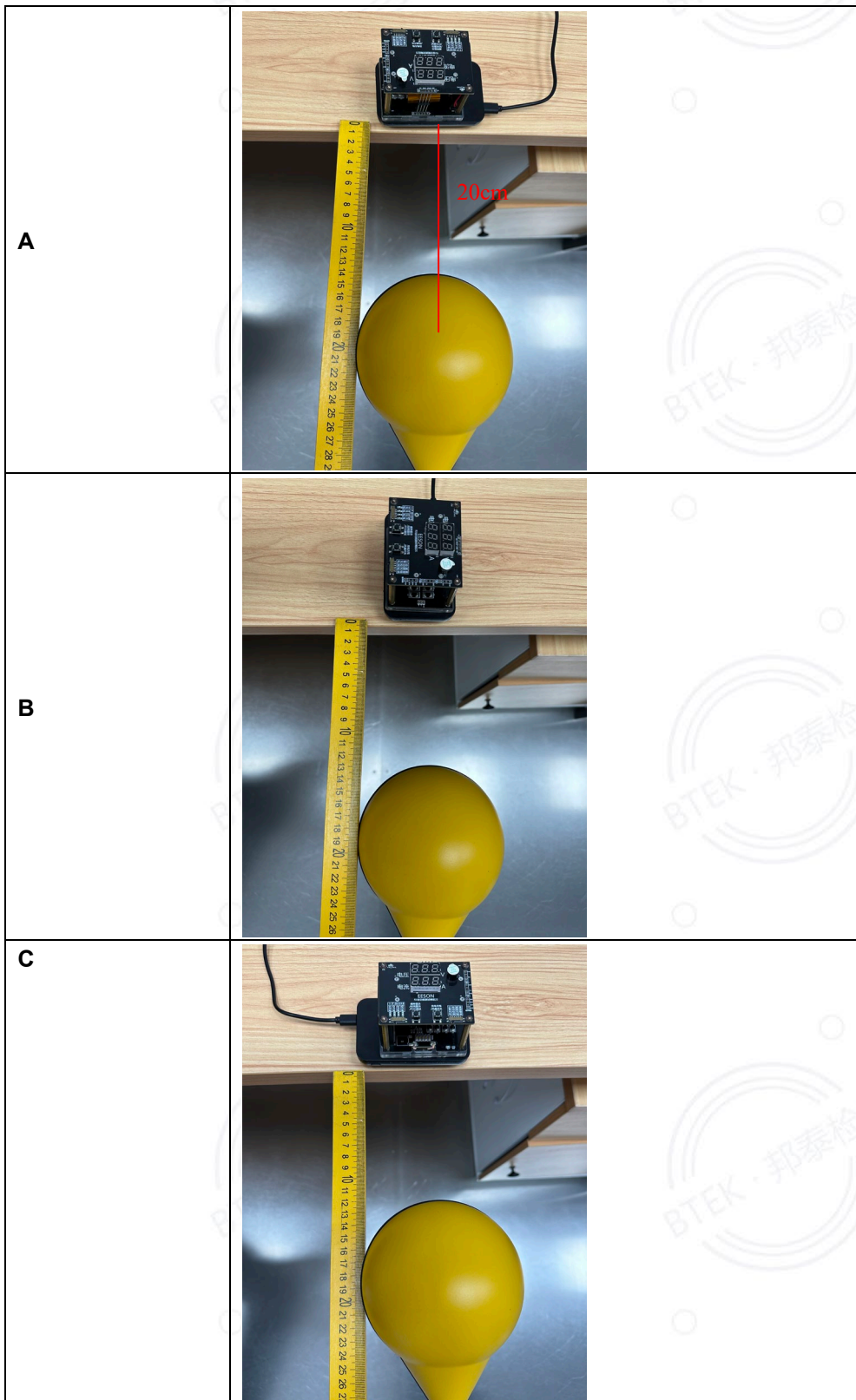
4.2 Test Set-up Photo

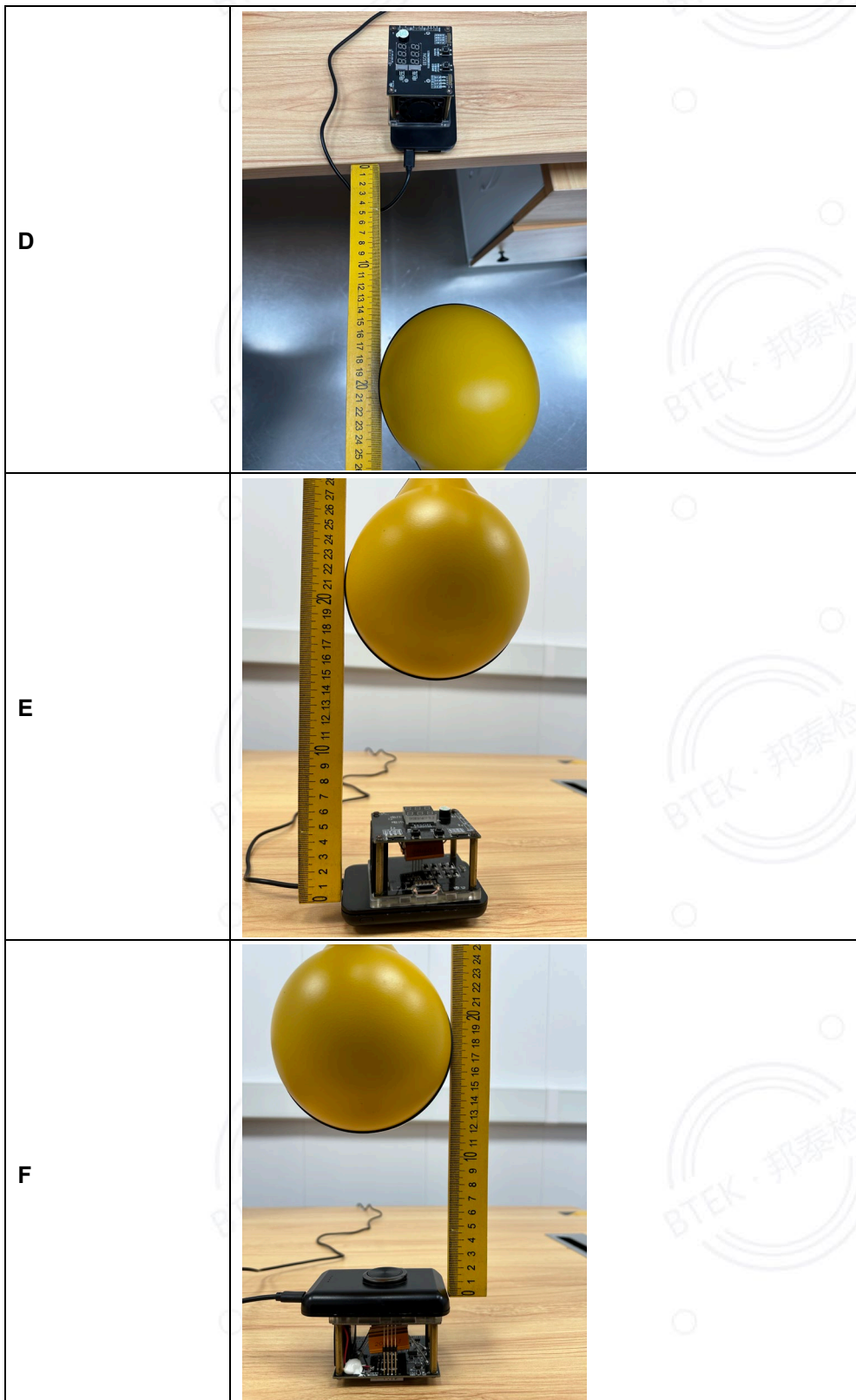
0cm Remark(Probe center to the EUT side is 6.25cm)	
A	
B	
C	
D	



E	
F	
F	
20cm Remark(Probe center to the EUT side is20cm)	







- End of the Report -

