TEST REPORT

Report No.:	BCTC2207791140-2E
Applicant:	Shenzhen U-Angel Technology Co.,Ltd
Product Name:	Power Bank
Model/Type Ref.:	QP-10100
Tested Date:	2022-07-06 to 2022-07-19
Issued Date:	2022-07-19

Shenzhen BCTC Testing Co., Ltd.

FCC ID:2AX87QP-10100

Product Name:	Power Bank
Trademark:	N/A
Model/Type Ref.:	QP-10100 QP-10100B, QP-10100W, LD10WL
Prepared For:	Shenzhen U-Angel Technology Co.,Ltd
Address:	4th Floor, Block C, Phase 2 Of Hongmen Industrial Park, No.399, Jihua Road, Jihua Street, Longgang District, Shenzhen City, Guangdong Province, China.
Manufacturer:	Shenzhen U-Angel Technology Co.,Ltd
Address:	4th Floor, Block C, Phase 2 Of Hongmen Industrial Park, No.399, Jihua Road, Jihua Street, Longgang District, Shenzhen City, Guangdong Province, China.
Prepared By:	Shenzhen BCTC Testing Co., Ltd.
Address:	1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date:	2022-07-06
Sample tested Date:	2022-07-06 to 2022-07-19
Issue Date:	2022-07-19
Report No.:	BCTC2207791140-2E
Test Standards:	FCC CFR 47 part1, 1.1307(b), 1.1310
Test Results:	PASS

Tested by:

Jeff.Fu/Project Handler

Approved by:

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

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(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2207791140-2E	2022-07-19	Original	Valid

2. Product Information

2.1 Product Information

Model/Type Ref.:	QP-10100 QP-10100B, QP-10100W, LD10WL
Model differences:	All the model are the same circuit and RF module, except model names.
Product Description:	Power Bank
Operation Frequency:	115kHz-205kHz
Antenna installation:	Loop coil antenna
Ratings:	Type-C input: 5V⎓ 3A, 9V⎓ 2A Lightning input: 5V⎓ 3A, 9V⎓ 2A Type-C output: 5V⎓ 3A, 9V⎓ 2.22A, 12V⎓ 1.5A USB-A output: 5V⎓ 3A, 9V⎓ 2A, 12V⎓ 1.5A Wireless out: 9V⎓ 15W/9V⎓ 10W/ 7.5V⎓ 7.5W/5V⎓ 5W Total output: 20W(Max) for Type-C only 15W(Max) for Wireless output
Hardware Version:	N/A
Software Version:	N/A

Cable of Product

No.	Cable Type	Quantity	Provider	Length (m)	Shielded	Note
1	--	--	Applicant	---	Yes/No	---
2	--	--	BCTC	--	Yes/No	--

2.2 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
1.	Mobile phone	iPhone	iPhone 12	---	---

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

2.3 Test Mode

Test Mode 1	Charging(Type-C)
Test Mode 2	Charging(Lightning)
Test Mode 3	Type-C 5V3A
Test Mode 4	Type-C 9V2.22A
Test Mode 5	Type-C 12V1.5A
Test Mode 6	5W
Test Mode 7	7.5W
Test Mode 8	10W
Test Mode 9	15W
Test Mode 10	USB-A 5V3A
Test Mode 11	USB-A 9V2A
Test Mode 12	USB-A 12V1.5A
Test Mode 13	Type-C 5V1A+USB-A 5V1A+5W

3. Test Facility And Test Instrument Used

3.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.
FCC Test Firm Registration Number: 712850
IC Registered No.: 23583

3.2 Test Instrument Used

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Electromagnetic radiation tester	Wavecontrol	SMP160	19SN0980	Aug. 30, 2021	Aug. 29, 2022
Electromagnetic field probe	Wavecontrol	WP400-3	20WP120082	Aug. 30, 2021	Aug. 29, 2022
843 Chamber	ETS	843	84301	Aug. 27, 2020	Aug. 26, 2023

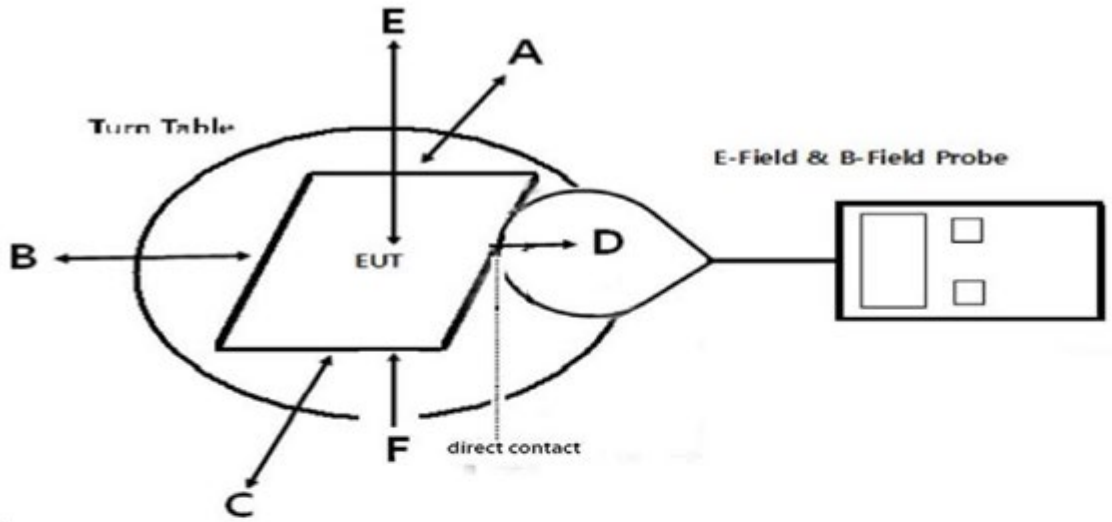
4. Method Of Measurement

4.1 Applicable Standard

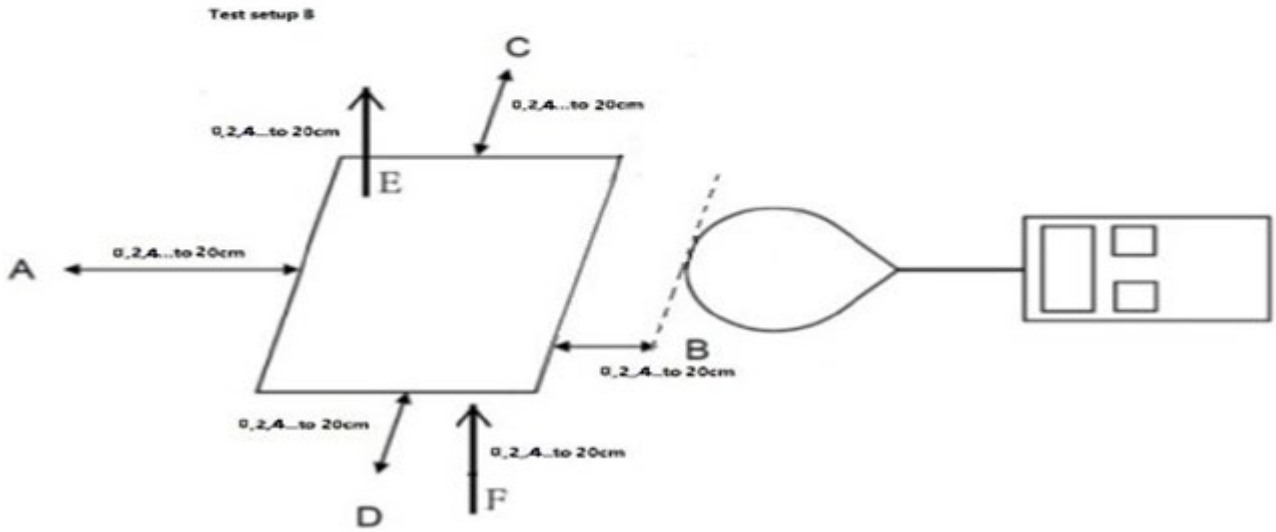
According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. According to §1.1310 and §2.1093 RF exposure is calculated. According KDB680106 D01v03: RF Exposure Wireless Charging Apps v02.

4.2 Block Diagram Of Test Setup

A:



B:



4.3 Limit

Limits for Occupational / Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |E|²,|H|² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

Limits for General Population / Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |E|²,|H|² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180 / f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1	30

4.4 Test Procedure

a) he RF exposure test was performed in anechoic chamber.
b) The measurement probe was placed at 0 cm surrounding the device for test setup A; and the measurement Probe was placed from 0 cm to 20 cm, in 2 cm maximum increment measured from the edge of the device For the test setup B.
c)The highest emission level was recorded and compared with limit as soon as measurement of eachd)
The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
d)The EUT was measured according to the dictates of KDB680106
D01v03r01
f)Remark:
The EUT's test position A, B, C, D , E and F is valid for the E and H field measurements.

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4.5 E And H Field Strength

For setup A:
Worst Case Operating Mode: Mode 9

H-Filed Strength at 0 cm from edges surrounding the EUT (A/m)

Frequency Range (KHz)	Operation condition	Test Position A (A/m)	Test Position B (A/m)	Test Position C (A/m)	Test Position D (A/m)	Test Position E (A/m)	Test Position F (A/m)	Limits (A/m)
115kHz-205kHz	1% battery	0.208	0.219	0.132	0.233	0.211	0.247	1.63
115kHz-205kHz	50% battery	0.256	0.209	0.232	0.184	0.215	0.151	1.63
115kHz-205kHz	99% battery	0.231	0.216	0.145	0.169	0.225	0.210	1.63

E-Filed Strength at 0 cm from edges surrounding the EUT (V/m)

Frequency Range (KHz)	Operation condition	Test Position A (V/m)	Test Position B (V/m)	Test Position C (V/m)	Test Position D (V/m)	Test Position E (V/m)	Test Position F (V/m)	Limits (V/m)
115kHz-205kHz	1% battery	0.139	0.219	0.145	0.106	0.175	0.260	614
115kHz-205kHz	50% battery	0.230	0.128	0.111	0.153	0.156	0.231	614
115kHz-205kHz	99% battery	0.215	0.214	0.185	0.248	0.211	0.261	614

For setup B:
Worst Case Operating Mode: Mode 9

1% battery
H-Filed Strength at (distance from 0cm to 20cm at 2cm iteration) surrounding the EUT (A/m)

Test distance (cm)	Test Position A(A/m)	Test Position B(A/m)	Test Position C(A/m)	Test Position D(A/m)	Test Position E(A/m)	Test Position F(A/m)	Limits (A/m)
0	0.212	0.199	0.212	0.191	0.185	0.192	1.63
2	0.201	0.186	0.192	0.185	0.175	0.171	1.63
4	0.185	0.190	0.193	0.186	0.204	0.200	1.63
6	0.190	0.185	0.194	0.194	0.180	0.175	1.63
8	0.191	0.191	0.185	0.195	0.181	0.181	1.63
10	0.173	0.200	0.172	0.192	0.185	0.205	1.63
12	0.201	0.195	0.183	0.183	0.185	0.194	1.63
14	0.212	0.190	0.181	0.194	0.215	0.195	1.63
16	0.183	0.192	0.202	0.194	0.182	0.186	1.63
18	0.180	0.185	0.183	0.190	0.181	0.191	1.63
20	0.179	0.176	0.190	0.195	0.190	0.181	1.63

E-Filed Strength at (distance from 0cm to 20cm at 2cm iteration) surrounding the EUT (V/m)

Test distance (cm)	Test Position A(V/m)	Test Position B(V/m)	Test Position C(V/m)	Test Position D(V/m)	Test Position E(V/m)	Test Position F(V/m)	Limits (V/m)
0	0.218	0.198	0.217	0.188	0.186	0.185	614
2	0.242	0.165	0.190	0.168	0.175	0.175	614
4	0.156	0.165	0.191	0.175	0.215	0.185	614
6	0.175	0.175	0.185	0.185	0.168	0.165	614
8	0.185	0.188	0.183	0.165	0.185	0.175	614
10	0.136	0.198	0.174	0.177	0.184	0.185	614
12	0.212	0.175	0.175	0.122	0.180	0.185	1.63
14	0.256	0.185	0.177	0.175	0.242	0.175	614
16	0.186	0.175	0.185	0.185	0.175	0.166	614
18	0.184	0.235	0.182	0.175	0.185	0.175	614
20	0.177	0.258	0.175	0.185	0.185	0.175	614

50% battery

H-Filed Strength at (distance from 0cm to 20cm at 2cm iteration) surrounding the EUT (A/m)

Test distance (cm)	Test Position A(A/m)	Test Position B(A/m)	Test Position C(A/m)	Test Position D(A/m)	Test Position E(A/m)	Test Position F(A/m)	Limits (A/m)
0	0.191	0.186	0.193	0.185	0.186	0.198	1.63
2	0.202	0.182	0.202	0.188	0.201	0.192	1.63
4	0.190	0.185	0.181	0.178	0.187	0.201	1.63
6	0.184	0.193	0.167	0.185	0.177	0.180	1.63
8	0.175	0.201	0.193	0.198	0.185	0.195	1.63
10	0.190	0.185	0.173	0.198	0.168	0.190	1.63
12	0.195	0.182	0.164	0.175	0.215	0.188	1.63
14	0.184	0.191	0.195	0.172	0.156	0.201	1.63
16	0.191	0.174	0.205	0.186	0.188	0.185	1.63
18	0.182	0.191	0.196	0.136	0.186	0.196	1.63
20	0.193	0.193	0.189	0.178	0.191	0.185	1.63

E-Filed Strength at (distance from 0cm to 20cm at 2cm iteration) surrounding the EUT (V/m)

Test distance (cm)	Test Position A(V/m)	Test Position B(V/m)	Test Position C(V/m)	Test Position D(V/m)	Test Position E(V/m)	Test Position F(V/m)	Limits (V/m)
0	0.226	0.154	0.108	0.178	0.173	0.190	614
2	0.245	0.228	0.215	0.124	0.232	0.275	614
4	0.175	0.171	0.264	0.126	0.137	0.157	614
6	0.213	0.207	0.123	0.113	0.293	0.259	614
8	0.234	0.096	0.166	0.231	0.246	0.187	614
10	0.212	0.145	0.112	0.182	0.202	0.162	614
12	0.289	0.190	0.223	0.240	0.255	0.175	614
14	0.279	0.178	0.197	0.215	0.268	0.228	614
16	0.230	0.213	0.160	0.239	0.208	0.195	614
18	0.113	0.152	0.171	0.205	0.234	0.147	614
20	0.215	0.242	0.265	0.278	0.239	0.219	614

99% battery

H-Filed Strength at (distance from 0cm to 20cm at 2cm iteration) surrounding the EUT (A/m)

Test distance (cm)	Test Position A(A/m)	Test Position B(A/m)	Test Position C(A/m)	Test Position D(A/m)	Test Position E(A/m)	Test Position F(A/m)	Limits (A/m)
0	0.202	0.226	0.083	0.225	0.138	0.240	1.63
2	0.190	0.183	0.160	0.147	0.118	0.168	1.63
4	0.130	0.250	0.195	0.175	0.157	0.033	1.63
6	0.166	0.225	0.160	0.147	0.172	0.140	1.63
8	0.162	0.187	0.171	0.185	0.137	0.224	1.63
10	0.189	0.186	0.197	0.137	0.263	0.124	1.63
12	0.107	0.180	0.130	0.191	0.244	0.146	1.63
14	0.122	0.179	0.220	0.224	0.132	0.216	1.63
16	0.171	0.169	0.236	0.148	0.127	0.110	1.63
18	0.197	0.135	0.199	0.138	0.205	0.261	1.63
20	0.191	0.157	0.188	0.141	0.086	0.288	1.63

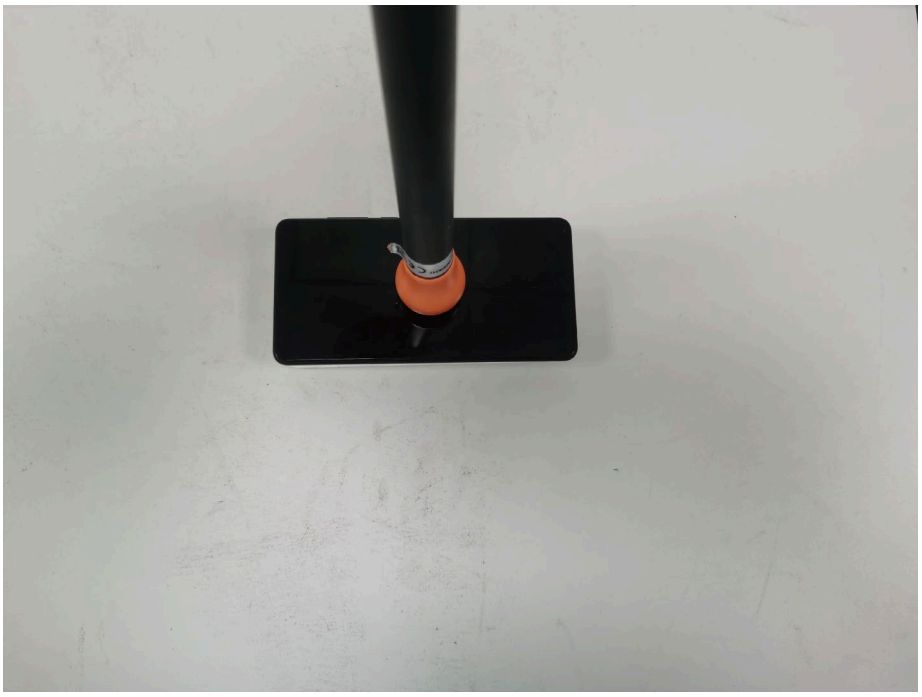
E-Filed Strength at (distance from 0cm to 20cm at 2cm iteration) surrounding the EUT (V/m)

Test distance (cm)	Test Position A(V/m)	Test Position B(V/m)	Test Position C(V/m)	Test Position D(V/m)	Test Position E(V/m)	Test Position F(V/m)	Limits (V/m)
0	0.173	0.180	0.156	0.233	0.213	0.236	614
2	0.175	0.149	0.135	0.231	0.256	0.207	614
4	0.178	0.215	0.160	0.218	0.193	0.149	614
6	0.233	0.163	0.151	0.194	0.114	0.209	614
8	0.193	0.122	0.177	0.172	0.233	0.113	614
10	0.265	0.170	0.102	0.194	0.217	0.217	614
12	0.148	0.120	0.104	0.126	0.141	0.233	614
14	0.162	0.147	0.230	0.242	0.193	0.147	614
16	0.188	0.134	0.254	0.244	0.169	0.219	614
18	0.236	0.204	0.187	0.135	0.136	0.193	614
20	0.148	0.120	0.512	0.248	0.121	0.205	614

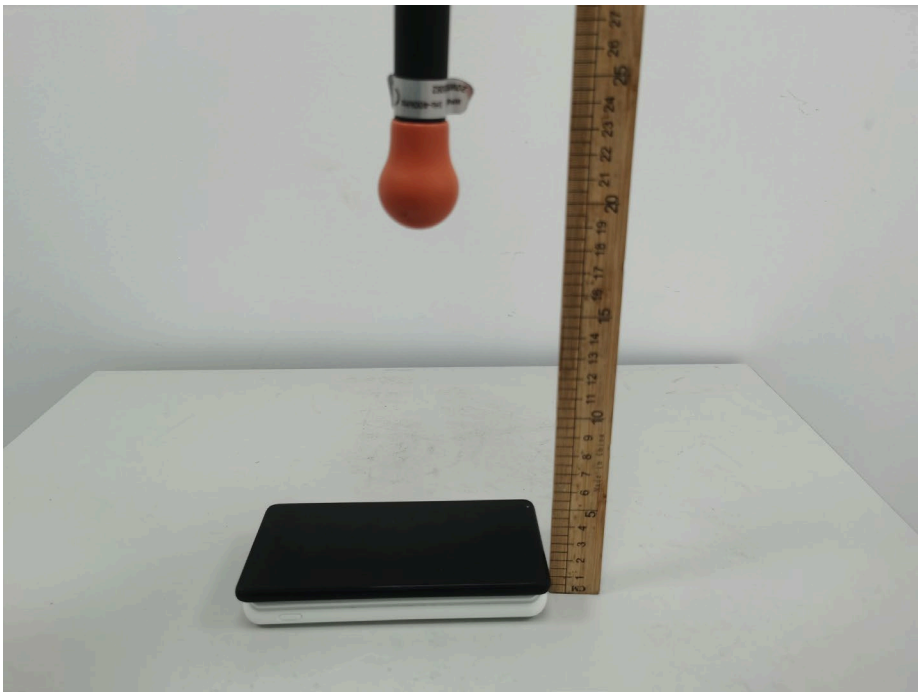
Note: In the frequency range of 1k-10M, except the fundamental frequency, other transmissions of the power transmission system are less than 20dB lower than the maximum fundamental transmission, so it is not necessary to evaluate.

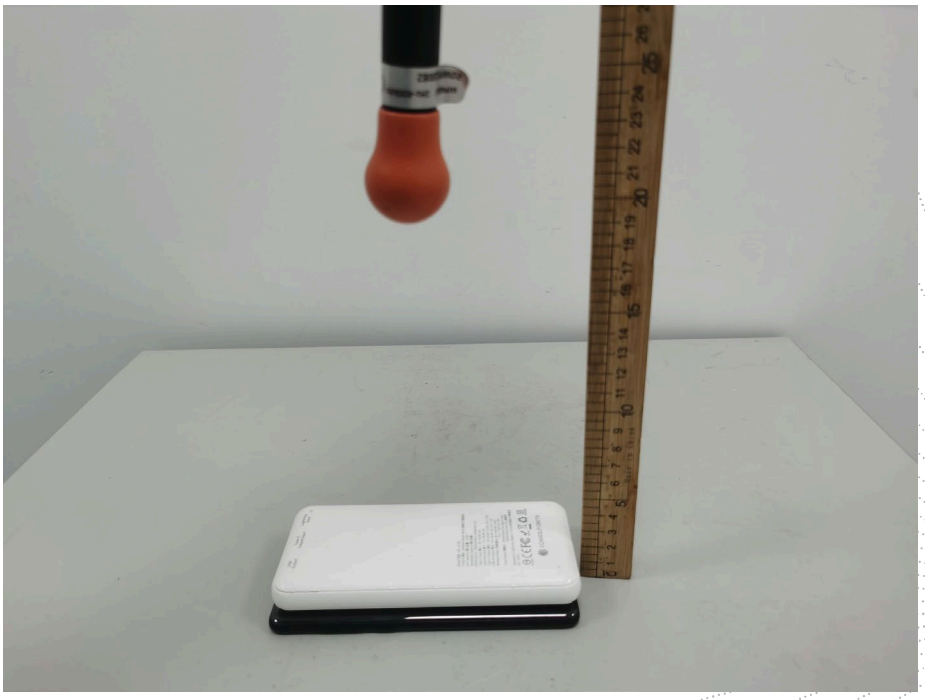
5. Photographs Of Test Set-Up

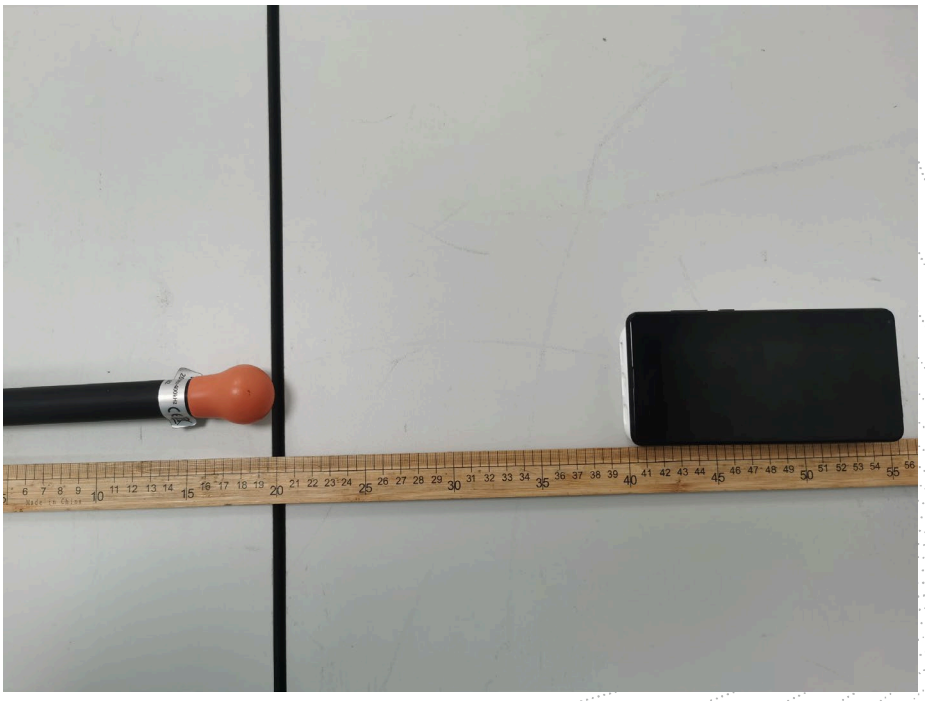
0CM



20CM







STATEMENT

1. The equipment lists are traceable to the national reference standards.

2. The test report can not be partially copied unless prior written approval is issued from our lab.

3. The test report is invalid without the "special seal for inspection and testing".

4. The test report is invalid without the signature of the approver.

5. The test process and test result is only related to the Unit Under Test.

6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.

7. The test report without CMA mark is only used for scientific research, teaching, enterprise product development and internal quality control purposes.

8. The quality system of our laboratory is in accordance with ISO/IEC17025.

9. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address:
1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

TEL：400-788-9558

P.C.: 518103

FAX：0755-33229357

Website：http://www.chnbctc.com

E-Mail：bctc@bctc-lab.com.cn

※※※※※ **END** ※※※※※