

TEST REPORT

Report No.: BCTC2201144129-2E

Applicant: mophie LLC

Product Name: mophie snap+juice pack mini

Model/Type Ref.: SNP-JP-MINI-5K-M2

Tested Date: 2022-01-27 to 2022-02-22

Issued Date: 2022-02-22

Shenzhen **BCTC** Testing Co., Ltd.



FCC ID: 2ACWB-SNAP5KM2

Product Name: mophie snap+juice pack mini
Trademark: mophie
Model/Type Ref.: SNP-JP-MINI-5K-M2
Prepared For: mophie LLC
Address: 6244 Technology Ave. Kalamazoo,MI 49009 U.S.A.
Manufacturer: mophie LLC
Address: 6244 Technology Ave. Kalamazoo,MI 49009 U.S.A.
Prepared By: Shenzhen BCTC Testing Co., Ltd.
Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date: 2022-01-27
Sample tested Date: 2022-01-27 to 2022-02-22
Issue Date: 2022-02-22
Report No.: BCTC2201144129-2E
Test Standards: FCC CFR 47 part1, 1.1307(b), 1.1310
Test Results: PASS

Tested by:



Brave Zeng/ Project Handler

Approved by:



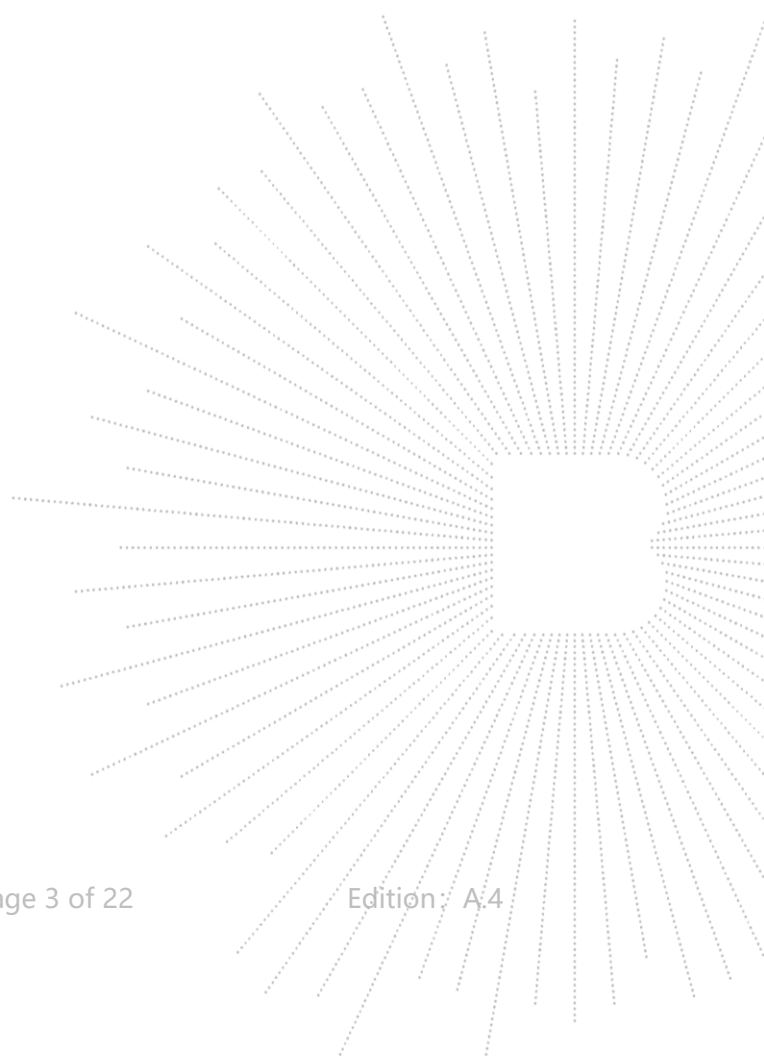
Zero Zhou/Reviewer

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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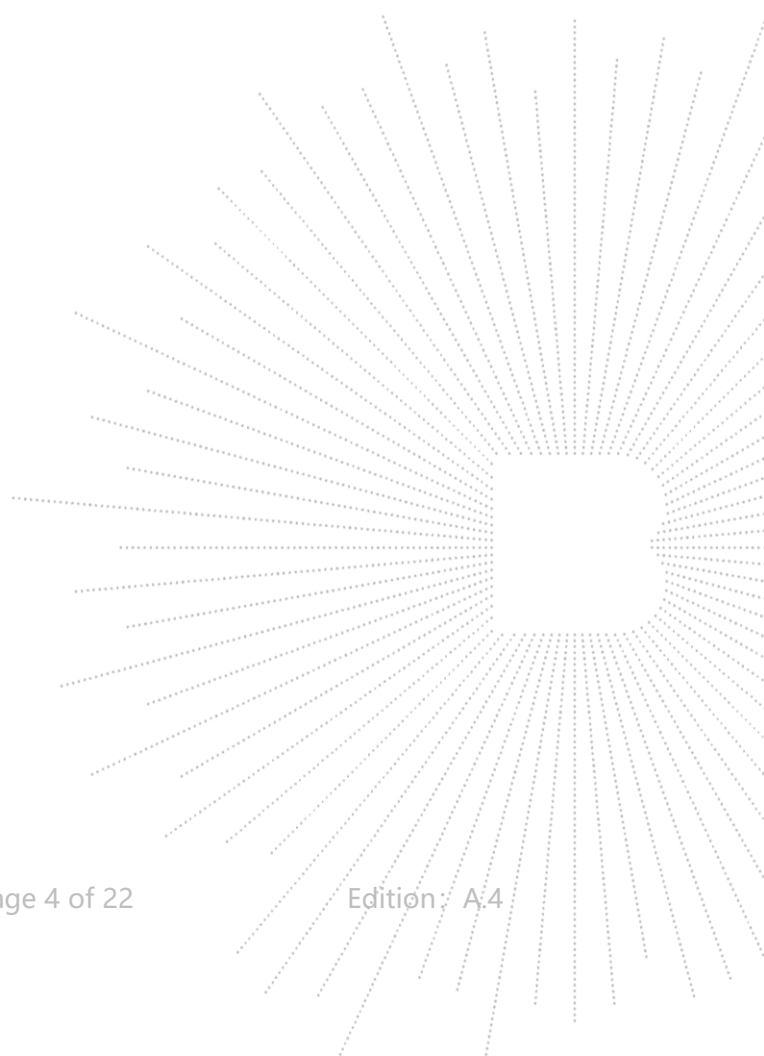
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(Note: N/A Means Not Applicable)



1. Version

Report No.	Issue Date	Description	Approved
BCTC2201144129-2E	2022-02-22	Original	Valid



2. Product Information

2.1 Product Information

Model/Type Ref.:	SNP-JP-MINI-5K-M2
Model differences:	N/A
Product Description:	mophie snap+juice pack mini
Operation Frequency:	115kHz-205kHz
Antenna installation:	loop coil antenna
Ratings:	AC 120V/60Hz/DC 3.7V
Hardware Version:	P180P-5356-V1.0
Software Version:	0xCC04C6B2

Cable of Product

No.	Cable Type	Quantity	Provider	Length (m)	Shielded	Note
1	--	--	Applicant	---	Yes/No	With a ferrite ring in mid Detachable
2	--	--	BCTC	--	Yes/No	--

2.2 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
1.	---	---	---	---	---

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 Modes 1	Wireless (5W)
Test Modes 2	Wireless (7.5W)

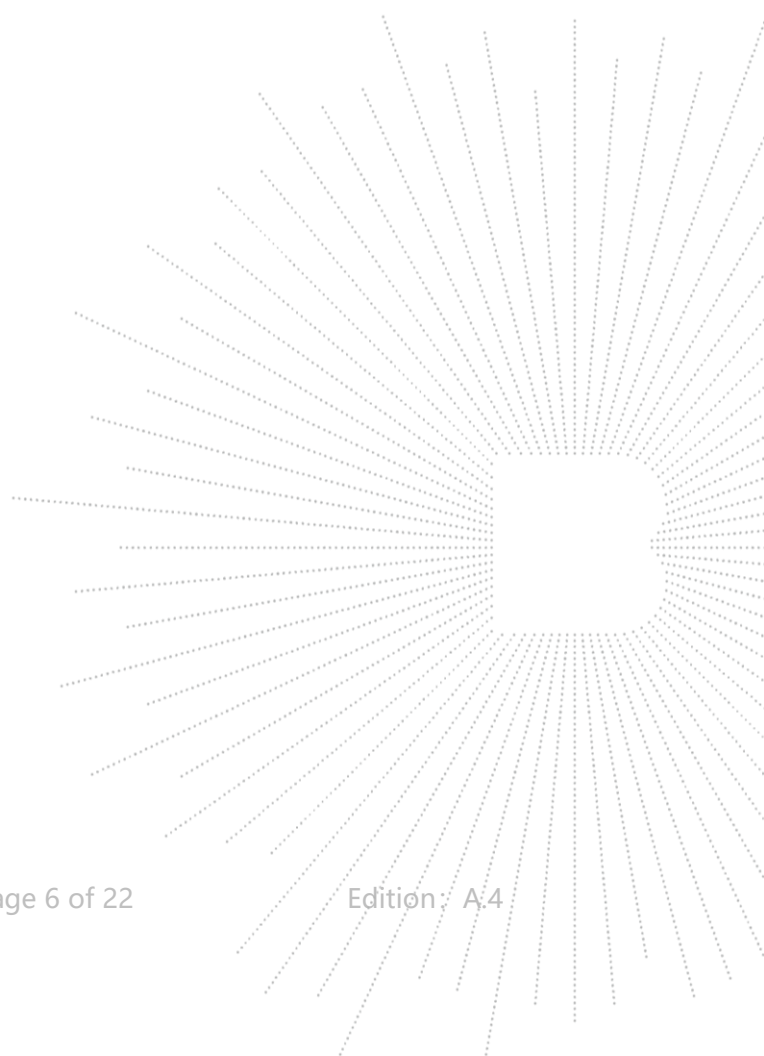
3. Test Facility And Test Instrument Used

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, Tangwei, 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



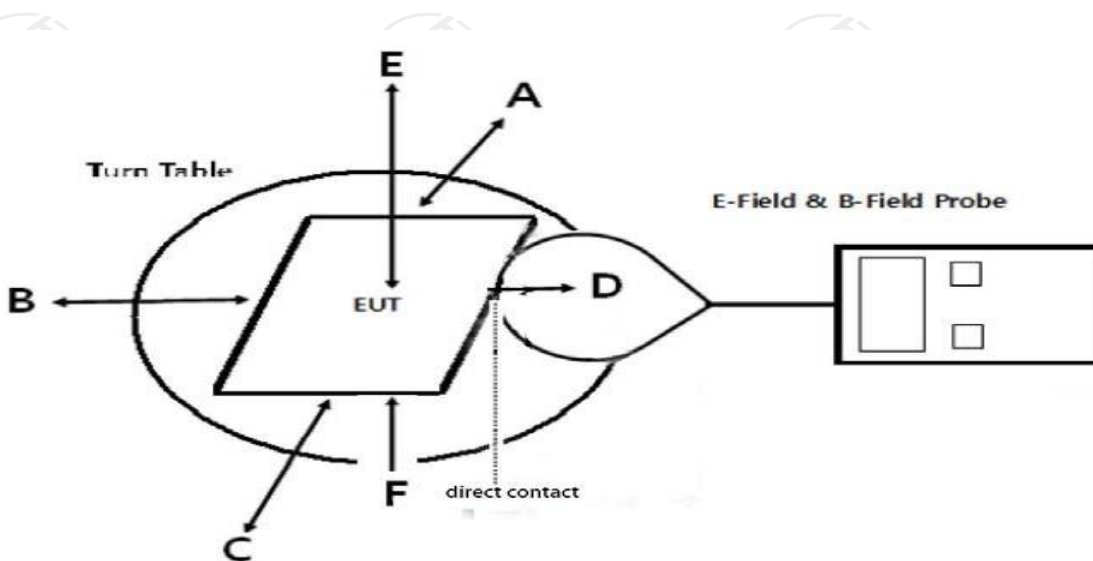
4. Method Of Measurement

4.1 Applicable Standard

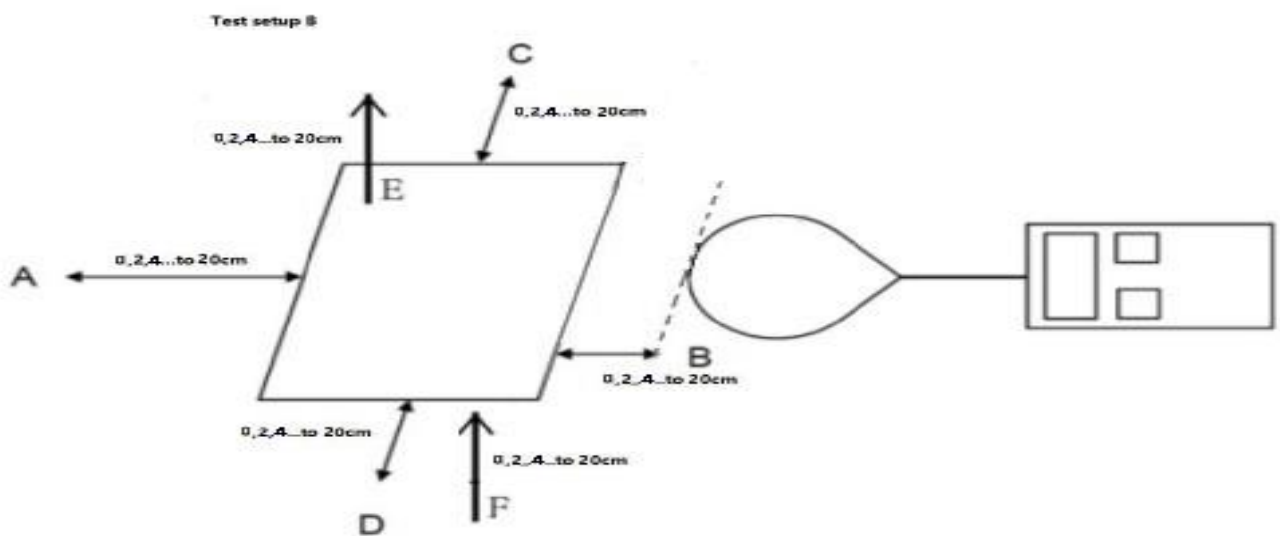
According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. According to §1.1310 and §2.1093 RF exposure is calculated. According 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/ cm ²)	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/ cm ²)	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) The 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.

4.5 E And H Field Strength

For setup A:

Note: Internal battery power mode

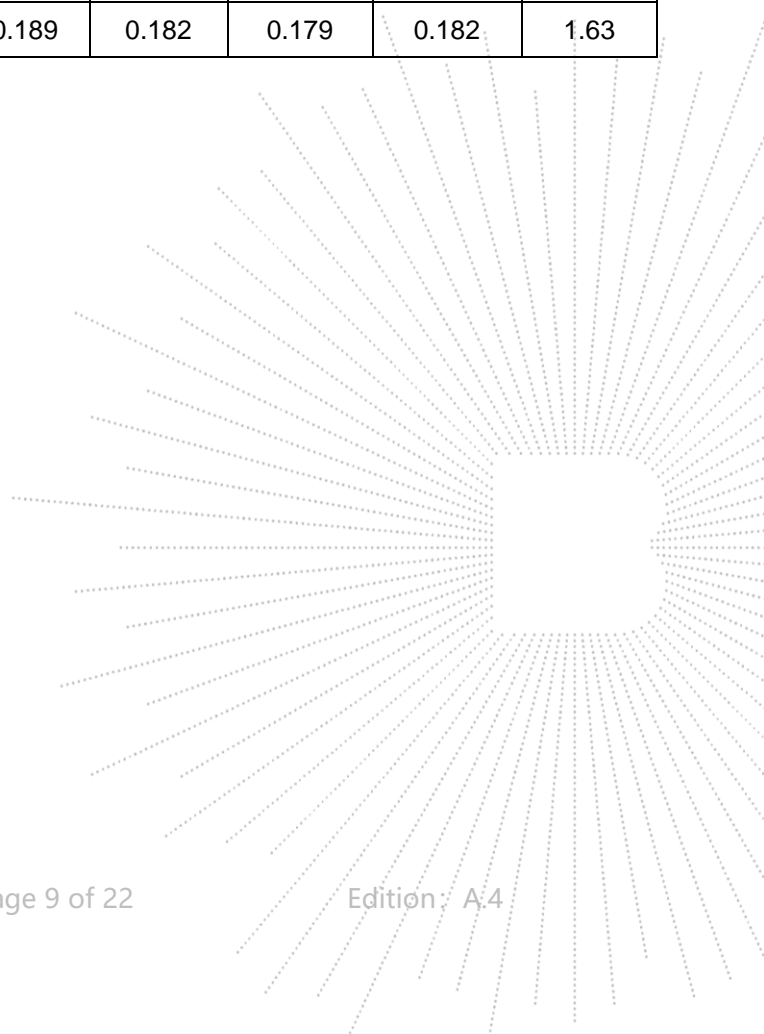
H-Filed Strength at 0 cm from edges surrounding the EUT (A/m)

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	Full load	0.204	0.185	0.206	0.195	0.185	0.193	1.63
115kHz-205kHz	Half load	0.192	0.158	0.196	0.184	0.182	0.191	1.63
115kHz-205kHz	No load	0.195	0.135	0.188	0.180	0.175	0.185	1.63

Note: AC mode

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	Full load	0.202	0.196	0.202	0.196	0.187	0.197	1.63
115kHz-205kHz	Half load	0.196	0.190	0.193	0.187	0.184	0.190	1.63
115kHz-205kHz	No load	0.192	0.178	0.189	0.182	0.179	0.182	1.63



For setup B:

Note: Internal battery power mode

Full Load

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

Half Load

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

NO-load

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	0.192	0.178	0.185	0.182	0.175	0.156	1.63
2	0.211	0.185	0.182	0.186	0.205	0.198	1.63
4	0.183	0.201	0.201	0.199	0.211	0.205	1.63
6	0.191	0.198	0.183	0.205	0.187	0.194	1.63
8	0.202	0.208	0.194	0.207	0.188	0.182	1.63
10	0.184	0.191	0.175	0.179	0.210	0.181	1.63
12	0.182	0.206	0.192	0.214	0.187	0.195	1.63
14	0.211	0.188	0.181	0.205	0.186	0.204	1.63
16	0.175	0.195	0.203	0.171	0.178	0.191	1.63
18	0.196	0.178	0.194	0.202	0.166	0.185	1.63
20	0.180	0.189	0.198	0.189	0.215	0.206	1.63

Note: AC mode

Full Load

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	0.215	0.197	0.195	0.192	0.182	0.195	1.63
2	0.205	0.182	0.190	0.201	0.201	0.198	1.63
4	0.186	0.196	0.180	0.180	0.194	0.180	1.63
6	0.212	0.181	0.194	0.192	0.173	0.182	1.63
8	0.156	0.211	0.212	0.184	0.214	0.210	1.63
10	0.185	0.218	0.168	0.190	0.185	0.185	1.63
12	0.196	0.178	0.185	0.214	0.186	0.211	1.63
14	0.185	0.186	0.178	0.171	0.185	0.192	1.63
16	0.156	0.168	0.185	0.183	0.201	0.188	1.63
18	0.185	0.215	0.168	0.184	0.156	0.168	1.63
20	0.186	0.205	0.168	0.188	0.185	0.185	1.63

Half Load

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	0.192	0.183	0.168	0.168	0.185	0.186	1.63
2	0.211	0.201	0.14	0.158	0.194	0.197	1.63
4	0.158	0.158	0.186	0.188	0.193	0.165	1.63
6	0.198	0.168	0.186	0.205	0.214	0.162	1.63
8	0.188	0.168	0.172	0.168	0.185	0.178	1.63
10	0.195	0.188	0.201	0.188	0.228	0.231	1.63
12	0.214	0.168	0.201	0.205	0.206	0.201	1.63
14	0.185	0.188	0.183	0.201	0.214	0.195	1.63
16	0.168	0.156	0.204	0.193	0.188	0.184	1.63
18	0.198	0.178	0.181	0.194	0.196	0.216	1.63
20	0.185	0.185	0.171	0.185	0.188	0.194	1.63

NO-load

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

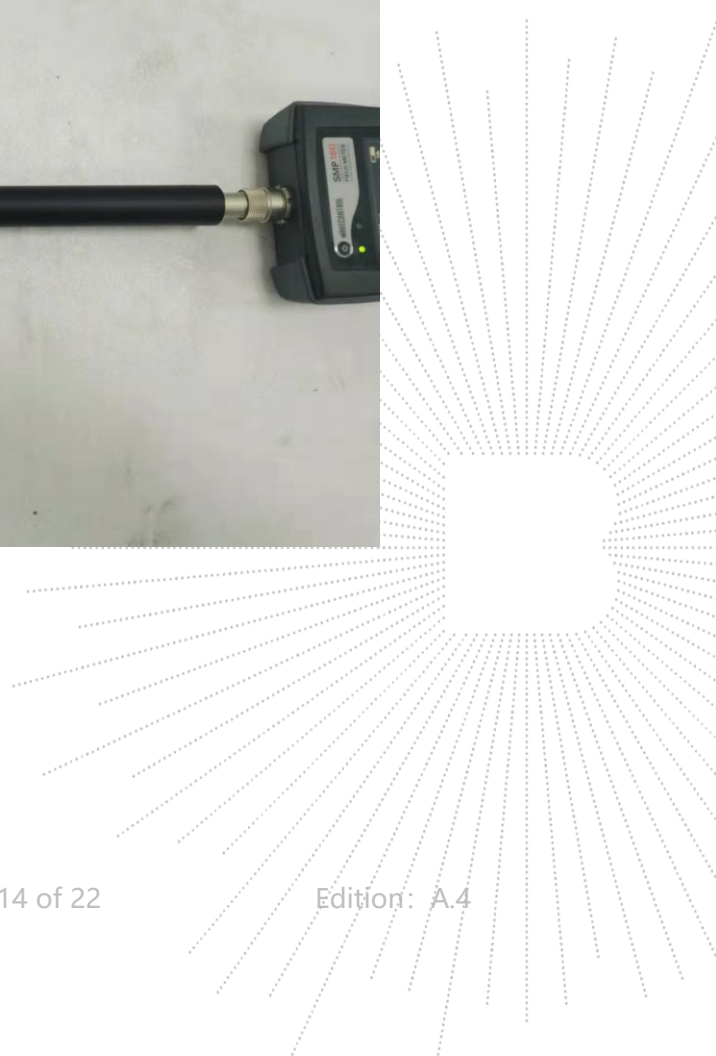
Test distance (cm)	Test Position A(A/m)	Test Position B(A/m)	Test Position C(A/m)	Test Position D(A/m)	Test Position E(A/m)	Test Position F(A/m)	Limits (A/m)
0	0.192	0.175	0.193	0.185	0.176	0.187	1.63
2	0.201	0.215	0.168	0.204	0.163	0.171	1.63
4	0.185	0.179	0.171	0.201	0.199	0.182	1.63
6	0.174	0.192	0.187	0.185	0.218	0.165	1.63
8	0.192	0.212	0.173	0.197	0.187	0.191	1.63
10	0.248	0.209	0.193	0.203	0.201	0.186	1.63
12	0.185	0.184	0.194	0.186	0.181	0.195	1.63
14	0.191	0.202	0.185	0.195	0.187	0.185	1.63
16	0.215	0.195	0.225	0.219	0.223	0.202	1.63
18	0.184	0.179	0.196	0.208	0.177	0.169	1.63
20	0.196	0.203	0.202	0.211	0.185	0.188	1.63

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

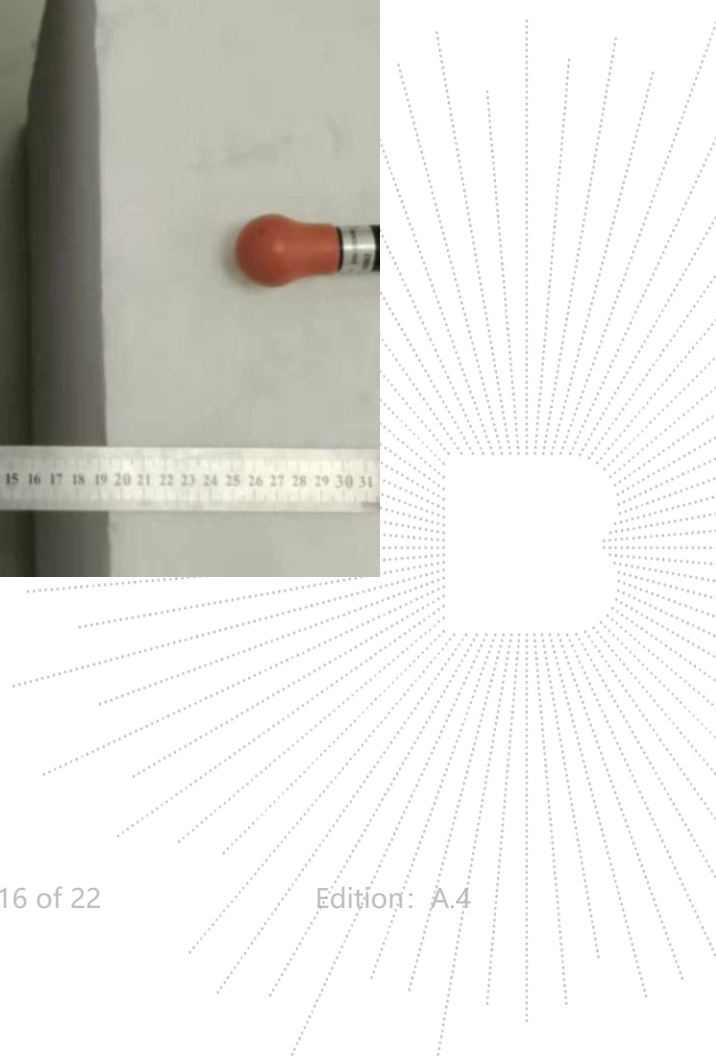
0CM



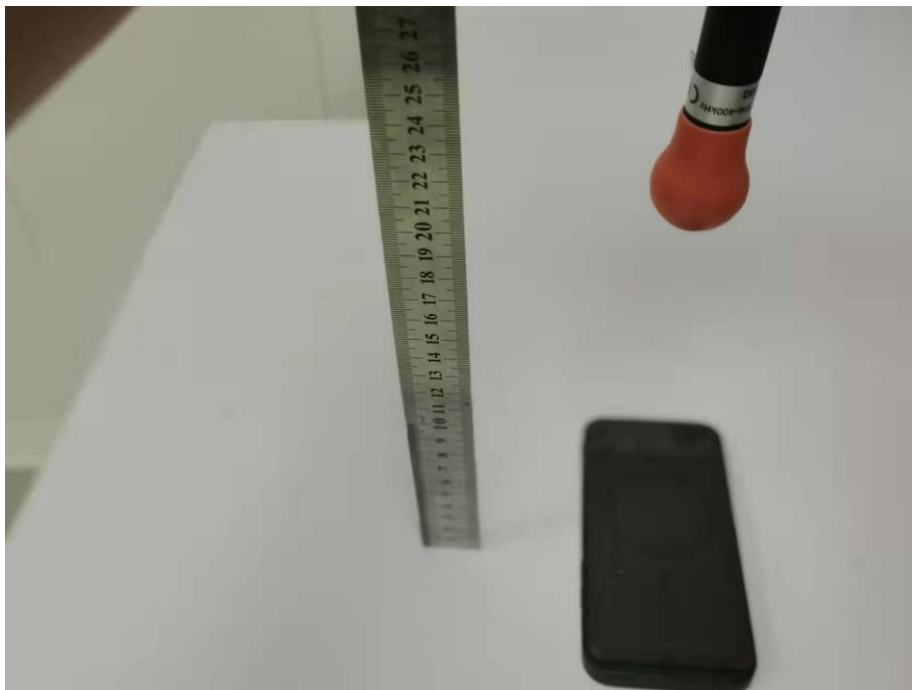




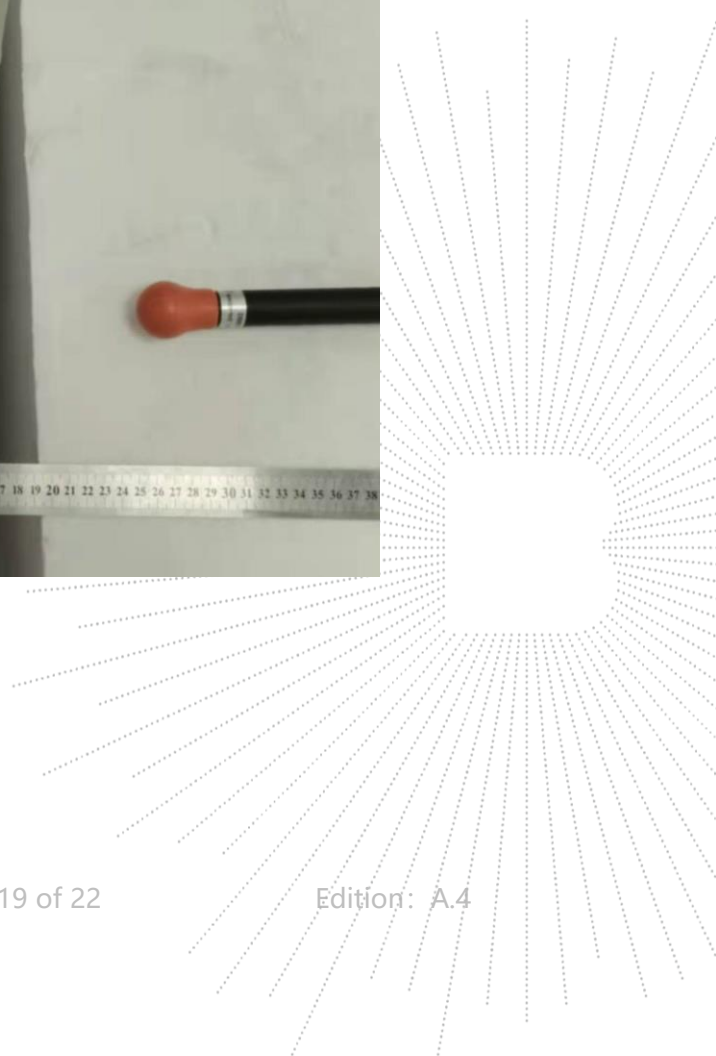
20CM

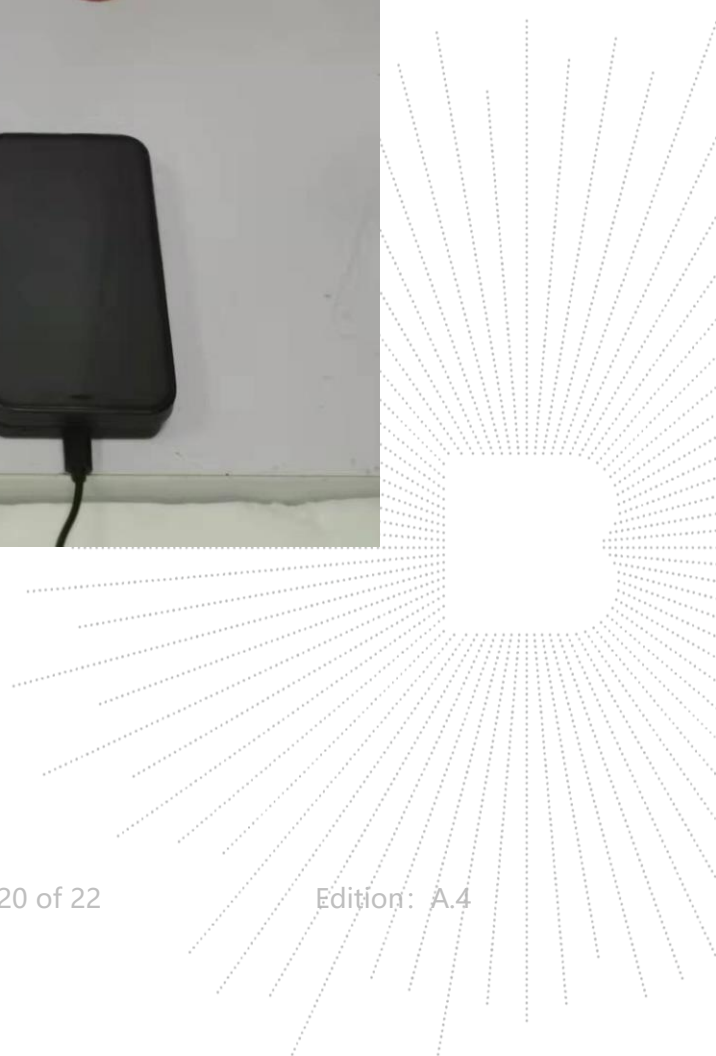


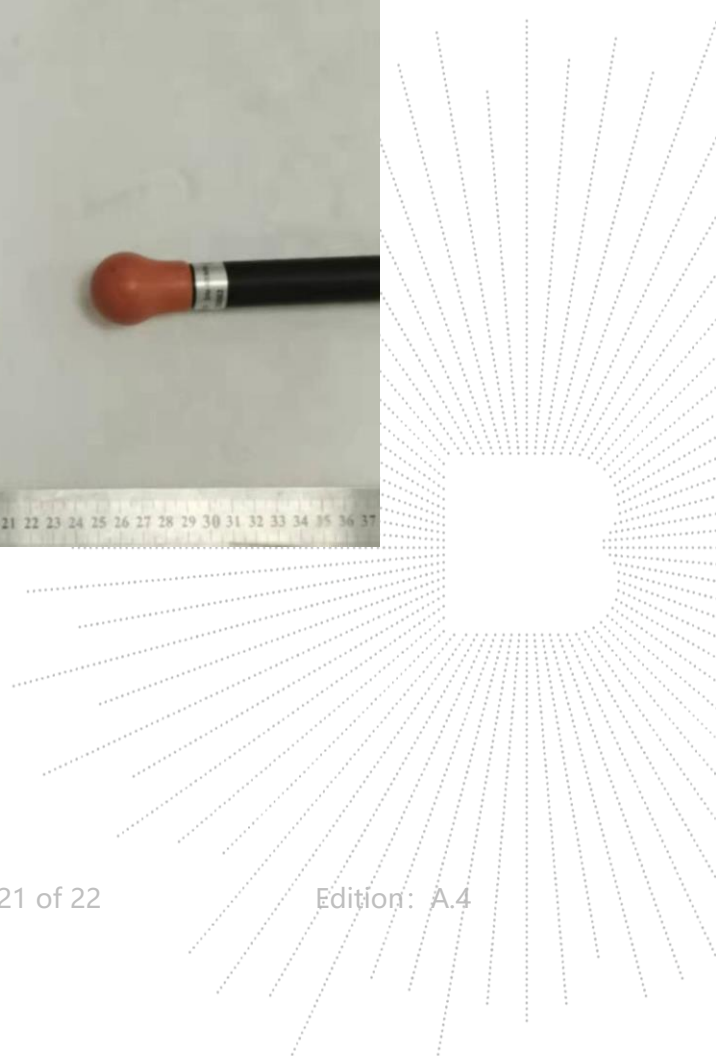




20CM-AC







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 stamp of laboratory.
- 4.The test report is invalid without signature of person(s) testing and authorizing.
- 5.The test process and test result is only related to the Unit Under Test.
- 6.The quality system of our laboratory is in accordance with ISO/IEC17025.
- 7.If there is any objection to 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, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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E-Mail: bctc@bctc-lab.com.cn

***** END *****

