

TEST REPORT

Report No.: BCTC2401180647-2E

Applicant: Adam Elements International Co., LTD.

Product Name: Magnetic 3-in-1 Foldable Travel Charging Station

Test Model: Mag Z


Tested Date: 2024-01-25 to 2024-02-01

Issued Date: 2024-03-13

Shenzhen BCTC Testing Co., Ltd.

FCC ID: 2ABY9MAG-Z

Product Name: Magnetic 3-in-1 Foldable Travel Charging Station

Trademark: 

Model/Type reference: Mag Z

Prepared For: Adam Elements International Co., LTD.

Address: 8F.-5, No. 148, Sec.4, Zhongxiao E. Rd., Da'an Dist., Taipei City, Taiwan 106

Manufacturer: Vina International Holdings LTD

Address: 101-2,201-2, D building, No. 26, East Chang Long RD, FuChengAo, Pinghu Town, Longgang District, Shenzhen, 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: 2024-01-25

Sample tested Date: 2024-01-25 to 2024-02-01

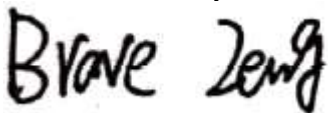
Issue Date: 2024-03-13

Report No.: BCTC2401180647-2E

Test Standards: FCC CFR 47 part1, 1.1307(b), 1.1310
KDB 680106 D01 Wireless Power Transfer v04

Test Results: PASS

Tested by:



Brave Zeng/ Project Handler

Approved by:



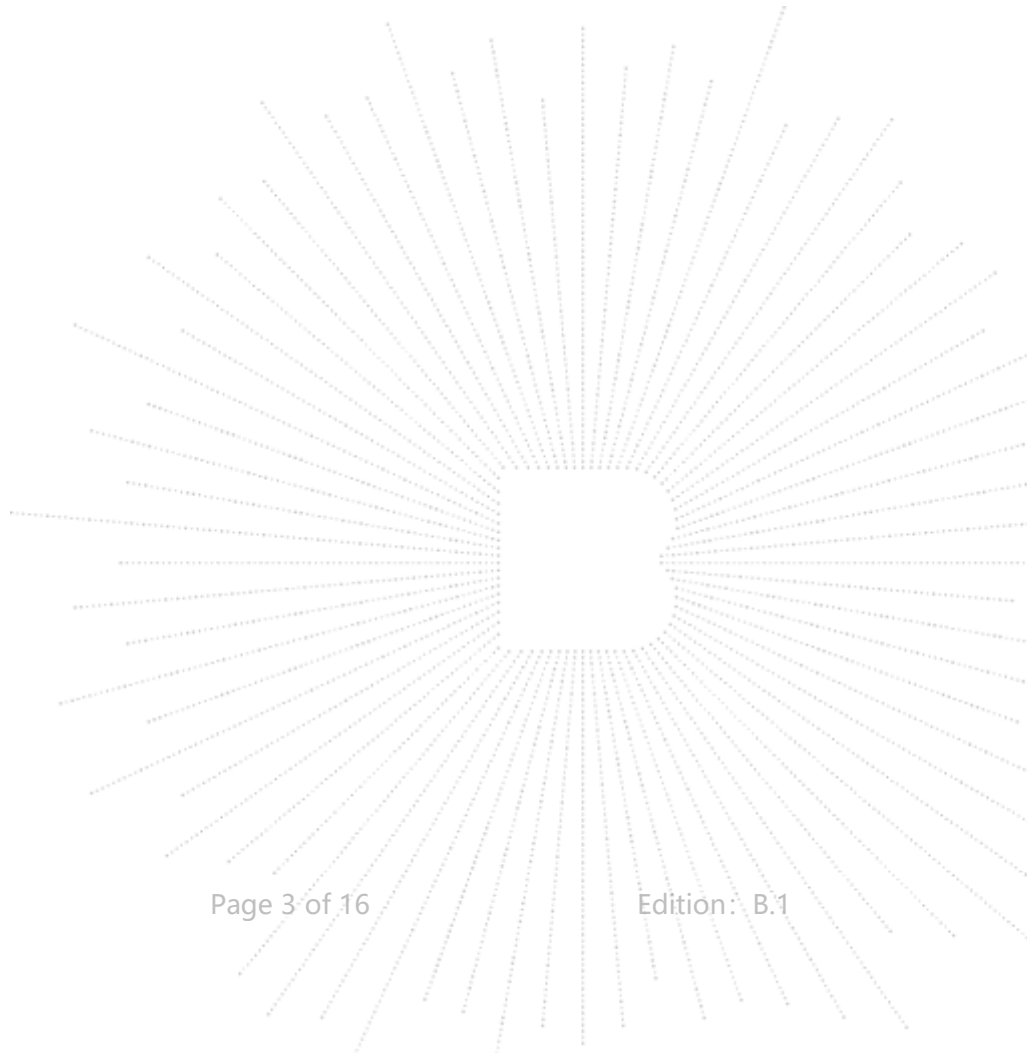
Zero Zhou/Reviewer

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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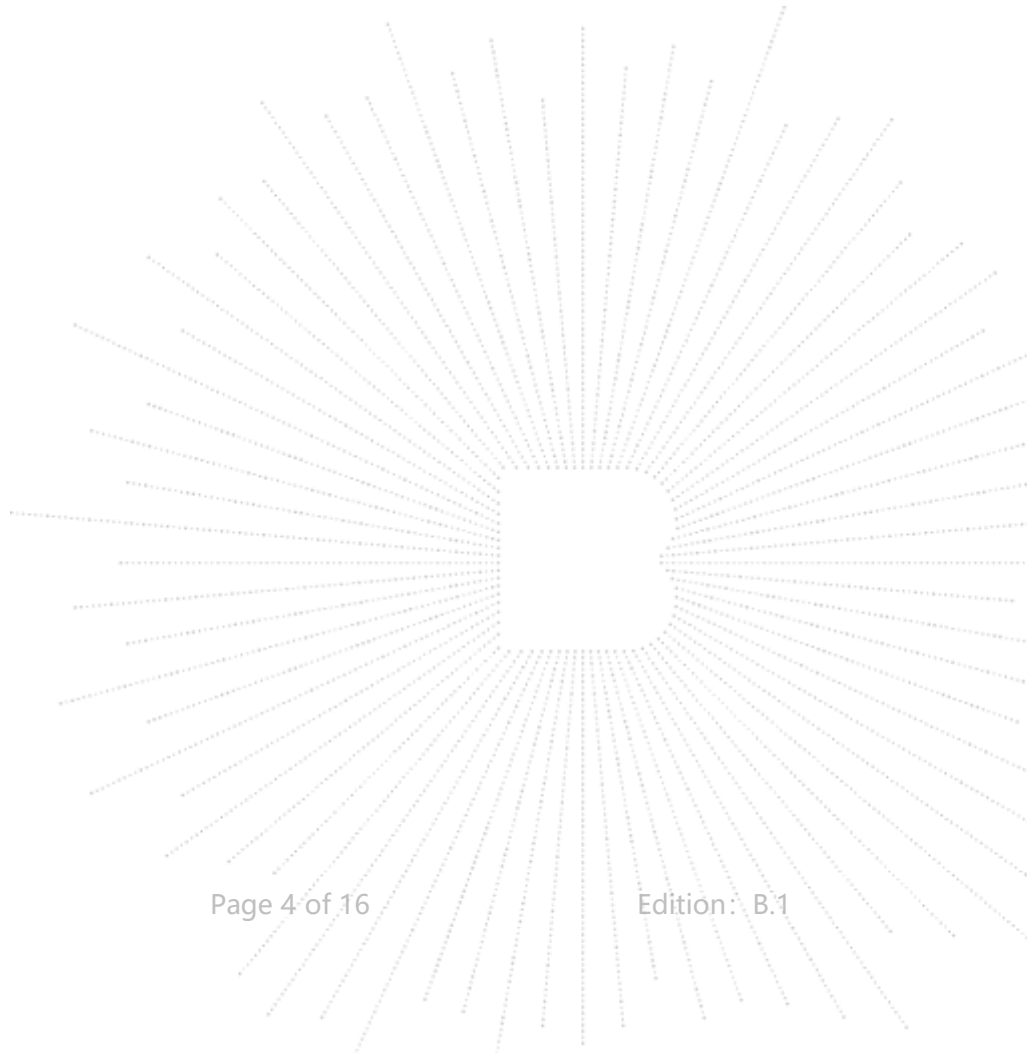
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(Note: N/A Means Not Applicable)



1. Version

Report No.	Issue Date	Description	Approved
BCTC2401180647-2E	2024-03-13	Original	Valid



2. Product Information

2.1 Product Information

Model/Type reference:	Mag Z
Model differences:	N/A
Operation Frequency:	Wireless charging Output (Phone/ Earphone): 112kHz-205kHz, Wireless charging Output (Watch): 300-350kHz
Type of Modulation:	ASK
Antenna installation:	loop coil antenna
Ratings:	Input: DC 5V/3A, 9V/3A,12V/3A Magnetic Charger:5W/7.5W/10W/15W Charging Base:5W(3W when AirPods are being charged) Watch Charger:2.5W
Hardware Version:	N/A
Software Version:	N/A

2.2 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Magnetic 3-in-1 Foldable Travel Charging Station	N/A	Mag Z	N/A	EUT
E-2	Adapter	---	N/A	---	Auxiliary
E-3	Dummy load	N/A	N/A	N/A	Auxiliary
E-4	Dummy load	N/A	N/A	N/A	Auxiliary
E-5	Dummy load	N/A	N/A	N/A	Auxiliary

Notes:

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

2.3 Test Mode

Test Mode 1	Wireless charger 5W (Phone) + Wireless charger 5W (Earphone) + Wireless charger 2.5W (Watch)
Test Mode 2	Wireless charger 7.5W (Phone) + Wireless charger 5W (Earphone) + Wireless charger 2.5W (Watch)
Test Mode 3	Wireless charger 10W (Phone) + Wireless charger 5W (Earphone) + Wireless charger 2.5W (Watch)
Test Mode 4	Wireless charger 15W (Phone) + Wireless charger 5W (Earphone) + Wireless charger 2.5W (Watch)

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

A2LA certificate registration number is: CN1212

ISED Registered No.: 23583

ISED CAB identifier: CN0017

3.2 Test Instrument Used

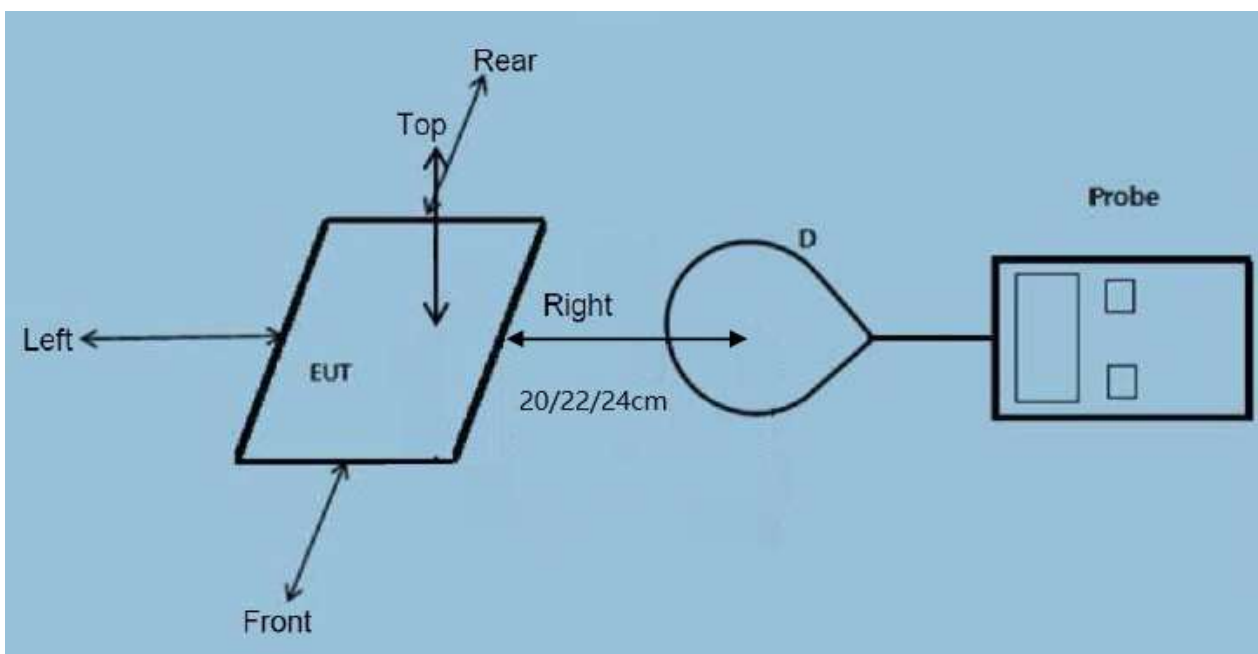
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Electromagnet-ic radiation tester	Wavecontrol	SMP160	19SN0980	May 15, 2023	May 14, 2024
Electromagne-tic field probe	Wavecontrol	WP400-3	20WP120082	Sept. 08, 2023	Sept. 07, 2024
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\

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 KDB 680106 D01 v04:

4.2 Block Diagram Of Test Setup



Note: Measurements should be made from all sides and the top of the primary/client pair, with the 20/22/24 cm measured from the center of the probe(s) to the edge of the device

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 on 360 degree turn table in anechoic chamber.
- b) The measurement probe was placed at test distance (20/22/24cm) which is between the edge of the charger and the geometric centre of probe.
- c) The turn table was rotated 360d degree to search of highest strength.
- d) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- e) The EUT were measured according to the dictates of KDB 680106 D01 v04.

4.5 Equipment Approval Considerations

The EUT does comply with item 5.2 of KDB 680106 D01 v04

1) The power transfer frequency is below 1 MHz.

Yes, the device operate in the frequency range from 112-205KHz,300-350kHz

2) The output power from each transmitting element is less than or equal to 15 watts.

Yes, the maximum output power of the primary coil is 15W.

3) A client device providing the maximum permitted load is placed in physical contact with the transmitter.

Yes, client device is placed directly in contact with the transmitter.

4) Only § 2.1091-Mobile exposure conditions apply

Yes, EUT is a fixed state assessment

5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1.

Yes, Conform to

6) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time.

Yes, Conform to

4.6 E and H field Strength

E-Field test results the electric field strength at 20cm around the EUT.

Battery level	Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position Top	50% Limits Test (V/m)	Limits Test (V/m)
1%	0.112-0.350	0.249	0.230	0.240	0.240	0.230	0.232	307	614
50%	0.112-0.350	0.238	0.223	0.228	0.248	0.228	0.241	307	614
99%	0.112-0.350	0.224	0.249	0.232	0.239	0.240	0.228	307	614

H-Field test results the electric field strength at 20cm around the EUT.

Battery level	Frequency Range (MHz)	Test Position A(uT)	Test Position B(uT)	Test Position C(uT)	Test Position D(uT)	Test Position E(uT)	Test Position Top(uT)	50% Limits Test (uT)	Limits Test (uT)
1%	0.112-0.350	0.259	0.246	0.242	0.231	0.234	0.230	1.019	2.038
50%	0.112-0.350	0.233	0.244	0.237	0.233	0.239	0.230	1.019	2.038
99%	0.112-0.350	0.260	0.244	0.256	0.250	0.231	0.236	1.019	2.038

Battery level	Frequency Range (MHz)	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 Top(A/m)	50% Limits Test (A/m)	Limits Test (A/m)
1%	0.112-0.350	0.207	0.197	0.194	0.185	0.187	0.184	0.815	1.63
50%	0.112-0.350	0.186	0.195	0.190	0.186	0.191	0.184	0.815	1.63
99%	0.112-0.350	0.208	0.195	0.205	0.200	0.185	0.189	0.815	1.63

Note: A/m = uT ÷ 1.25

E-Field test results the electric field strength at 22cm around the EUT.

Battery level	Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position Top	50% Limits Test (V/m)	Limits Test (V/m)
1%	0.112-0.350	0.224	0.239	0.242	0.234	0.246	0.221	307	614
50%	0.112-0.350	0.248	0.248	0.242	0.234	0.248	0.230	307	614
99%	0.112-0.350	0.224	0.242	0.227	0.243	0.225	0.223	307	614

H-Field test results the electric field strength at 22cm around the EUT.

Battery level	Frequency Range (MHz)	Test Position A(uT)	Test Position B(uT)	Test Position C(uT)	Test Position D(uT)	Test Position E(uT)	Test Position Top(uT)	50% Limits Test (uT)	Limits Test (uT)
1%	0.112-0.350	0.245	0.245	0.239	0.251	0.248	0.257	1.019	2.038
50%	0.112-0.350	0.257	0.234	0.243	0.238	0.246	0.231	1.019	2.038
99%	0.112-0.350	0.239	0.234	0.247	0.233	0.235	0.244	1.019	2.038

Battery level	Frequency Range (MHz)	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 Top(A/m)	50% Limits Test (A/m)	Limits Test (A/m)
1%	0.112-0.350	0.196	0.196	0.191	0.201	0.198	0.206	0.815	1.63
50%	0.112-0.350	0.205	0.187	0.195	0.191	0.197	0.185	0.815	1.63
99%	0.112-0.350	0.192	0.187	0.198	0.186	0.188	0.195	0.815	1.63

Note: A/m = uT ÷ 1.25

E-Field test results the electric field strength at 24cm around the EUT.

Battery level	Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position Top	50% Limits Test (V/m)	Limits Test (V/m)
1%	0.112-0.350	0.234	0.243	0.230	0.243	0.220	0.222	307	614
50%	0.112-0.350	0.229	0.232	0.229	0.231	0.231	0.232	307	614
99%	0.112-0.350	0.238	0.225	0.240	0.244	0.222	0.236	307	614

H-Field test results the electric field strength at 24cm around the EUT.

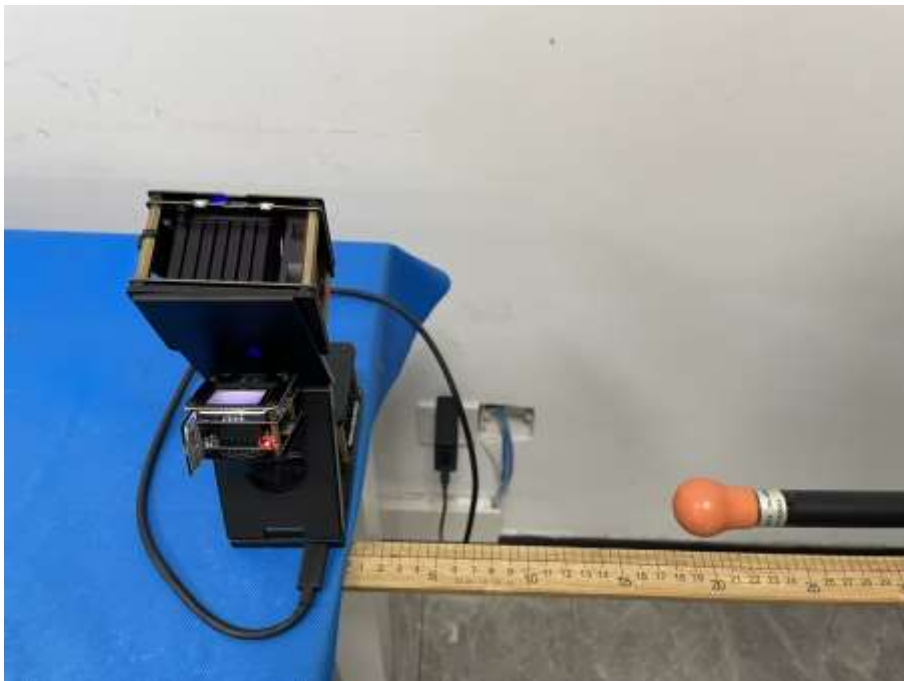
Battery level	Frequency Range (MHz)	Test Position A(uT)	Test Position B(uT)	Test Position C(uT)	Test Position D(uT)	Test Position E(uT)	Test Position Top(uT)	50% Limits Test (uT)	Limits Test (uT)
1%	0.112-0.350	0.251	0.247	0.241	0.258	0.238	0.245	1.019	2.038
50%	0.112-0.350	0.231	0.243	0.236	0.245	0.241	0.246	1.019	2.038
99%	0.112-0.350	0.252	0.246	0.258	0.231	0.254	0.239	1.019	2.038

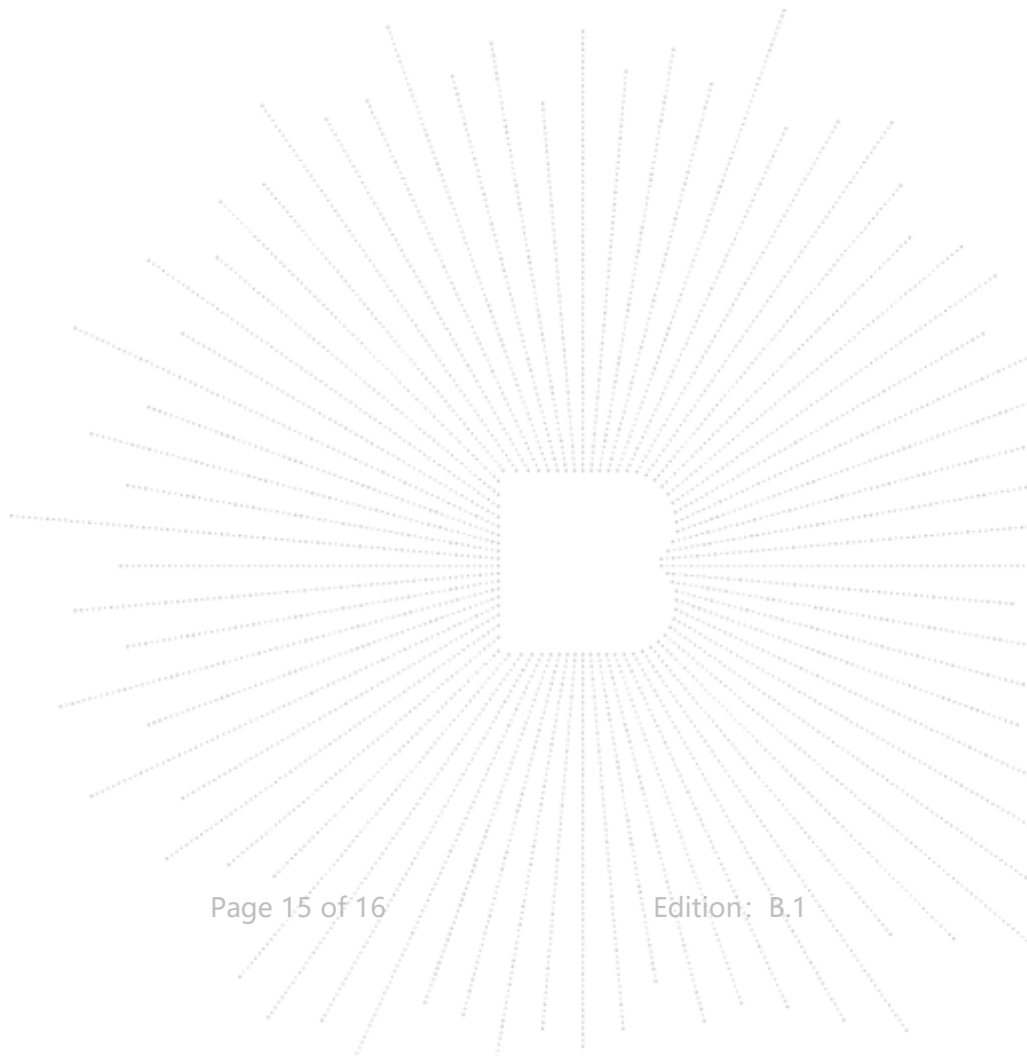
Battery level	Frequency Range (MHz)	Test Position A(A/m)	Test Position B(A/m)	Test Position C(A/m)	Test Position D(A/m)	Test Position E(A/m)	Test Position Top(A/m)	50% Limits Test (A/m)	Limits Test (A/m)
1%	0.112-0.350	0.201	0.198	0.193	0.206	0.191	0.196	0.815	1.63
50%	0.112-0.350	0.185	0.195	0.189	0.196	0.193	0.197	0.815	1.63
99%	0.112-0.350	0.201	0.197	0.206	0.185	0.203	0.191	0.815	1.63

Note: A/m = uT ÷ 1.25

5. Photographs Of Test Set-Up







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

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***** END *****