

# TEST REPORT

Report No.: BCTC2407667117-2E

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Applicant: JLR Gear

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Product Name: WIRELESS CHARGING MAGNETIC BATTERY

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Test Model: 2AMG5-STG-7076-KB

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Tested Date: 2024-07-04 to 2024-07-11

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Issued Date: 2024-08-12

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

# FCC ID: 2AMG5-STG-7076-KB

Product Name: WIRELESS CHARGING MAGNETIC BATTERY

Trademark: Connect

Model/Type Reference: 2AMG5-STG-7076-KB, PD-14, PD-08, IGT-12,GT-\*\*\*, iGT-\*\*\*, A-\*\*\*B-\*\*\* C-\*\*\* D-\*\*\*E-\*\*\*F-\*\*\*G-\*\*\*H-\*\*\*,I-\*\*\*J-\*\*\*K-\*\*\*L-\*\*\*M-\*\*\* N-\*\*\* O-\*\*\*P-\*\*\*Q-\*\*\*R-\*\*\*S-\*\*\*T-\*\*\*U-\*\*\* V-\*\*\*W-\*\*\* X-\*\*\* Y-\*\*\* Z\*\*\*, WS-\*\*\*, US-\*\*\*, UD-\*\*\* (\*\* represents any number 0-9 or letter A-Z or blank. It only represents different models due to different appearance colors and sales strategies)

Prepared For: JLR Gear

Address: 2434 Research Dr Livermore, California United States 94550

Manufacturer: ShenZhen iGood Tech Co.,Ltd

Address: Room201, Building 3, Fifth Industrial Zone, Tianliao Community, Yutang Street, Guangming District, Shenzhen

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: 2024-07-04

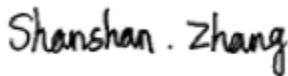
Sample Tested Date: 2024-07-04 to 2024-07-11

Report No.: BCTC2407667117-2E

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

Test Results: PASS

Tested by:



Shanshan. Zhang / Project Handler

Approved by:



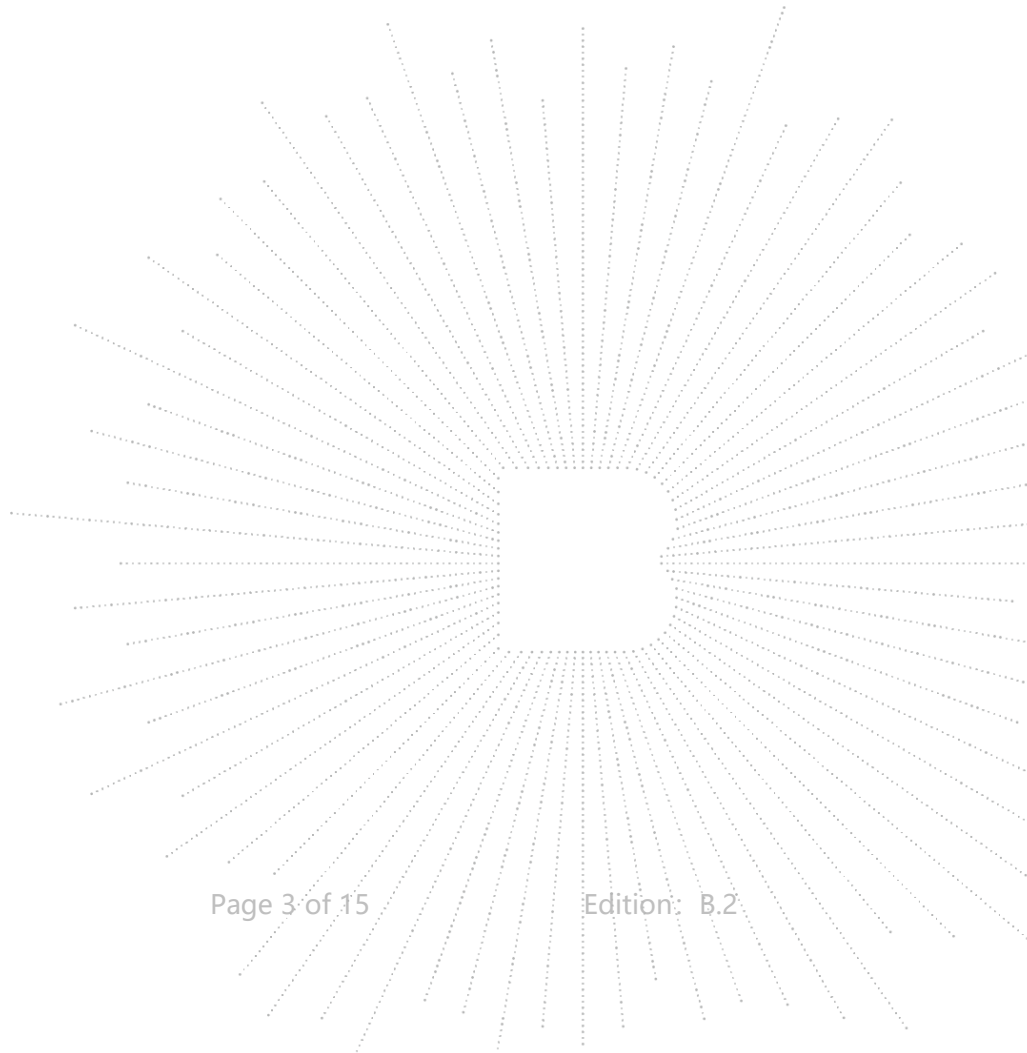
Zero Zhou/Reviewer

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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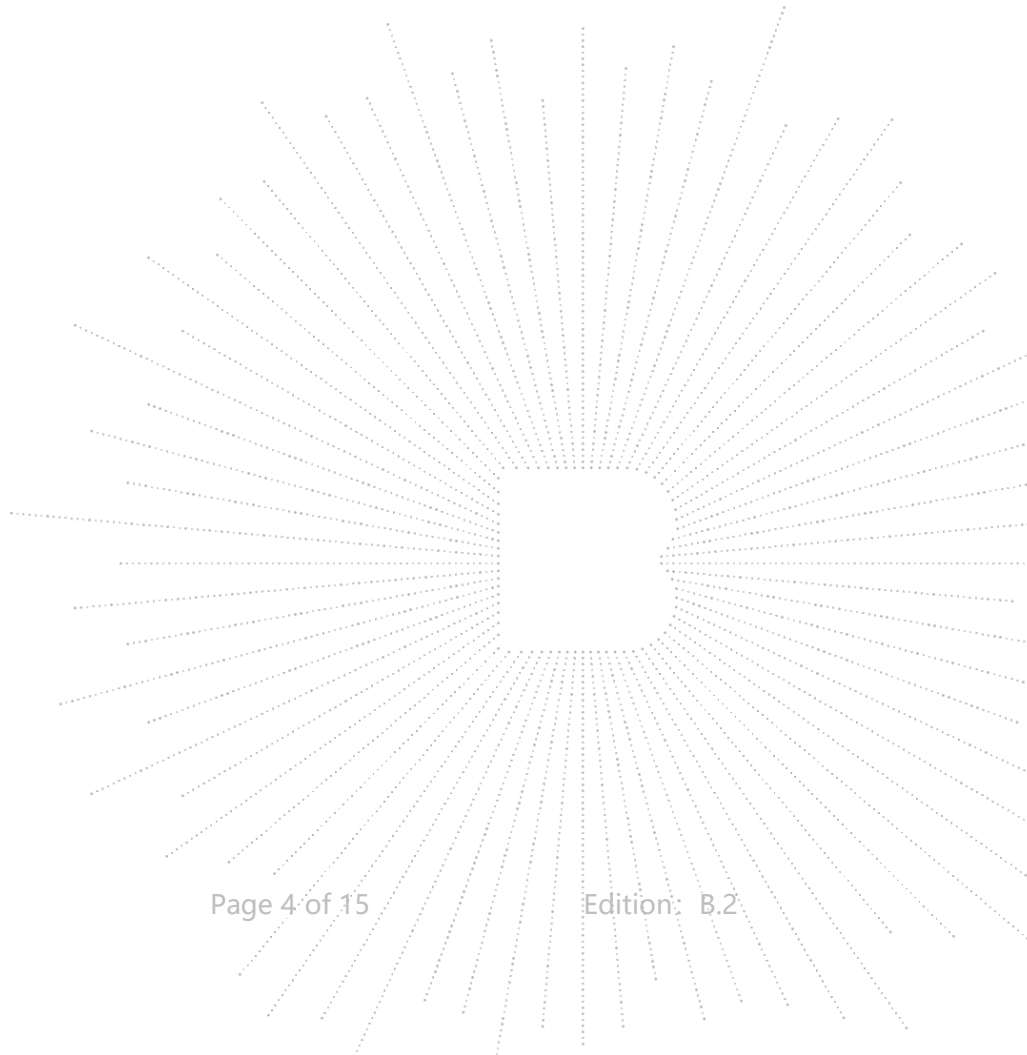
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(Note: N/A Means Not Applicable)



**1. Version**

<b>Report No.</b>	<b>Issue Date</b>	<b>Description</b>	<b>Approved</b>
BCTC2407667117-2E	2024-08-12	Original	Valid



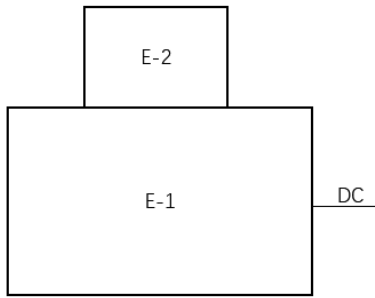
## 2. Product Information

### 2.1 Product Information

Model/Type reference:	2AMG5-STG-7076-KB,PD-14, PD-08, IGT-12,GT-***, iGT-***,A-***B-*** C-*** D-***E-***F-***G-***H-**,I-***J-***K-***L-***M-***N-***O-***P-***Q-***R-***S-***T-***U-*** V-***W-*** X-*** Y-*** Z*** , WS-***, US-*** , UD-*** (***) represents any number 0-9 or letter A-Z or blank. It only represents different models due to different appearance colors and sales strategies)
Model differences:	The following models of units we produce are identical in electrical, mechanical and physical structure; The difference is only in the model name, we finally have 2AMG5-STG-7076-KB, as test model.
Hardware Version:	V1.0
Software Version:	V1.0
Type of Modulation:	ASK
Operation Frequency:	112-205KHz
Antenna installation:	Loop coil antenna
Ratings:	USB-C Input: DC 5V/3A, 9V/2A USB-C Output: DC 5V/3A,9V/2.22A,12V/1.67A Wireless Output: 5W/7.5W/10W/15W
Battery:	DC 3.85V, 10000mAh

### 2.2 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	WIRELESS CHARGING MAGNETIC BATTERY	N/A	2AMG5-STG-7076-KB	N/A	EUT
E-2	Dummy load	N/A	DL01	N/A	Dummy load
E-3	Adapter	N/A	KA3601A-1252880US	N/A	Auxiliary


**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**

DC Mode	Mode 1	Wireless Charging (Full load)
	Mode 2	Wireless Charging (Half load)
	Mode 3	Wireless Charging (Null load)

Note: All test mode were tested and passed, only shows the worst case mode which were recorded in this report.

### 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

EMF Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Electromagnetic radiation tester	Wavecontrol	SMP160	19SN0980	May 16, 2024	May 15, 2025
Electromagnetic field probe	Wavecontrol	WP400-3	20WP120082	May 16, 2024	May 15, 2025
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\

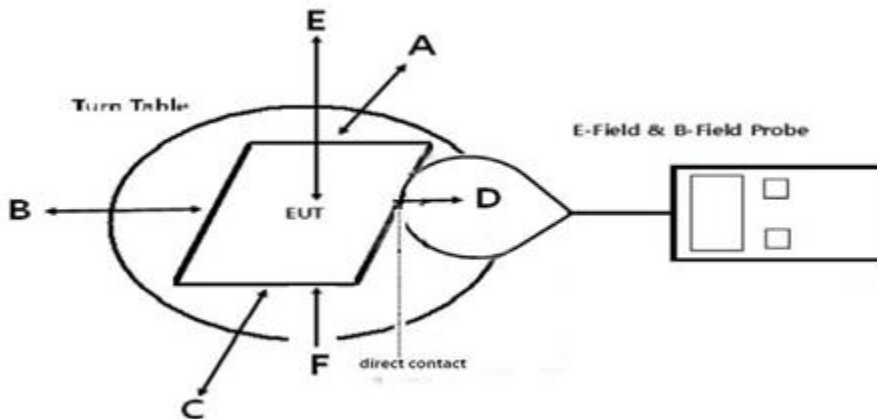
## 4. Method Of Measurement

### 4.1 Applicable Standard

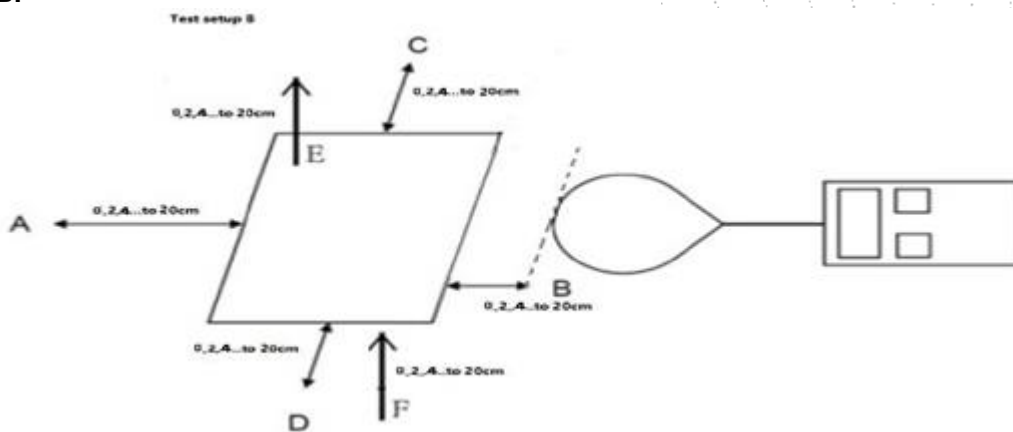
According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. According to §1.1310 and §2.1093 RF exposure is calculated. According KDB680106 D01v04: RF Exposure Wireless Charging v04.

### 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 <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> 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 <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> 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 each
- d) 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.
- d) The EUT was measured according to the dictates of KDB680106 D01v04.
- 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 Equipment Approval Considerations

The EUT does comply with item 5(b) of KDB 680106 D01v04

1) Power transfer frequency is less than 1MHz

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

2) Output power from each primary coil 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

No, the EUT is portable condition 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, confirm.

#### 4.6 E and H field Strength

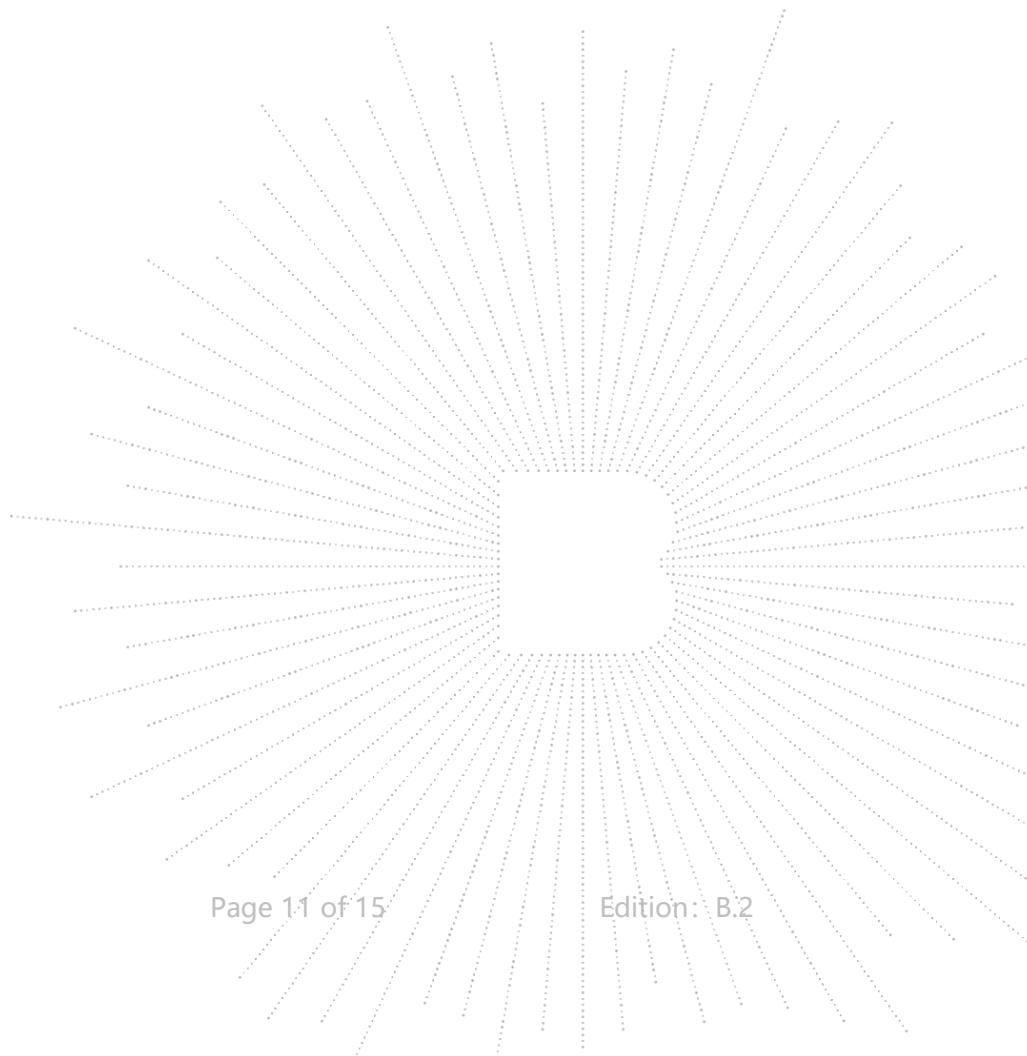
Mobile: Test Mode 1 (the worst mode)

H-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of 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)
99%	0.112-0.205	0.068	0.075	0.066	0.062	0.070	0.066

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)
99%	0.112-0.205	0.055	0.060	0.053	0.049	0.056	0.053	0.814	1.63

Note: A/m = uT ÷ 1.25



Portable: Test Mode 1 (the worst mode)

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

Test distance (cm)	Test Position A(uT)	Test Position B(uT)	Test Position C(uT)	Test Position D(uT)	Test Position E(uT)	Test Position F(uT)
2	0.1395	0.1049	0.0921	0.1164	0.0569	0.0578
4	0.1551	0.1258	0.1001	0.1288	0.0629	0.0630
6	0.0269	0.0145	0.0149	0.0186	0.0130	0.0118
8	0.0213	0.0085	0.0098	0.0138	0.0090	0.0085
10	0.0208	0.0077	0.0092	0.0134	0.0085	0.0076
12	0.0215	0.0079	0.0087	0.0135	0.0092	0.0087
14	0.0213	0.0087	0.0093	0.0136	0.0084	0.0087
16	0.0203	0.0079	0.0090	0.0135	0.0092	0.0073
18	0.0203	0.0086	0.0092	0.0138	0.0079	0.0086
20	0.0213	0.0083	0.0085	0.0127	0.0083	0.0080

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)
2	0.1116	0.0839	0.0737	0.0931	0.0455	0.0462	1.63
4	0.1241	0.1006	0.0801	0.103	0.0503	0.0504	1.63
6	0.0215	0.0116	0.0119	0.0149	0.0104	0.0094	1.63
8	0.0170	0.0068	0.0078	0.0110	0.0072	0.0068	1.63
10	0.0166	0.0062	0.0074	0.0107	0.0068	0.0061	1.63
12	0.0172	0.0063	0.0070	0.0108	0.0074	0.0070	1.63
14	0.0170	0.0070	0.0074	0.0109	0.0067	0.0070	1.63
16	0.0162	0.0063	0.0072	0.0108	0.0074	0.0058	1.63
18	0.0162	0.0069	0.0074	0.0110	0.0063	0.0069	1.63
20	0.0170	0.0066	0.0068	0.0102	0.0066	0.0064	1.63

Note: A/m=uT/1.25

Using Biot-Savart Law, the value of 0cm can be estimated through the test results of 2cm:

Distance: 0cm

battery	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)
99%	0.1255	0.0944	0.0829	0.1047	0.0474	0.0481	1.63

Using Biot-Savart Law, the value of 2cm can be estimated through the test results of 4cm:

Distance: 2cm

battery	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)
99%	0.1390	0.1127	0.0897	0.1153	0.0523	0.0524	1.63

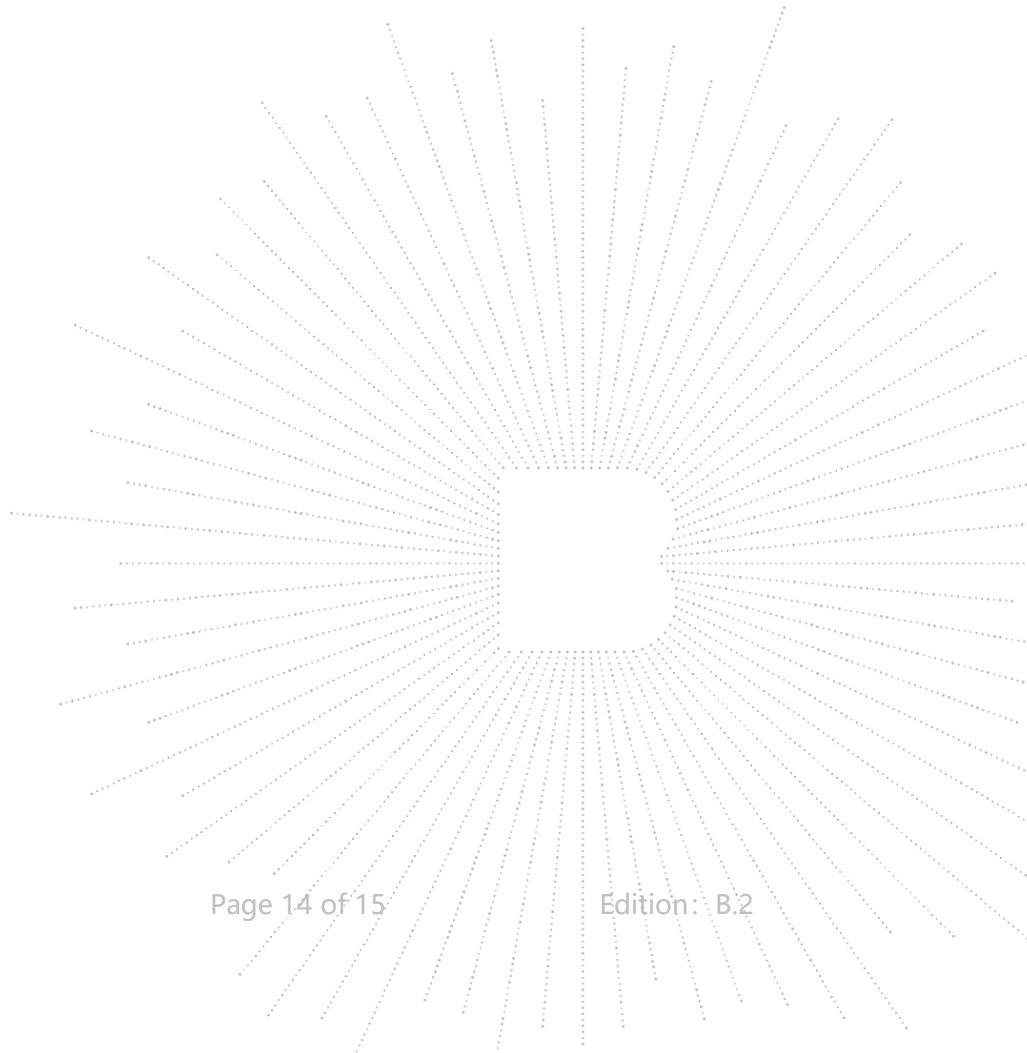
Agreement Ratio

Distance: 2cm

Mode 1				
Test Position	Measure Value (A/m)	Valuation(A/m)	Agreement ratio	Limit
Point A	0.1116	0.1390	21.87%	30%
Point B	0.0839	0.1127	29.30%	30%
Point C	0.0737	0.0897	19.58%	30%
Point D	0.0931	0.1153	21.31%	30%
Point E	0.0455	0.0523	13.91%	30%
Point F	0.0462	0.0524	12.58%	30%
Test result: Pass				

**5. Photographs Of Test Set-Up**

**Mobile: Test Mode 1-3**



**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:**

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

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