Test report

Client Name: Yantai Fuxinda Bimetallic Co., Ltd.

Address of the client: No. 575, Wuwu Road, Muping District, Yantai City, Shandong Province

Sample Name: Copper-Aluminum Alloy Composite Busbar Parts

Sample models: 1.16×3, 30% T2/8030, nickel plated; 2.16×3, 30% T2/8030, tin plated.

Sample quantity: 10 pieces

Other notes...: /

ÿThe above information was provided by the client, and our company is not responsible for its authenticity.

Sample number: U240726018~019

Sample received date: July 26, 2024

Test completion date: August 26, 2024

Report release date: August 30, 2024

Test information:

Serial Number	Testing items	Test Results
1	Electrically charged temperature surge test	See Appendix 2

approve:

Suzhou Meixin Testing Technology Co., Ltd.

Verification code: qgqfvv

Test report

Appendix **1**

Sample image:

Figure 1. Image of sample U240726018~019 before testing

Test report

Appendix **2**

Test item: Electrically charged temperature surge test

1. Testing environment:

Ambient temperature: 26.3ÿ; Humidity: 56%RH

2. Sample testing:

Sample number	Sample Name	model	Sample quantity	Sample description
U240726018-01~05	Copper-aluminum alloy composite busbar parts	16×3, 30%T2/8030, Nickel plating on surface	5	copper-aluminum alloy composite bars
U240726019-01~05	Copper-aluminum alloy composite busbar parts	16×3, 30%T2/8030, Surface tin plating	5	copper-aluminum alloy composite bars

3. Testing equipment:

Serial Number	Equipment Name	Equipment Model	Calibration Date
1	Temperature shock chamber	TSA-101S-W	2024.03.19
2	Paperless recorder	KSF32A0R	2024.02.24
3	Programmable DC power supply	DSP-006-400HD	2024.01.02

4. Testing standards:

According to customer requirements

5. Testing conditions:

1. Temperature: -40ÿ~125ÿ, high and low temperature exposure for 30 minutes, 600 cycles;

2. Measure the temperature rise of the sample before and after the test. During the test, the power supply is 190A DC, and the temperature rise is monitored every 1 minute.

3. Tin-plated 5 pieces, nickel-plated 5 pieces, totaling 10 pieces (3 pieces in each group are charged, and 2 pieces are not charged);

4. After testing, observe the sample surface for any discoloration or cracks.

5. The monitoring locations are shown in the image below;

Test report

6. Test Results:

Sample number	Test results
U240726018~019	After testing, a visual inspection of the sample surface revealed no discoloration or cracks. Temperature rise data are shown in the table below.

	Collection (°C)				Environment (°C)	Temperature rise (°C)			
monitoring point	1. Nickel	2. Nickel	3. Tin	4. Tin		1. Nickel	2. Nickel	3. Tin	4. Tin
0H	68.0	62.6	69.0	67.3	28.0	40.0	34.6	41.0	39.3
100 cycles	-27.7	-29.2	-27.6	-27.7	-38.5	10.8	9.3	10.9	10.8
	134.3	133.0	138.2	139.6	124.8	9.5	8.2	13.4	14.8
159 cycles	-21.9	-23.3	-21	-19.3	-38.3	16.4	15.0	17.3	19.0
	134.5	133.2	138.5	139.9	125.2	9.3	8.0	13.3	14.7
161 loops	-33.1	-33.6	-31.9	-31.4	-38.5	5.4	4.9	6.6	7.1
	134.3	133.0	138.2	139.7	125.0	9.3	8.0	13.2	14.7
200 cycles	-24.7	-26.0	-23.5	-23.4	-38.9	14.2	12.9	15.4	15.5
	134.3	133.0	138.2	139.6	124.9	9.4	8.1	13.3	14.7
284 loops	-30.5	-31.5	-29.3	-27.6	-38.5	8.0	7.0	9.2	10.9
	134.5	133.1	138.4	139.9	125.1	9.4	8.0	13.3	14.8
286 loops	-32.9	-33.7	-32.9	-32.5	-38.6	5.7	4.9	5.7	6.1
	134.3	133.0	138.3	139.8	124.9	9.4	8.1	13.4	14.9
300 cycles	-31.4	-32.4	-31.3	-31.0	-38.6	7.2	6.2	7.3	7.6
	134.3	132.9	138.2	139.8	125.0	9.3	7.9	13.2	14.8
386 loop	-24.2	-26.6	-26.6	-27.3	-38.8	14.6	12.2	12.2	11.5
	134.7	133.3	138.4	140	125.3	9.4	8.0	13.1	14.7
388 loop	-33.1	-34	-33.1	-32.6	-39.1	6.0	5.1	6.0	6.5
	134.4	133.0	138.0	139.6	125.0	9.4	8.0	13.0	14.6

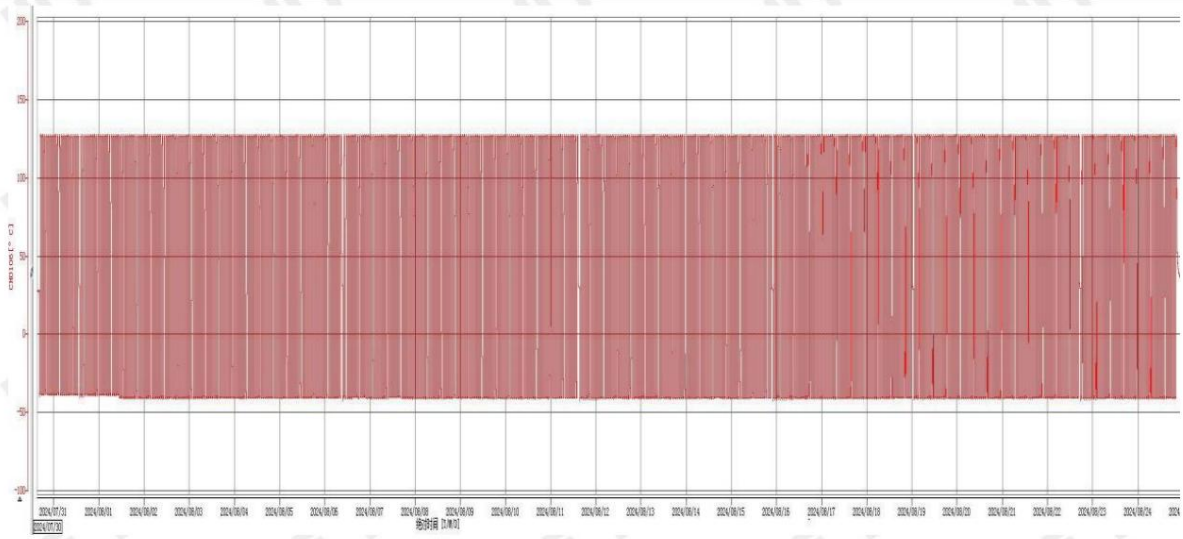
Test report

400 cycles	-32.4	-33.2	-32.3	-31.9	-38.7	6.3	5.5	6.4	6.8
	134.5 133.1		138.1 139.6		125.1	9.4	8.0	13.0	14.5
460 cycles	-13.4	-15.9	-14	-13.9	-37.1	23.7	21.2	23.1	23.2
	134.6 133.3 138.2 139.9				125.2	9.4	8.1	13.0	14.7
462 loops	-33.6	-34.3	-33.4	-32.9	-39.1	5.5	4.8	5.7	6.2
	134.4 133.0 137.9 139.7				125	9.4	8.0	12.9	14.7
500 cycles	-24.7	-26.7	-25.1	-25.2	-38.3	13.6	11.6	13.2	13.1
	134.4 133.1 138.0 139.7				124.9	9.5	8.2	13.1	14.8
548 cycle	-11.6	-14.2	-11.8	-11.6	-37.1	25.5	22.9	25.3	25.5
	134.5 133.1		138.1 139.8		125.2	9.3	7.9	12.9	14.6
550 cycles	-32.9	-33.7	-32.9	-32.5	-39.2	6.3	5.5	6.3	6.7
	134.4 132.9 137.8 139.6				125.0	9.4	7.9	12.8	14.6
600 cycles	-24.3	-26.6	-25.3	-25.6	-38.4	14.1	11.8	13.1	12.8
	134.4 133.1 138.0 139.5				125.0	9.4	8.1	13.0	14.5
After testing	68.4	63.1	69.3	69.0	27.8	40.6	35.3	41.5	41.2

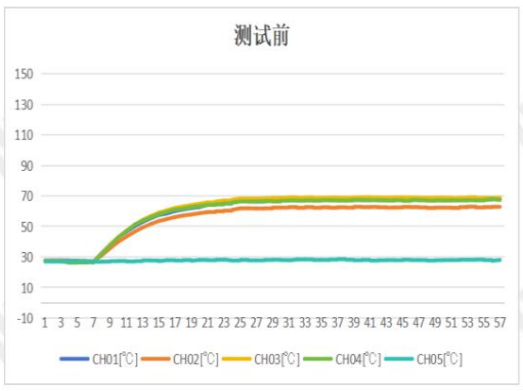
Note: The equipment automatically defrosts on cycles 21, 160, 285, 387, 461, and 549.

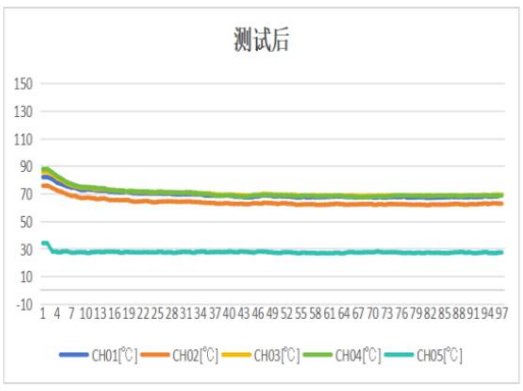
7. Image detection:

Figure 2. Images of sample U240726018~019 during testing.

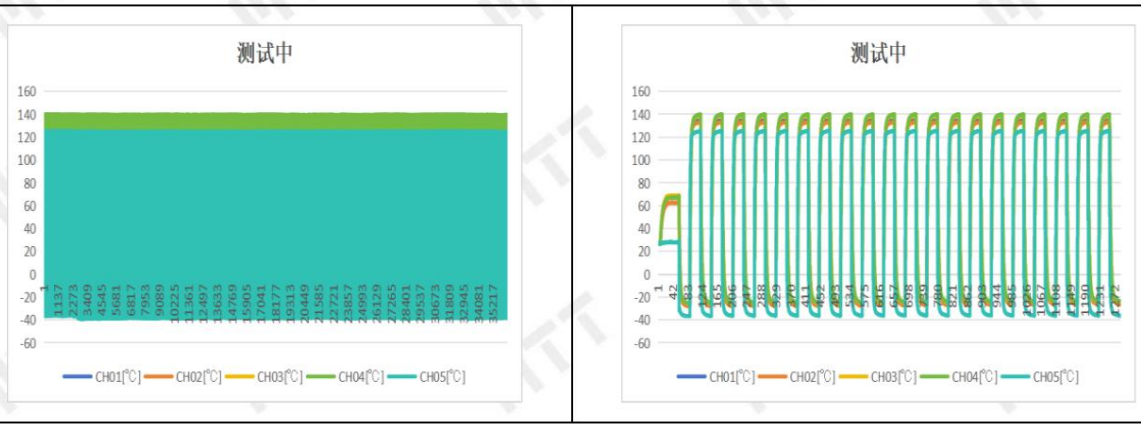


Temperature curve





Test report



Temperature rise curve

Figure 3. Test curves for sample U240726018~019

Figure 4. Images of sample U240726018~019 after testing

Report End

statement:

1. This report is invalid without the company's official inspection and testing seal and the seal across the seam.

2. This report may not be reproduced in any part without the company's written consent.

3. The client is responsible for the accuracy, authenticity, and completeness of the samples and information submitted for testing. Our company is not responsible for the accuracy or authenticity of the information provided by the client.

Verification of authenticity and completeness.

4. This report is only responsible for the results of the tested sample, and the results only reflect the evaluation of the sample.

5. The results in this report are based on descriptions and tests of the tested samples at specific times, using specific methods and applicable standards. These results may vary under different environmental conditions or using different methods.

Different methods and standards used to test the sample may lead to different conclusions.

6. The data results in this report are intended for internal product development, quality control, scientific research, teaching, and other purposes.

7. If the client has any objection to the results of this report, please submit it in writing to our company within 15 days from the date of publication of the report. Failure to do so within the time limit will be deemed as acceptance of this report.

result.