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Guoxinbiao Testing and Certification (Huizhou) Co., Ltd.

Report Number: UCT1630J157

Test Report

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Client		Yueqing Fuyi Switch Co., Ltd.
Address	:	No.151 Jingliu Road, Yueqing Economic Development Zone, Yueqing City, Wenzhou, Zhejiang Province
Sample name	:	Current Transformer
Sample model	:	LZZBJ9-10
Place of survey		Guoxinbiao Testing and Certification (Huizhou) Co., Ltd.
	:	4th Floor, Building C, Xiangshuihe Industrial Zone, West District, Daya Bay, Huizhou City, Guangdong Province
Report Date	:	30 July 2026
Test Category	:	Type Test

sjU17ex

5bnPcU3



Guoxinbiao Testing and Certification (Huizhou) Co., Ltd.

Report Number: UCT1630J157

Test Report

Sample name	Current Transformer		
Sample model	LZZBJ9-10		
Sample Mark	/		
Quantity	3 set		
Production unit	Yueqing Fuyi Switch Co., Ltd.		
Manufacturer's Address	No.151 Jingliu Road, Yueqing Economic Development Zone, Yueqing City, Wenzhou, Zhejiang Province		
Detection Items	See subsequent pages		
Detection cycle	30 June 2026 ~ 30 July 2026		
Detection basis	IEC 61869-1:2007 Instrument transformers — Part 1: General requirements IEC 61869-2:2012 Instrument transformers — Part 2: Additional requirements for current transformers		
Detection environment	Temperature: 20°C ~ 25°C, Humidity: 45%RH ~ 70%RH, Atmospheric Pressure: 86kPa~101kPa		
Detection result	See report contents		
Remark	Test Item Evaluation: — Test meets requirements: P — Test item not applicable to this sample: N/A — Test does not meet requirements: F — Indicates no evaluation is performed: \"—\"		
Chief Inspector		Date:	30 July 2026
examine and verify		Date:	30 July 2026
ratify		Date:	30 July 2026



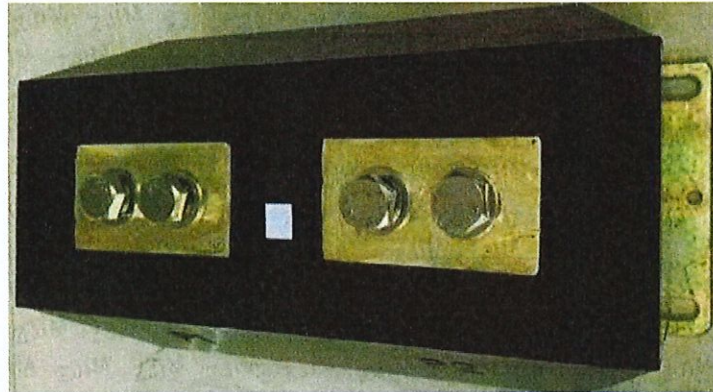


Supplementary Statement

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Sample photo



Nameplate Photo

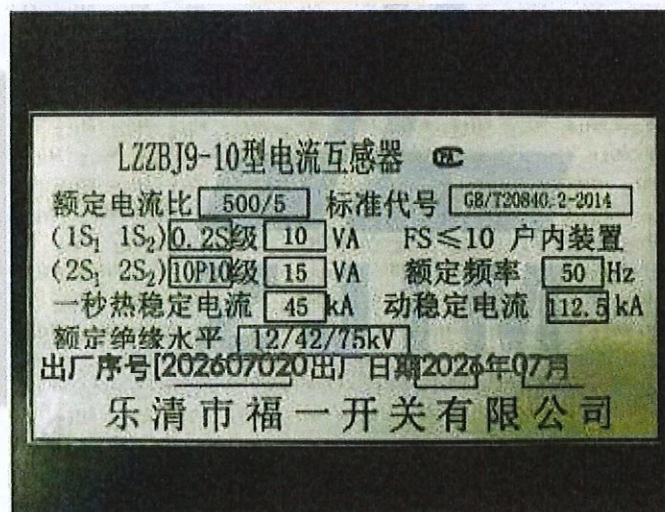




Photo of Equipment Sealing

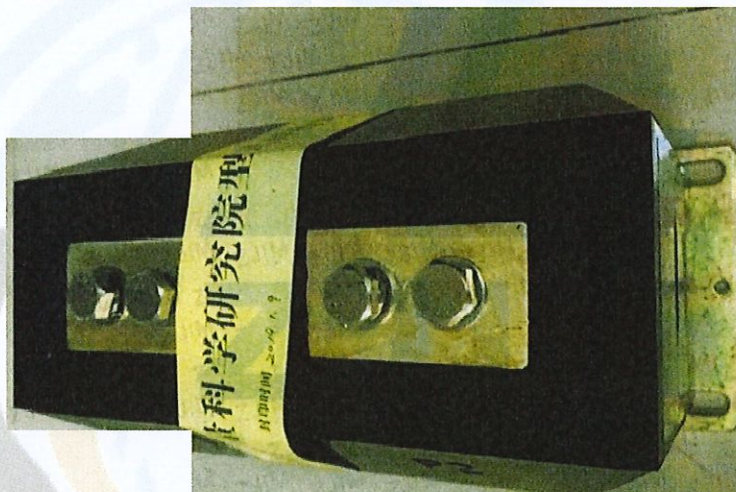
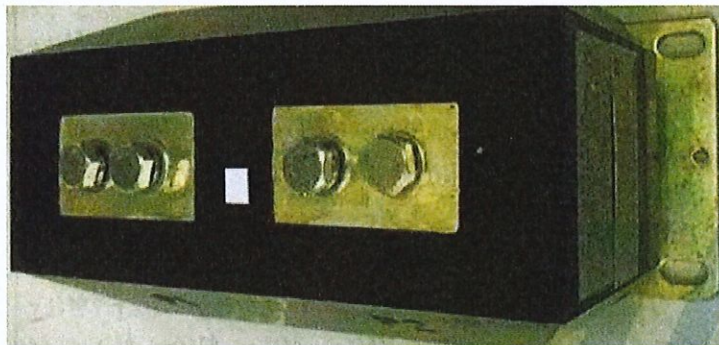


Photo of Components

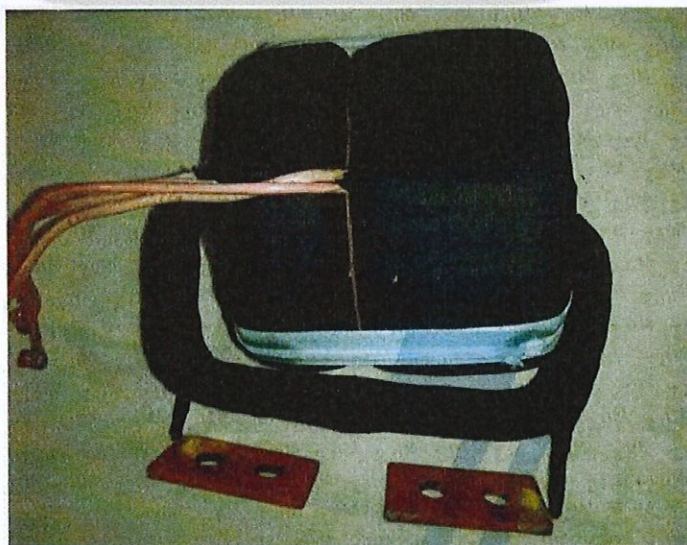




Table of Contents

No.	Test Item	Technical Requirement	Test Result	Conclusion
1	Unit of Measurement	IEC 61869-1:2007	Complied with requirements	qualified
2	Metrological Legal Mark	IEC 61869-1:2007	Complied with requirements	qualified
3	Nameplate Marking	IEC 61869-1:2007	Complied with requirements	qualified
4	Terminal Marking	IEC 61869-1:2007	Complied with requirements	qualified
5	Power-frequency Withstand Voltage of Secondary Winding	IEC 61869-1:2007	Complied with requirements	qualified
6	Accuracy Test	IEC 61869-2:2012	Complied with requirements	qualified
7	Partial Discharge Measurement	IEC 61869-1:2007	Complied with requirements	qualified
8	Insulation Requirements for Secondary Winding	IEC 61869-1:2007	Complied with requirements	qualified
9	Inter-turn Insulation Requirements	IEC 61869-1:2007	Complied with requirements	qualified
10	Temperature Rise Test	IEC 61869-1:2007	Complied with requirements	qualified
11	Rated Lightning Impulse Withstand Voltage of Primary Winding	IEC 61869-1:2007	Complied with requirements	qualified
12	Short-time Current Test	IEC 61869-2:2012	Complied with requirements	qualified
13	Visual Inspection	IEC 61869-1:2007	Complied with requirements	qualified
14	Power-frequency Withstand Voltage Test on Primary Winding (Retest)	IEC 61869-1:2007	Complied with requirements	qualified
15	Partial Discharge Measurement (Retest)	IEC 61869-1:2007	Complied with requirements	qualified
16	Power-frequency Withstand Voltage Test on Secondary Winding (Retest)	IEC 61869-1:2007	Complied with requirements	qualified
17	Inter-turn Insulation Requirements (Retest)	IEC 61869-1:2007	Complied with requirements	qualified
18	Accuracy Test (Retest)	IEC 61869-2:2012	Complied with requirements	qualified
19	Composite Error Test	IEC 61869-2:2012	Complied with requirements	qualified



Detection result

Test Item List		
Unit of Measurement		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Unit of Measurement		
Product No.	Required Value	Measured Value
01~03	Technical documents and data shall adopt the legal measurement units of the State.	qualified
3.result : Qualified		



Detection result

Test Item List		
Metrological Legal Mark		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Metrological Legal Mark		
Product No.	Required Value	Measured Value
01~03	The mark and number approved for the type of measuring instrument shall be indicated on the nameplate, operation manual and package (a reserved position may be provided for new products).	qualified
3.result : Qualified		

**Detection result**

Test Item List		
Nameplate Marking		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Nameplate Marking		
Product No.	Required Value	Measured Value
01~03	The nameplate marking of current transformers shall comply with Clause 6.13 of GB/T 20840.1-2010 and Clause 6.13.202 of GB/T 20840.2-2014.	qualified
3.result : Qualified		



Detection result

Test Item List		
Terminal Marking		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Terminal Marking		
Product No.	Required Value	Measured Value
01~03	Terminal marking requirements: Terminals marked with uppercase and lowercase forms of the same letter shall have the same polarity at any instant.	qualified
3.result : Qualified		

**Detection result**

Test Item List		
Power-frequency Withstand Voltage of Secondary Winding		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Power-frequency Withstand Voltage of Secondary Winding		
Product No.	Required Value	Measured Value
01~03	A power-frequency test voltage of 42 kV (r.m.s.) shall be applied between the primary winding, secondary winding and earth terminal for 1 minute. No flashover or breakdown shall occur.	No flashover, no breakdown
3.result : Qualified		

**Detection result**

Test Item List				
Accuracy Test				
1.Experimental Conditions				
Experimental ambient temperature: 24°C				
2.Test Content				
Accuracy Test				
Product No.	Required Value			Measured Value
01~03	Current error (±%) and phase error (±) at each measuring point shall not exceed the values below: (at the following percentages of rated primary current) (Class 1S11S20.2S)			Detailed data see Appendix 1
	1	5	20-120	
	0.75	0.35	0.2	
	30	15	10	
	Under 100% rated primary current, the current error of the transformer shall not exceed: ±3% (Class 10P)			
3.result : Qualified				

**Detection result**

Test Item List				
Partial Discharge Measurement				
1.Experimental Conditions				
Experimental ambient temperature: 24°C				
2.Test Content				
Partial Discharge Measurement				
Product No.	Required Value	Measured Value		
		01	02	03
01~03	Pre-applied voltage: 33.6 kV, duration ≥ 60 s Measuring voltage: 14.4 kV, duration ≤ 30 s Allowable apparent charge ≤ 50 pC	33pC	33pC	34pC
	Pre-applied voltage: 33.6 kV, duration ≥ 60 s Measuring voltage: 8.3 kV, duration ≤ 30 s Allowable apparent charge ≤ 20 pC	15pC	16pC	16pC
3.result : Qualified				



Detection result

Test Item List		
Insulation Requirements for Secondary Winding		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Insulation Requirements for Secondary Winding		
Product No.	Required Value	Measured Value
01~03	A power-frequency test voltage of 3 kV (r.m.s.) shall be applied between the secondary winding and earth terminal for 1 minute.	No flashover, no breakdown
3.result : Qualified		



Detection result

Test Item List		
Inter-turn Insulation Requirements		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Inter-turn Insulation Requirements		
Product No.	Required Value	Measured Value
01~03	Each secondary winding shall be open-circuited one by one. Rated extended primary current at rated frequency shall be passed through the primary winding. The terminal voltage of secondary winding ≤ 4.5 kV (peak value) for 1 minute. Inter-turn insulation shall not be damaged.	Inter-turn insulation undamaged
3.result : Qualified		

**Detection result**

Test Item List		
Temperature Rise Test		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Temperature Rise Test		
Product No.	Required Value	Measured Value
02	The primary current of the current transformer equals the rated continuous thermal current of 500 A, with rated burden (1S11S2:10 VA, 2S12S2:15 VA) at power factor 0.8. The temperature of the transformer reaches a steady state. Winding temperature rise ≤ 60 K	1S11S2: 31 K 2S12S2: 33 K
	The primary current of the current transformer equals the rated continuous thermal current of 500 A, with rated burden at power factor 0.8. The temperature of the transformer reaches a steady state. Winding terminal temperature rise ≤ 50 K	P1 P2: 21 K 1S11S2: 24 K 2S12S2: 26 K
3.result : Qualified		



Detection result

Test Item List		
Rated Lightning Impulse Withstand Voltage of Primary Winding		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Rated Lightning Impulse Withstand Voltage of Primary Winding		
Product No.	Required Value	Measured Value
02	The secondary terminals and enclosure are earthed. A rated full lightning impulse withstand voltage of 75 kV (peak) is applied between primary terminals and earth. Under each of the positive and negative polarities, 15 successive impulses are applied. No atmospheric condition correction is performed. During the test: No disruptive discharge occurs in non-self-restoring insulation of the transformer; The disruptive discharges in self-restoring insulation for each test series shall not exceed 2 times. This procedure allows a maximum of 25 impulses per test series. No other evidence of insulation damage (such as variation of recorded waveforms) shall be observed.	No flashover, no breakdown (Waveform diagrams see Appendix 2)
3.result : Qualified		



Detection result

Test Item List		
Short-time Current Test		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Short-time Current Test		
Product No.	Required Value	Measured Value
02	Short-time Thermal Current Test: With the secondary winding short-circuited, the current transformer shall withstand a current (r.m.s.) I_n for duration t, such that $(I^2 \cdot t) \geq 2025 (\text{kA})^2 \cdot \text{s}$, and t is between 0.5 s and 5 s. Dynamic Stability Current Test: Carried out jointly with the above test. During the short-time thermal current test, the first major peak value shall not be less than the rated dynamic stability current of 112.5 kA. After cooling following Test 1) and 2), carry out items 13~18. If all six items meet requirements, the current transformer passes this test.	Short-time thermal current: 45 kA (r.m.s.), Duration: 1 s Short-time thermal stability value: $(2025 (\text{kA})^2 \cdot \text{s})$ Dynamic stability current: 112.5 kA (peak) Items 13~18 all satisfy requirements. (Waveform diagrams see Appendix 3)
3.result : Qualified		



Detection result

Test Item List		
Visual Inspection		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Visual Inspection		
Product No.	Required Value	Measured Value
02	No visible damage; no obvious deterioration (e.g. carbonization) of insulation contacting conductor surfaces.	No damage, no deterioration
3.result : Qualified		



Detection result

Test Item List		
Power-frequency Withstand Voltage Test on Primary Winding (Retest)		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Power-frequency Withstand Voltage Test on Primary Winding (Retest)		
Product No.	Required Value	Measured Value
02	A power-frequency test voltage of 37.8 kV (r.m.s.) shall be applied between primary terminals, secondary terminals and earth terminal for 1 minute. No flashover or breakdown shall occur.	No flashover, no breakdown
3.result : Qualified		

**Detection result**

Test Item List		
Partial Discharge Measurement (Retest)		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Partial Discharge Measurement (Retest)		
Product No.	Required Value	Measured Value
02	Pre-applied voltage: 33.6 kV, duration ≥ 60 s Measuring voltage: 14.4 kV, duration ≤ 30 s Allowable apparent charge ≤ 50 pC	39 pC
	Pre-applied voltage: 33.6 kV, duration ≥ 60 s Measuring voltage: 8.3 kV, duration ≤ 30 s Allowable apparent charge ≤ 20 pC	18 pC
3.result : Qualified		

**Detection result**

Test Item List		
Power-frequency Withstand Voltage Test on Secondary Winding (Retest)		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Power-frequency Withstand Voltage Test on Secondary Winding (Retest)		
Product No.	Required Value	Measured Value
02	A power-frequency test voltage of 37.8 kV (r.m.s.) shall be applied between primary terminals, secondary terminals and earth terminal for 1 minute. No flashover or breakdown shall occur.	No flashover, no breakdown
3.result : Qualified		

**Detection result**

Test Item List		
Inter-turn Insulation Requirements (Retest)		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Inter-turn Insulation Requirements (Retest)		
Product No.	Required Value	Measured Value
02	Each secondary winding shall be open-circuited one by one. The primary winding is fed with rated extended primary current of 600 A at rated frequency. The terminal voltage of the secondary winding ≤ 4.5 kV (peak value) for 1 min. The inter-turn insulation shall not be damaged.	Inter-turn insulation undamaged
3.result : Qualified		



Detection result

Test Item List				
Accuracy Test (Retest)				
1.Experimental Conditions				
Experimental ambient temperature: 24°C				
2.Test Content				
Accuracy Test (Retest)				
Product No.	Required Value			Measured Value
02	The current error (±%) and phase error (±) at each measuring point shall not exceed the values specified below; the difference compared with the values obtained before the short-time current test shall not exceed half of the specified error limits. (at the following percentages of rated primary current) (Class 1S11S2, 0.2S)			Data see Appendix 4
	1	5	20-120	
	0.75	0.35	0.2	
	30	15	10	
3.result : Qualified				

**Detection result**

Test Item List		
Composite Error Test		
1.Experimental Conditions		
Experimental ambient temperature: 24°C		
2.Test Content		
Composite Error Test		
Product No.	Required Value	Measured Value
02	Composite error of measuring winding: Sinusoidal rated instrument limit current of 5000 A at rated frequency 50 Hz or less is applied to the primary terminals. Composite error of the transformer: $\geq 10\%$.	Current injected to primary terminals: 3410 A, Composite error of transformer: 13.3%
	Composite error of protective winding: Sinusoidal rated accuracy limit current of 5000 A at rated frequency 50 Hz or higher is applied to the primary terminals. Composite error of the transformer: $\leq 10\%$.	Current injected to primary terminals: 5890 A, Composite error of transformer: 5.4%
3.result : Qualified		



Appendix 1

Errors

Temperature: 22°C, Relative Humidity: 62%

Current Ratio	Sample No.	Accuracy Class	I/In(%) Errors	1	5	20	100	120	Secondary Burden
30/5A	01	(1SI 1S2) 0.2S	Current Error (%)	+0.04	+0.04	+0.04	+0.08	+0.08	10VA COSφ=0.8
			Phase Error (')	+6	+5	+4	+2	+1	
			Current Error (%)	/	+0.10	+0.10	+0.10	/	2.5VA COSφ=0.8
			Phase Error (')	/	+3	+2	+1	/	
		(2S12S2)10P10	Current Error (%)	/	/	/	-0.46	/	15VA COSφ=0.8
500/5A	02	(1SI 1S2) 0.2S	Current Error (%)	+0.04	+0.04	+0.04	+0.06	+0.06	10VA COSφ=0.8
			Phase Error (')	+4	+4	+3	+1	+1	
			Current Error (%)	/	+0.10	+0.10	+0.10	/	2.5VA COSφ=0.8
			Phase Error (')	/	+2	+2	+1	/	
		(2S12S2)10P10	Current Error (%)	/	/	/	-0.52	/	15VA COSφ=0.8
1500/5A	03	(1SI 1S2) 0.2S	Current Error (%)	+0.00	+0.02	+0.02	+0.02	+0.02	10VA COSφ=0.8
			Phase Error (')	+2	+2	+1	+1	+2	
			Current Error (%)	/	+0.02	+0.04	+0.04	/	2.5VA COSφ=0.8
			Phase Error (')	/	+1	+1	+1	/	
		(2S12S2)10P10	Current Error (%)	/	/	/	-0.08	/	15VA COSφ=0.8



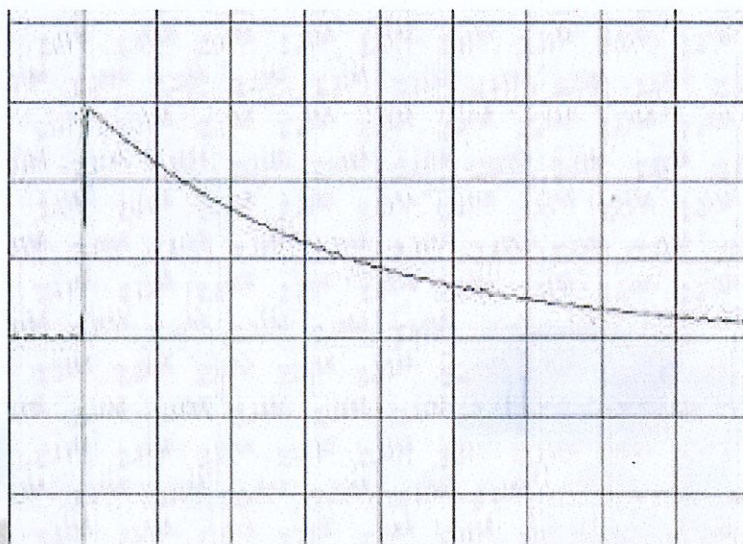
Appendix 2 Lightning Impulse Test Waveform

Note:

CH1 — Full Wave $V_{max}=76.60$ kV

$T_1=1.17$ μ s

$T_2=47.48$ μ s Bots=0.2%

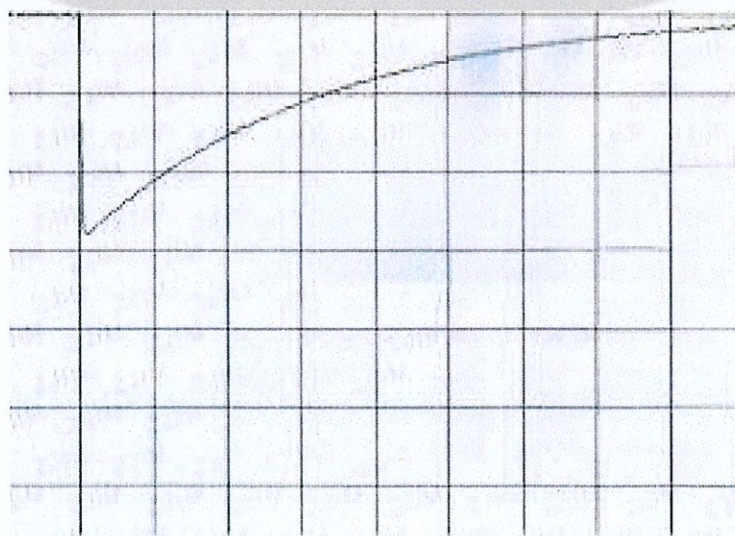


Note:

CH1 — Full Wave $V_{max} = -74.15$ kV

$T_1 = 1.32$ μ s

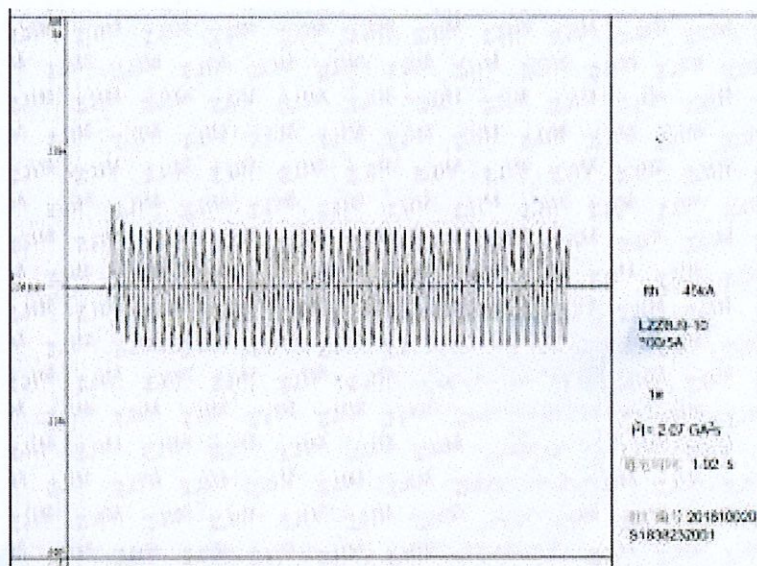
$T_2 = 46.50$ μ s Beta = 0.1%



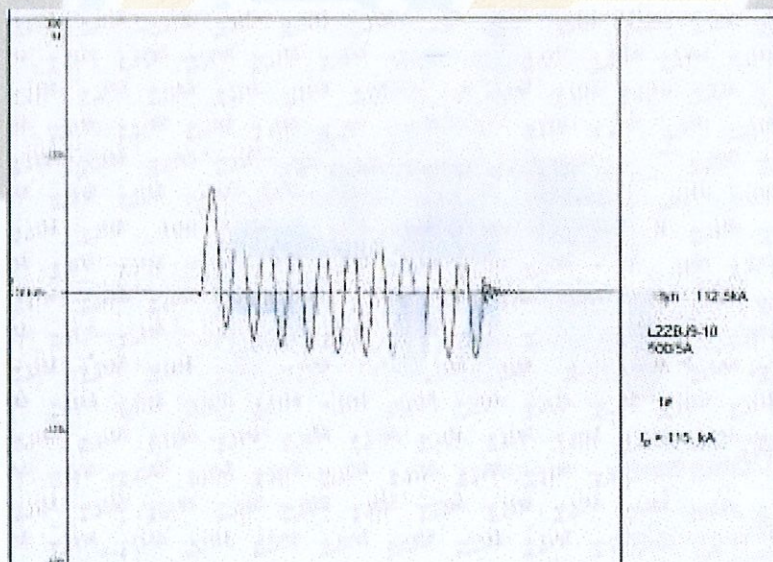


Appendix 3: Short-time Current Test Waveform

Oscillogram of Test



Oscillogram of Test





Appendix 4

Errors

Temperature: 22°C, Relative Humidity: 62%

Current Ratio	Sample No.	Accuracy Class	I/In(%) Errors	1	5	20	100	120	Secondary Burden
500/5 A (Retest)	02	(1SI 1S2) 0.2S	Current Error (%)	+0.04	+0.04	+0.04	+0.08	+0.08	10VA COSφ=0.8
			Phase Error (')	+4	+5	+3	+1	+1	
			Current Error (%)	/	+0.10	+0.10	+0.10	/	2.5VA COSφ=0.8
			Phase Error (')	/	+2	+2	+1	/	

End of text

