

CPRI

TEST REPORT



Central Power Research Institute

**(A Govt. of India Society,)
P.B. No. 8066, Sadashivanagar, S.P.O.
Prof. Sir. C.V. Raman Road,
Bangalore - 560 080**



CPRI

CENTRAL POWER RESEARCH INSTITUTE
(MEMBER STL)

TEST REPORT

Test Report Number : HV/1(ICG)/12/0152/RAPID **Dated:** 28-05-2012.

Name & Address of the customer : M/s. Rapid Electrode Pvt. Limited,
48, Ghael Compound, Nr. BRC Mandir,
Udhana Main Road,
Surat – 394 210. Gujarat, India.
Ref. Nil **Dated:** 25- 05-2012.

Name & Address of the Manufacturer : M/s. Rapid Electrode Pvt. Limited,
48, Ghael Compound, Nr. BRC Mandir,
Udhana Main Road,
Surat – 394 210. Gujarat, India.

Particulars of Samples tested
Condition of the sample on Receipt : New.

Type : Model Number – RLP 3.3
Designation : Lightning Arrester.
Serial Number : Nil.
Number of samples tested : One.
Date(s) of Test(s) : 28-05-2012.
CPRI Sample Code Number : HVML2012S0407.

Particulars of tests conducted : Lightning Impulse Current Withstand Test.

Test in accordance with standard/ Specification. : As per Customer's Procedure.
Sampling Plan : Not Applicable
Customer's requirement : Nil.

Deviations if any : Nil.

Name of the witnessing persons
Customer's representatives : Mr. Aditya Dokania- General Manager.

Other than customer's representatives : None.
Test subcontracted with Address of the laboratory : None.

Documents constituting this report (in words)

Number of sheets : Three.
Number of oscillogram/s : Ten.
Number of graphs : Nil.
Number of photo/s : Nil.
Number of Test Circuit Diagrams : Nil.
Number of drawings : One.(No. RLP 001)

M. Kanya Kumari
(M.KANYA KUMARI)
Test Engineer



R. Shivakumara Aradhya
(Dr.R.S.SHIVAKUMARA ARADHYA)
Additional Director 29/5/12



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TEST PROCEDURE

The test Procedure as declared by the customer is given below.
Five Positive & five negative current impulse shots of $8/20\mu\text{S}$ wave shape as per IEC 60099-4 with a magnitude of $40\text{kA}\pm 10\%$ (Positive polarity & negative polarity five shots) tolerance shall be applied to the sample. The sample shall be checked for physical deformation and degradation. The Current shall be applied between the terminals L&N marked in the drawing.

The test was conducted as per the above procedure and the results are tabulated below.

Lightning Impulse Current Withstand Test.

Current ($8/20\mu\text{S}$) withstand test on Lightning Arrester:

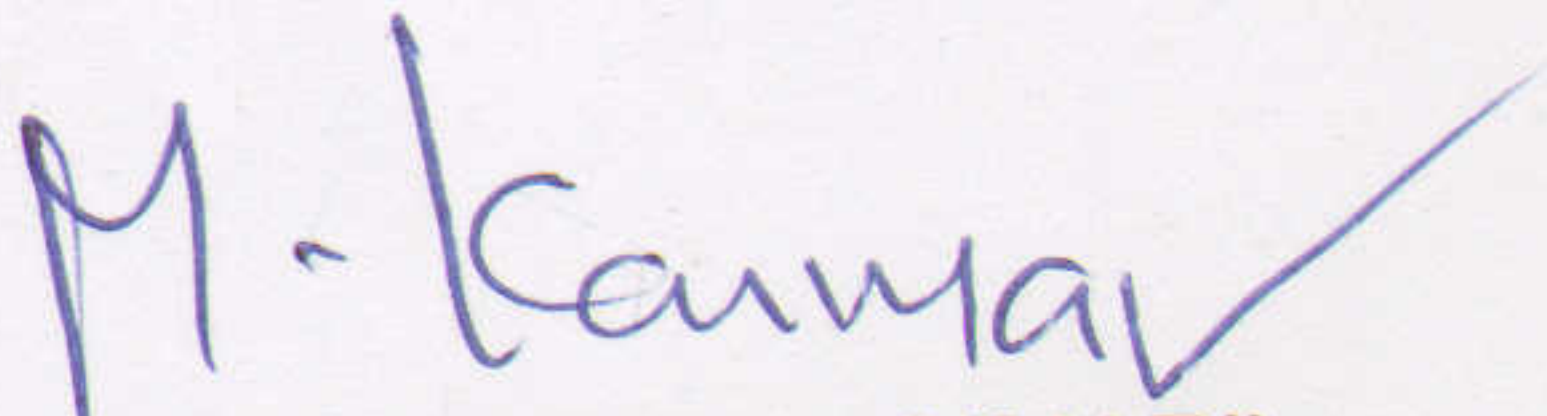
Sample No.	Polarity	Current Applied (kA)	Osc. No
1	+ Ve	40.1	12448
		40.0	12449
		40.0	12450
		40.0	12453
		40.0	12454
	- Ve	39.9	12465
		40.5	12466
		40.4	12467
		40.4	12468
		40.5	12469

Observations:

No visual deformation/mechanical degradation of the external parts of the Lightning Arrester was observed.

Laboratory Atmospheric conditions during the above tests.

Temperature in Degree Celsius			Atmospheric Pressure in mm of Hg.
Date	Dry Bulb	Wet Bulb	
28-05-2012	28.0	20.0	681.0


(M.KANYA KUMARI)
Test Engineer



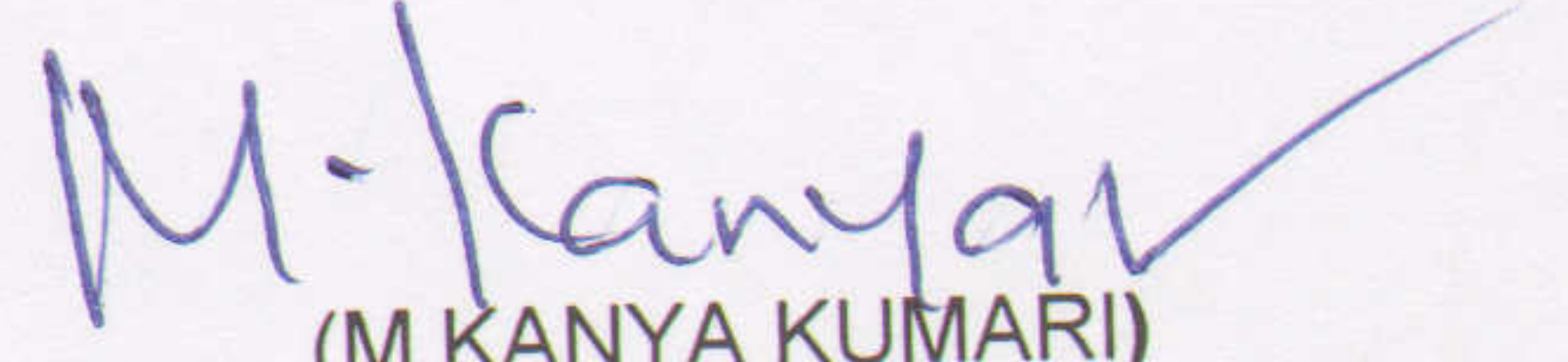
CENTRAL POWER RESEARCH INSTITUTE
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CPRI Test Report No. HV/1(ICG)/12/0152/RAPID

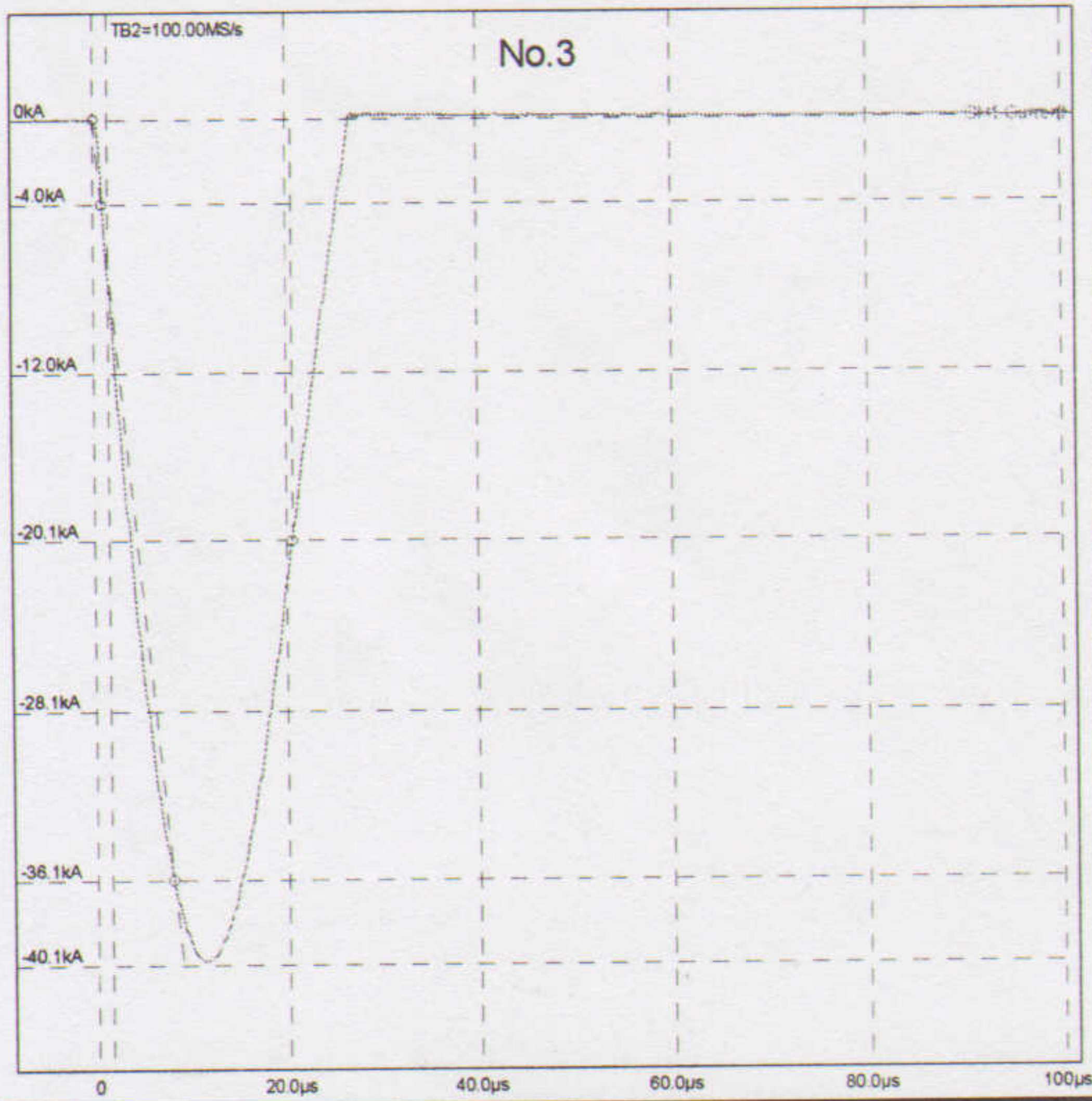
Dated: 28-05-2012.

NOTE

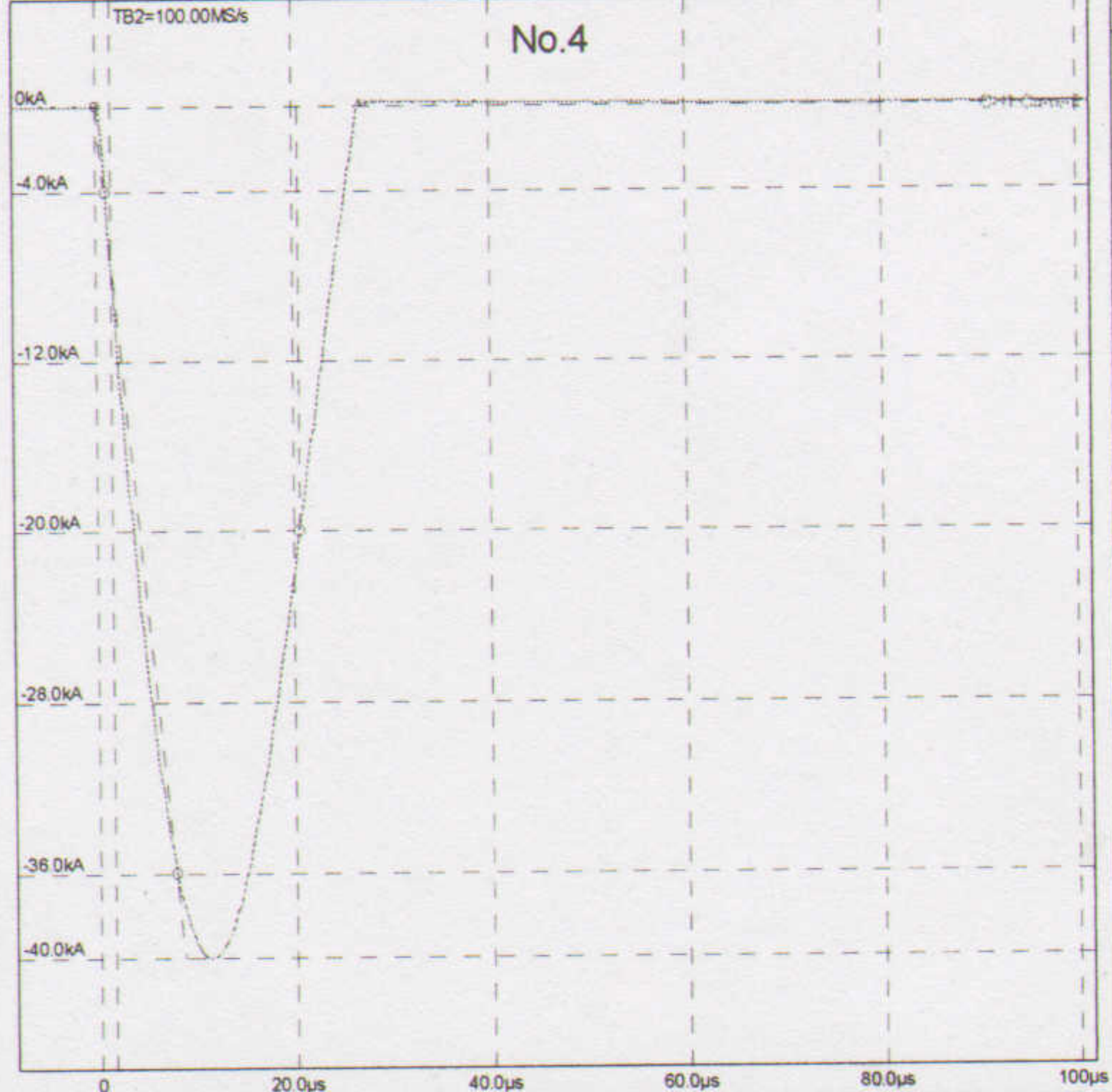
- a) The Test results relate only to the item(s) tested.
- b) Publication or reproduction of the test report /Certificate in any form other than by complete set of the whole test report /Certificate and in the language written is not permitted without the written consent of CPRI.
- c) Any Corrections/erasure invalidates the test Report/Certificate
- d) Any anomaly/discrepancy in the test report /Certificate should be brought to the notice of CPRI within 45 days from the date of issue.
- e) The verification of the sample drawings by CPRI is limited to dimensional checks only wherever possible.


(M.KANYA KUMARI)
Test Engineer

Lightning Impulse Current (8/20μS) - Positive Polarity



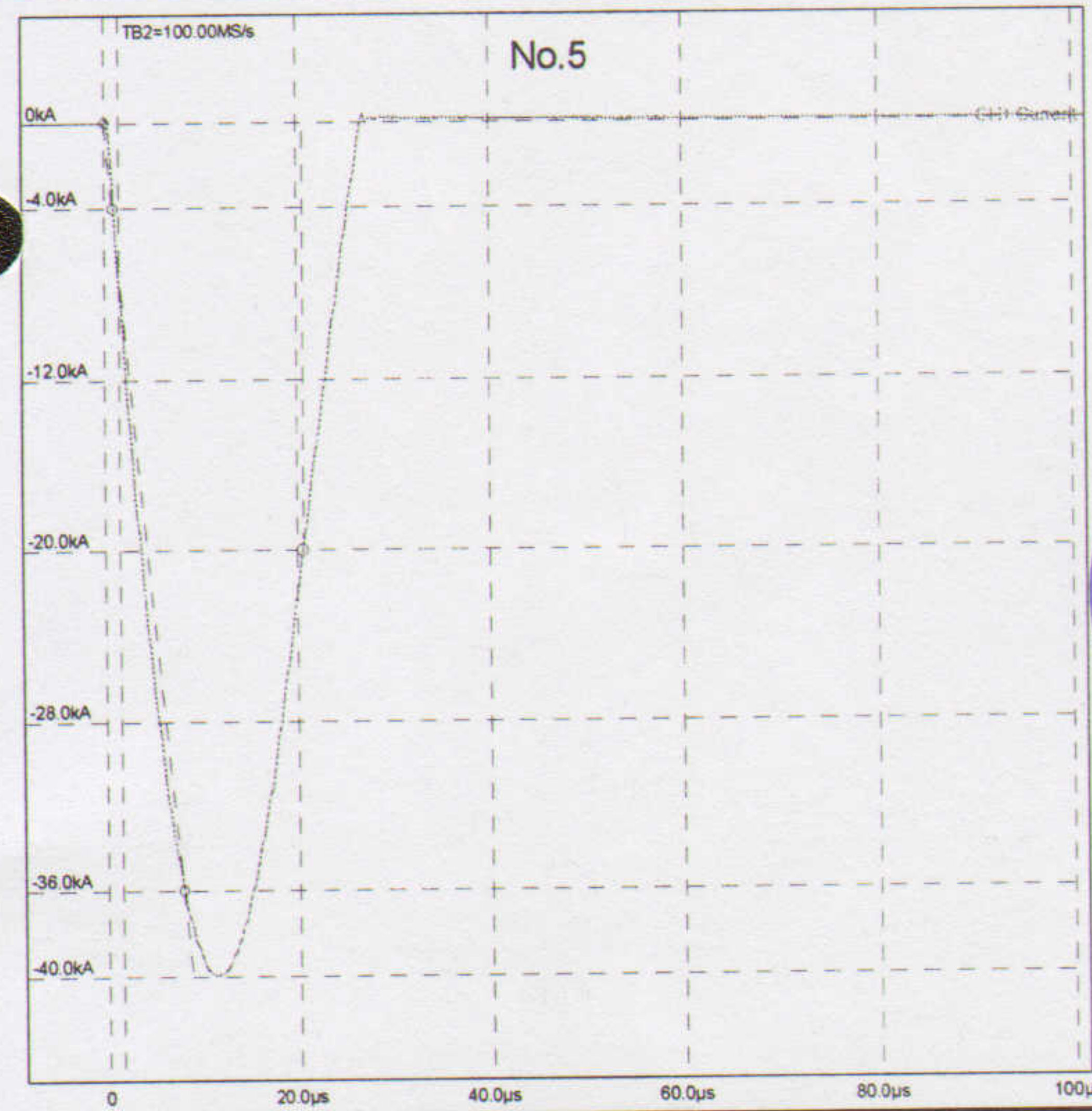
No.: 12448
CH1
Eval.: IC
Ip= -40.1kA
T1= 8.72μs
T2= 20.7μs



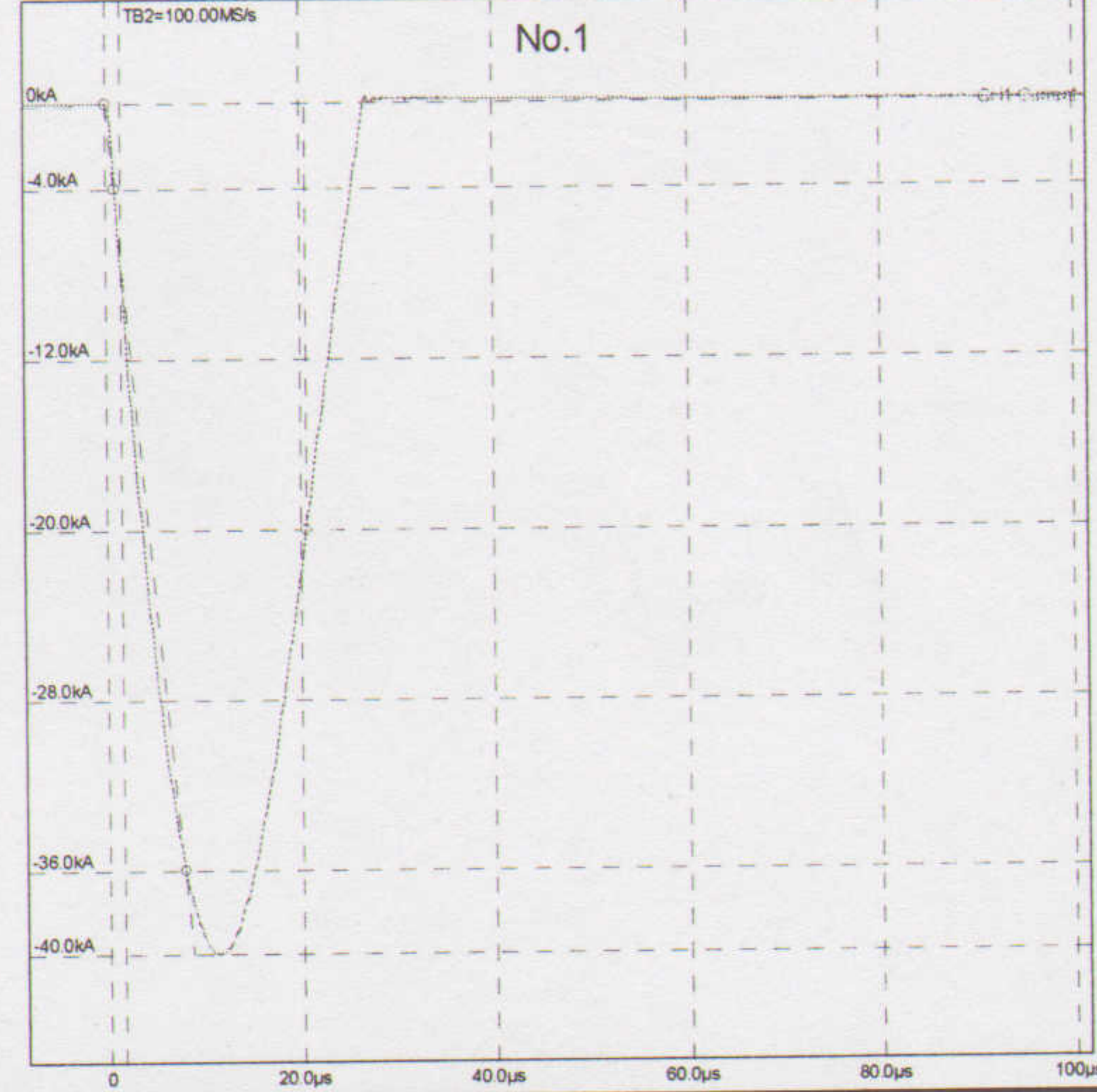
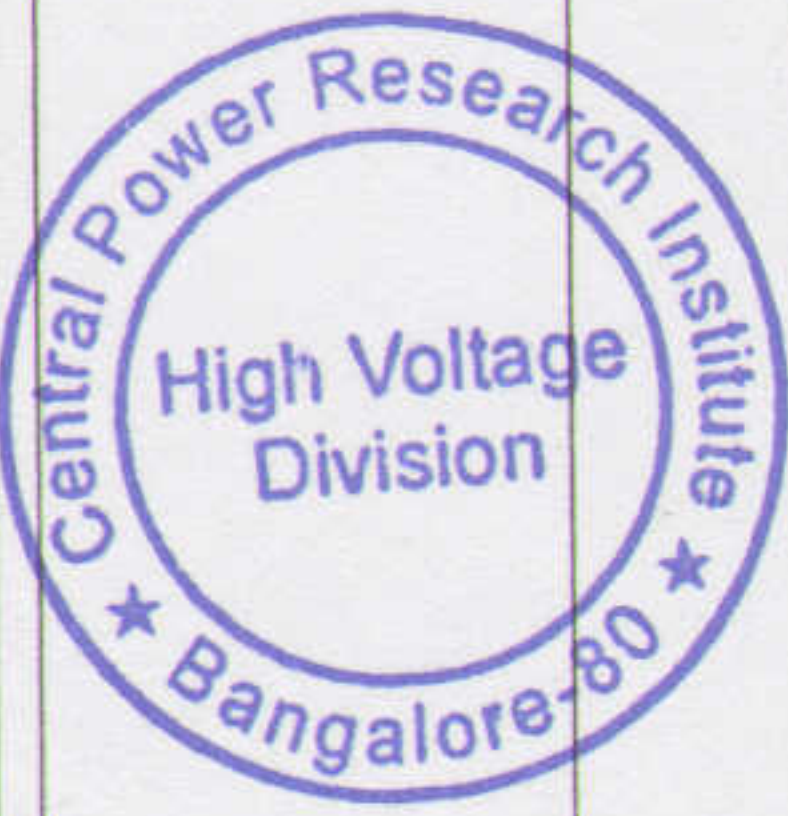
No.: 12449
CH1
Eval.: IC
Ip= -40.0kA
T1= 8.64μs
T2= 20.7μs

Shot No.1

Shot No. 2



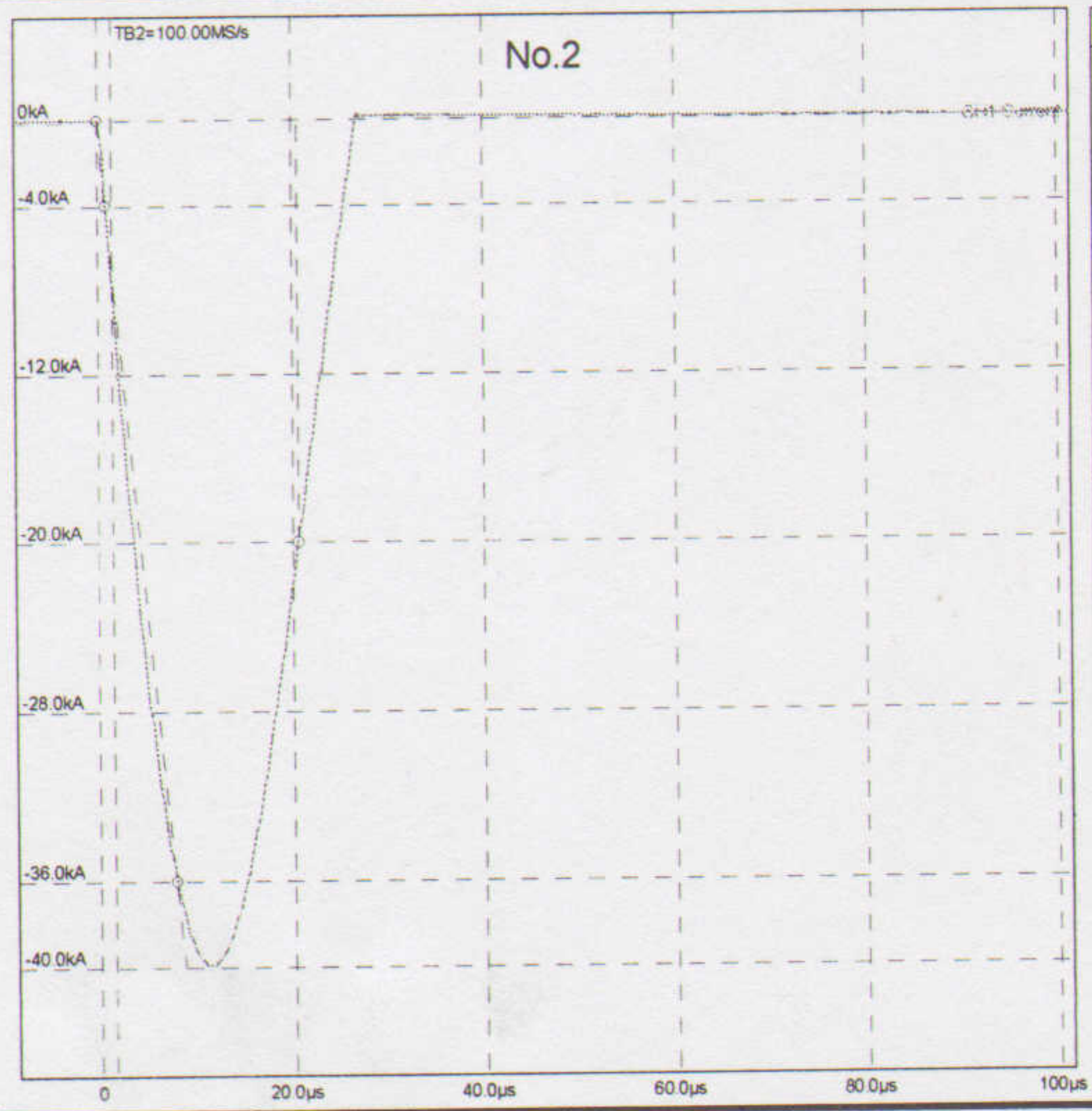
No.: 12450
CH1
Eval.: IC
Ip= -40.0kA
T1= 8.67μs
T2= 20.7μs



No.: 12453
CH1
Eval.: IC
Ip= -40.0kA
T1= 8.68μs
T2= 20.7μs

Shot No.3

Shot No. 4

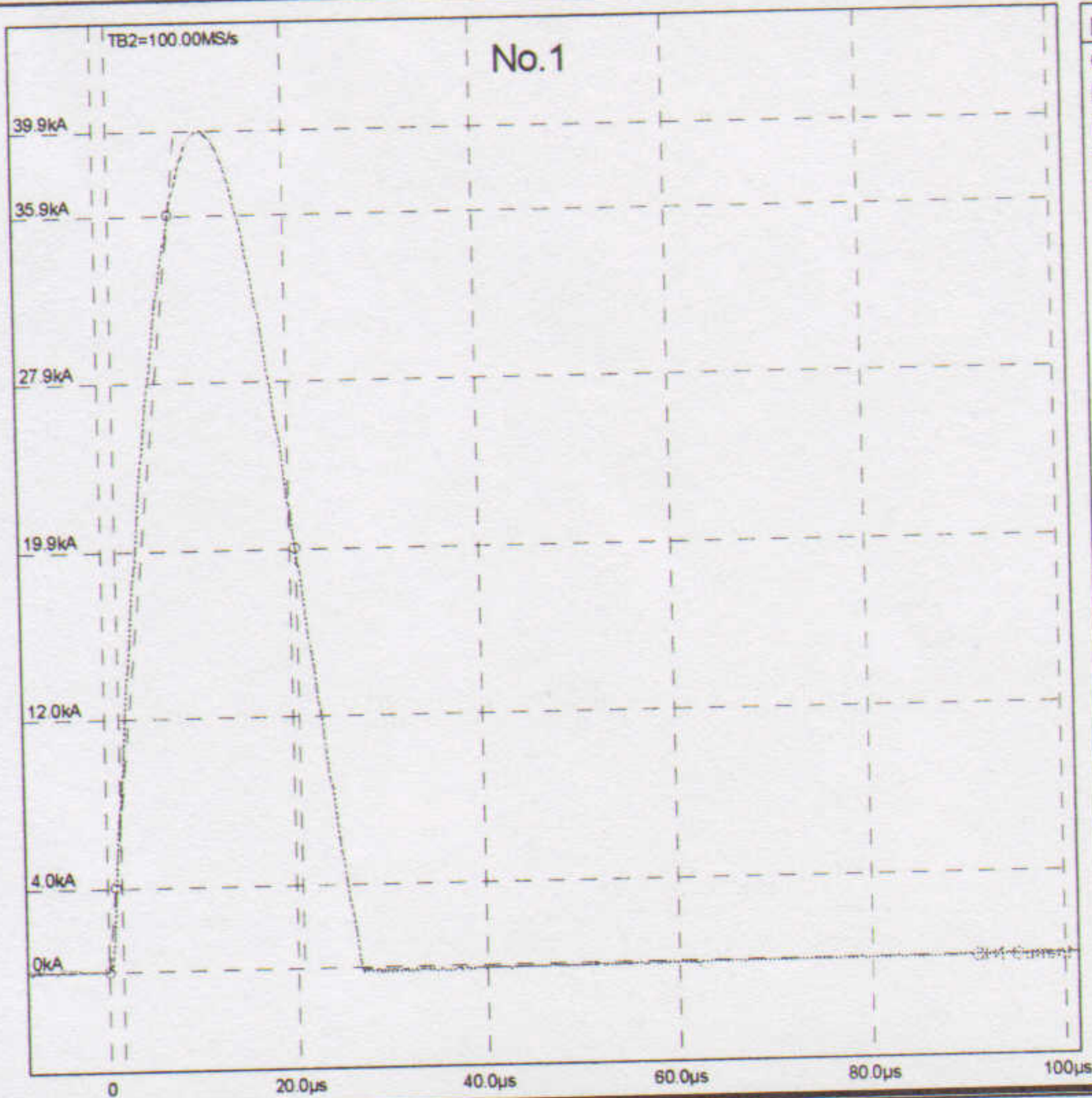


No.: 12454
CH1
Eval.: IC
Ip= -40.0kA
T1= 8.69μs
T2= 20.7μs

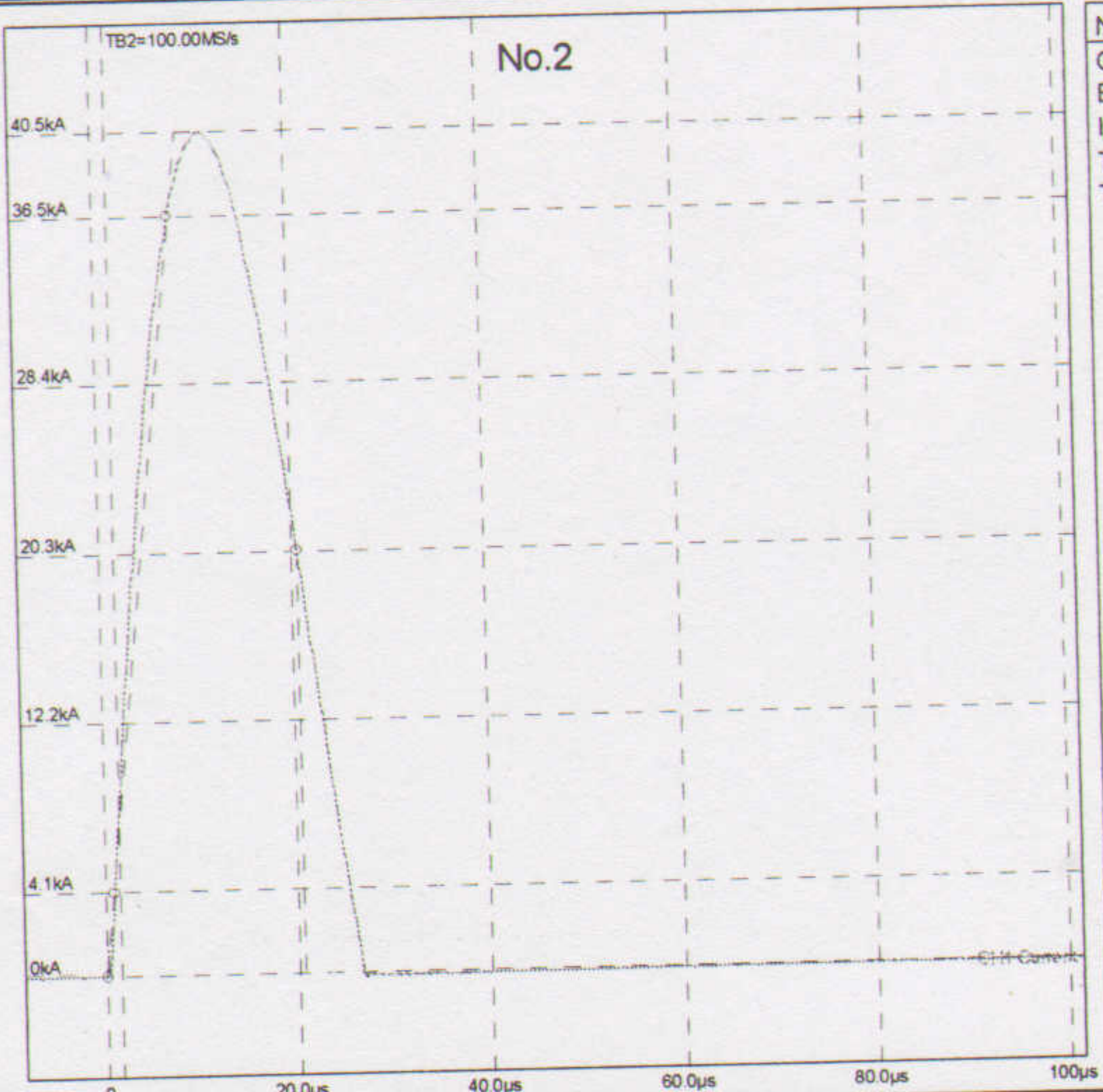
Shot No.5

M. Kanya
(M.KANYA KUMARI)
TEST ENGINEER

Lightning Impulse Current (8/20μS) - Negative Polarity



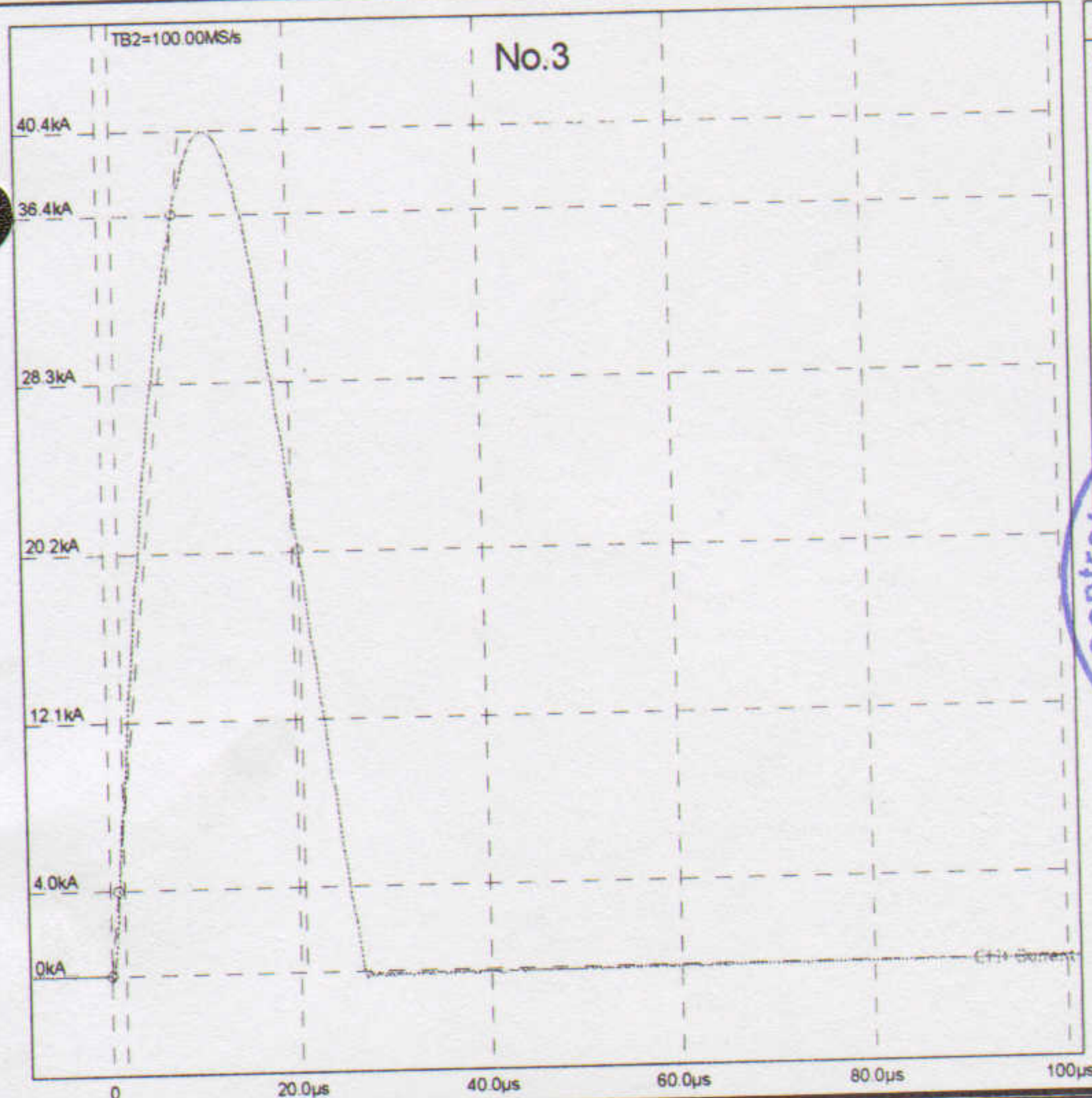
No.: 12465
CH1
Eval.: IC
Ip= 39.9kA
T1= 8.66μs
T2= 20.7μs



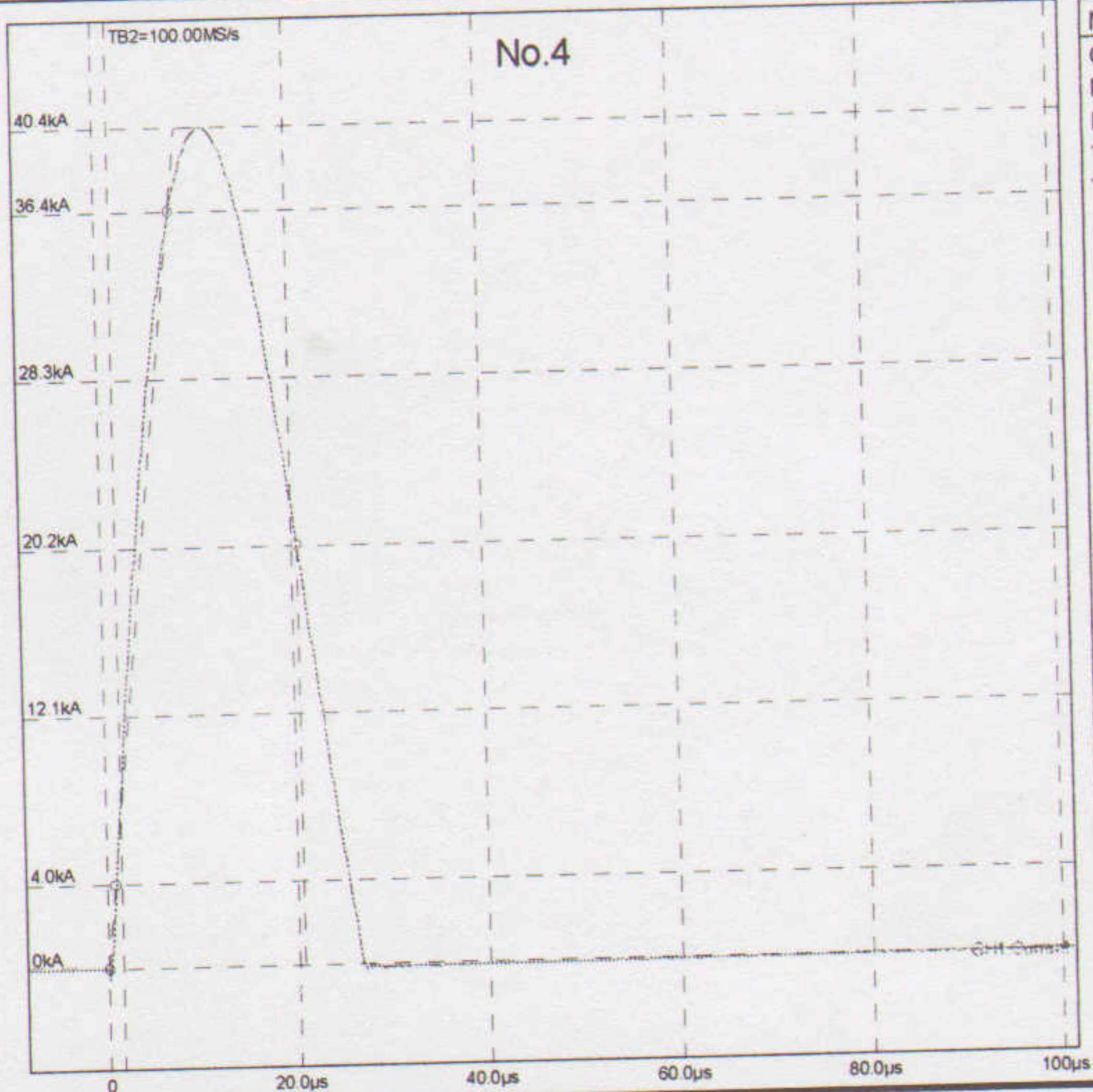
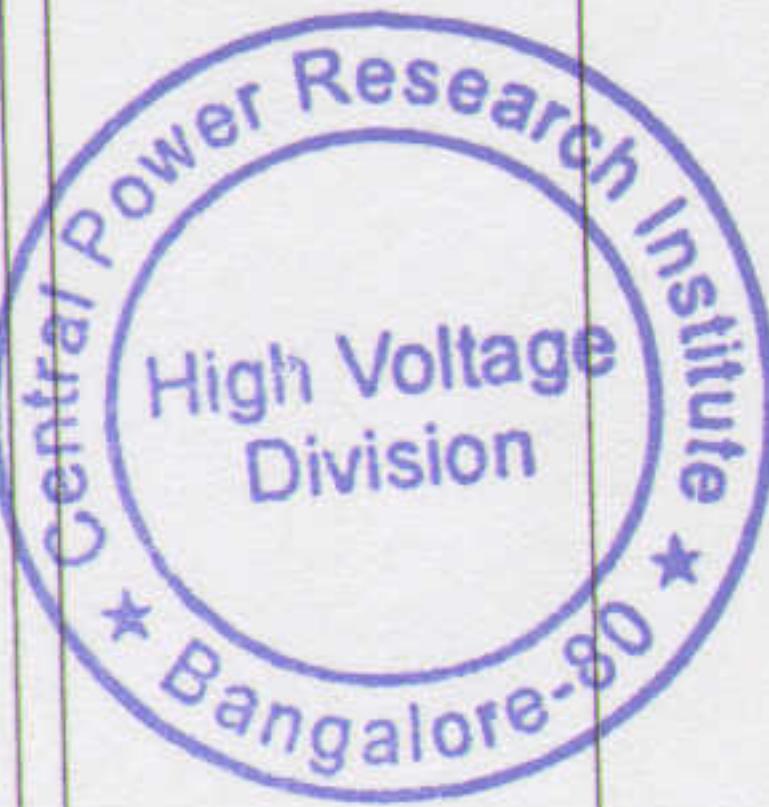
No.: 12466
CH1
Eval.: IC
Ip= 40.5kA
T1= 8.69μs
T2= 20.7μs

Shot No.1

Shot No. 2



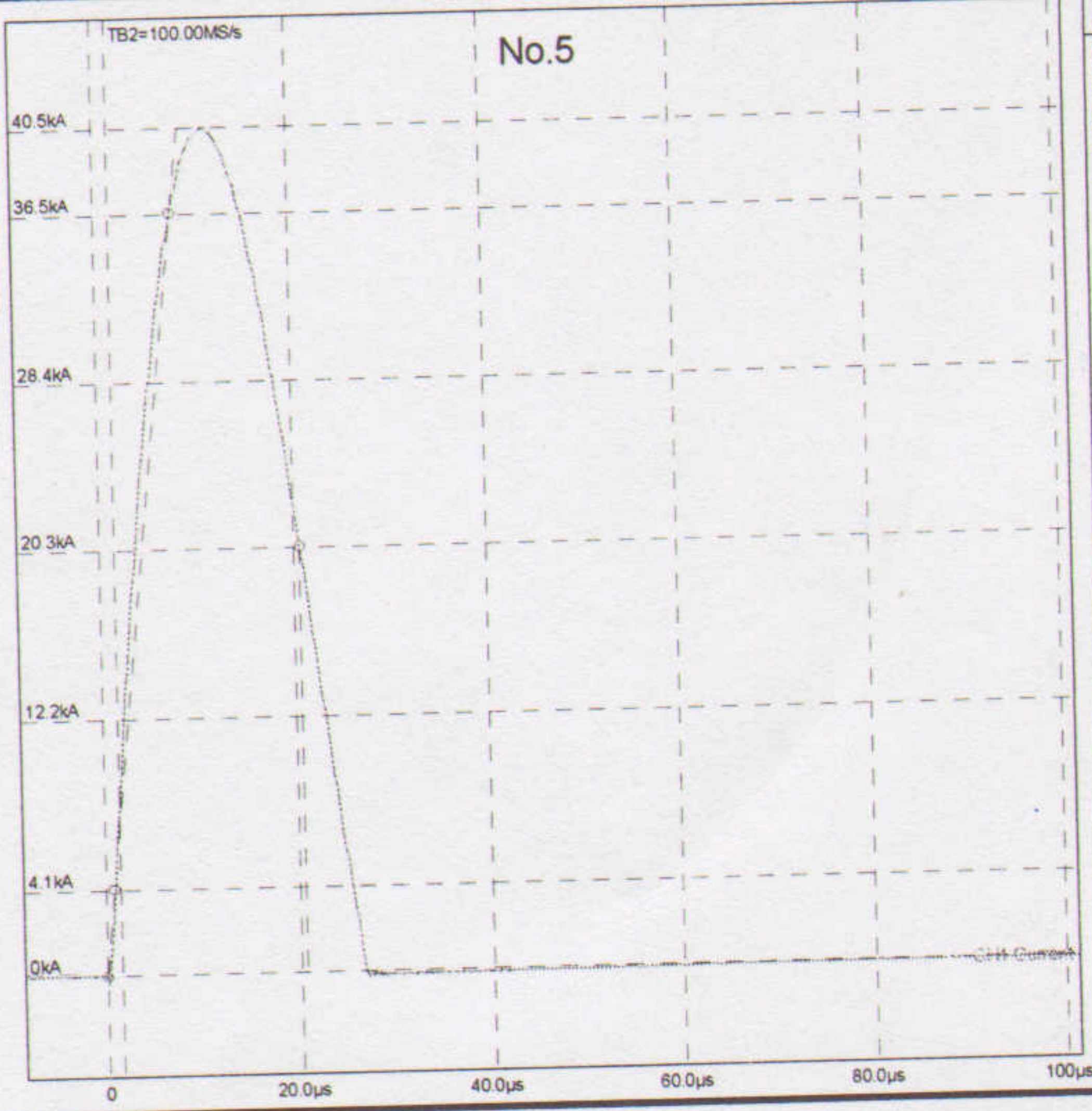
No.: 12467
CH1
Eval.: IC
Ip= 40.4kA
T1= 8.69μs
T2= 20.7μs



No.: 12468
CH1
Eval.: IC
Ip= 40.4kA
T1= 8.69μs
T2= 20.7μs

Shot No.3

Shot No.4



No.: 12469
CH1
Eval.: IC
Ip= 40.5kA
T1= 8.69μs
T2= 20.7μs

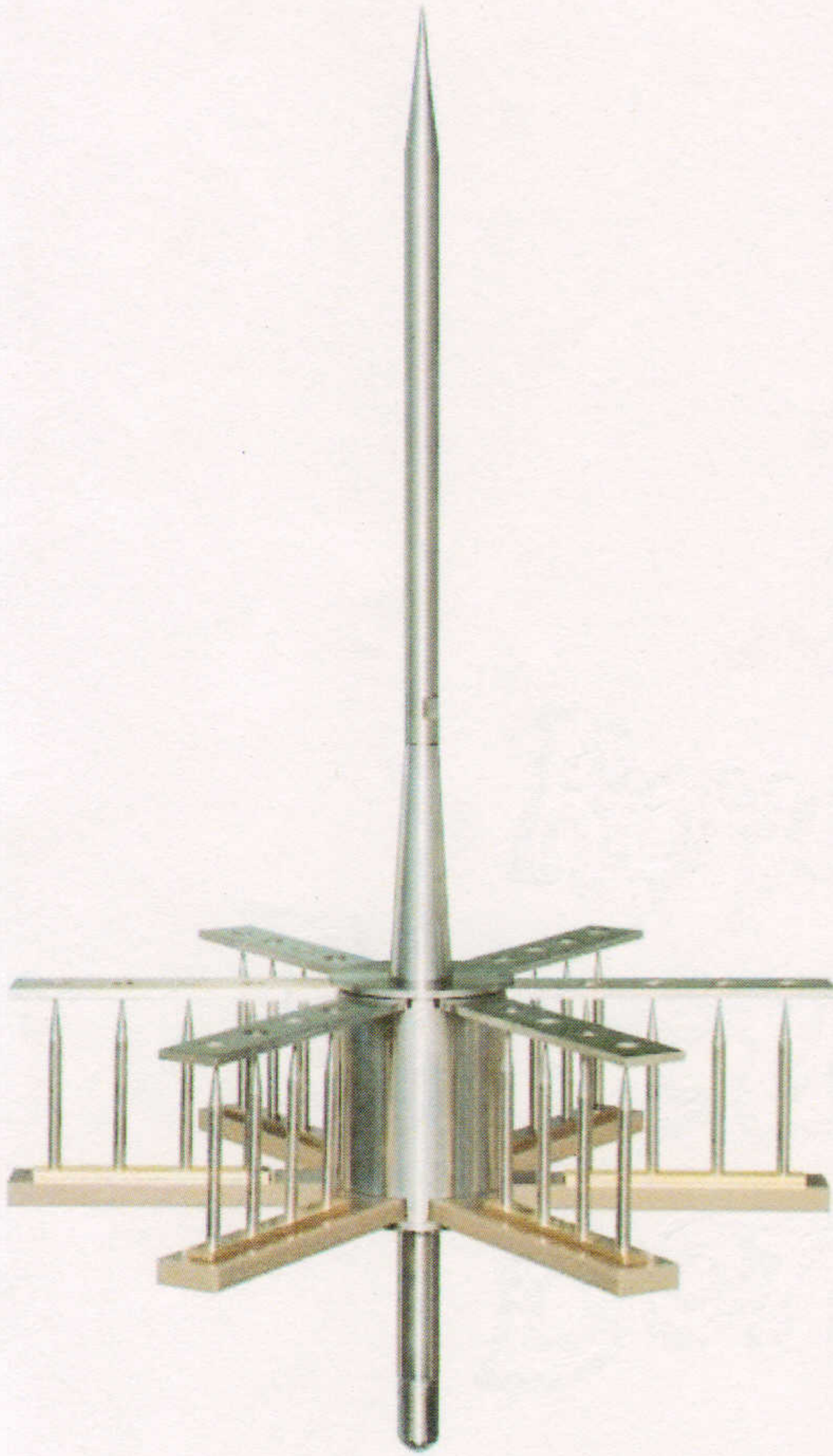
Shot No.5

M. Kanya
(M.KANYA KUMARI)
TEST ENGINEER



EARLY STREAMER EMISSION LIGHTNING ROD

PDC LIGHTNING RODS



यह चित्र परीक्षण दस्तावेज सं HV/1 (ICG)/
एचवी ता..... से संबंधित है।
THIS DRAWING PERTAINS TO TEST REPORT
No. HV/1 (ICG)/.....
Dtd.....

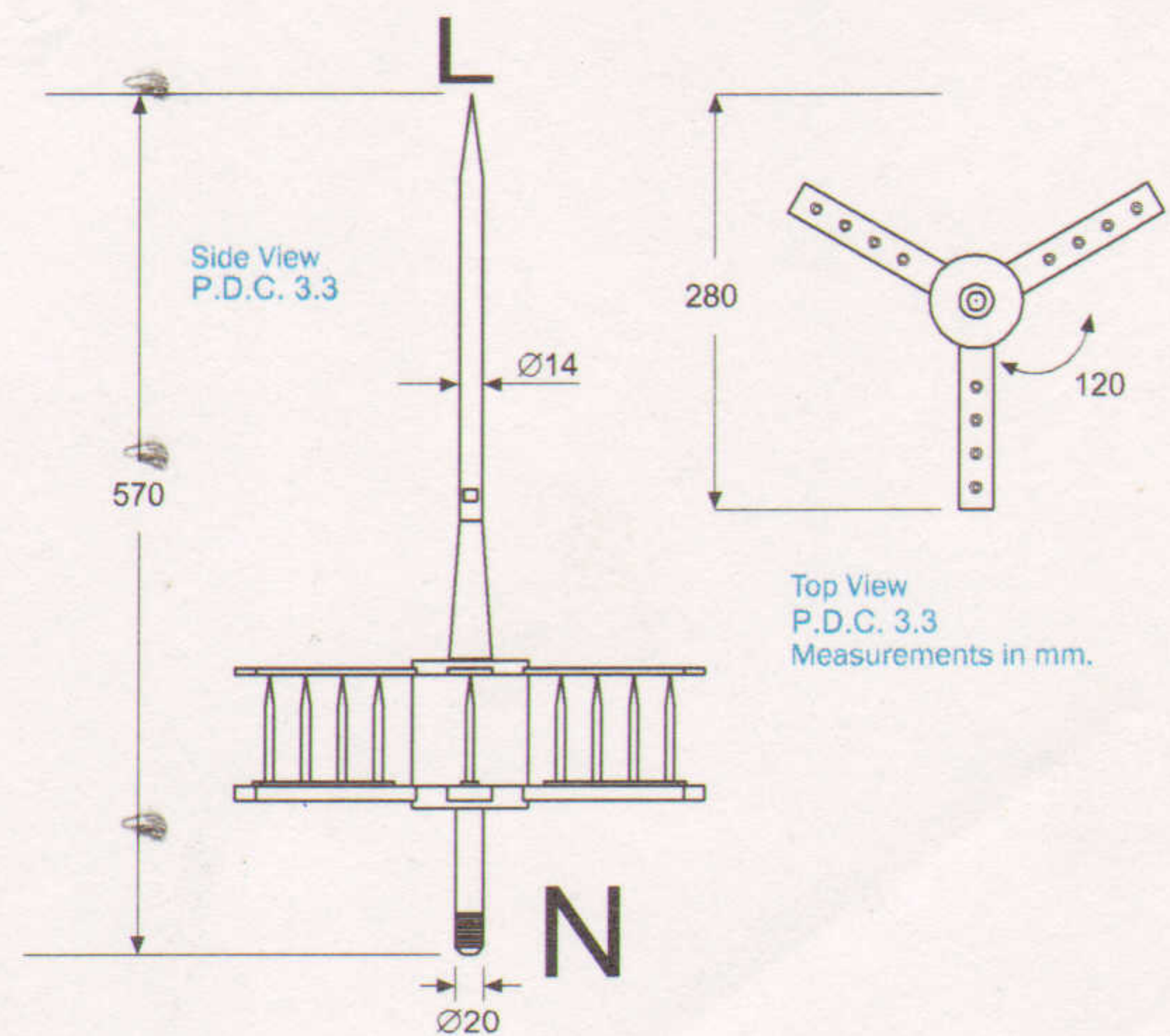
RAPID ELECTRODE PRIVATE LIMITED
PRODUCT NAME – LIGHTNING ARRESTOR
MODEL NUMBER – RLP 3.3
DRAWING NUMBER – RLP 001

“इस चित्र का माप्यकरण महत्वपूर्ण
आमापों की जाँच तक ही सीमित है।”
“ATTESTATION OF THIS DRAWING IS
LIMITED TO THE CHECKING OF
IMPORTANT DIMENSIONS ONLY”

DESCRIPTION :

- Lightning rod with non-electronic **ESE** (Early Streamer Emission) system,
- Adaptable to all types of buildings.
- Complies with the requirements set forth in the standards:
- Made of AISI 316 stainless steel and epoxy resin.
- 100 % EFFICIENCY, maximum durability.
- Does not need an external power supply.
- Guarantee of electrical continuity and operation after lightning strike, in any atmospheric conditions.

Photo Mod. PDC 6.4
(Ref. 101009)



M. Janyan
संयुक्त निदेशक
Joint Director
उच्च वोल्टेज प्रभाग
High Voltage Division
केन्द्रीय विद्युत अनुसंधान संस्थान
Central Power Research Institute
पो. बा. सं. 8066
P.B. No. 8066
बेंगलूर - 560 080
Bangalore-560 080

