



SOUTHWEST RESEARCH INSTITUTE®

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Institute Calibration Laboratory
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Certificate #

0972-01

Certificate of Calibration

Submitted By: DIV20
Address: B57
Contact: DON BANNON
Manufacturer Model: ABBEON SE 120
Description: STRIP CHART RECORDER
Serial No: 0515265
Asset No: 002292
Procedure: CL-75, JUN/99

Work Order: 303066234
Date Issued: Nov 4, 2005
Calibration Date: Nov 4, 2005
***Calibration Due:** Nov 3, 2006
Calibration Location: Bldg. 64
Environment: Temp. 72.0°F Hum. 40 %RH
****Data Type:** FOUND-LEFT

This certificate documents traceability to the National Institute of Standards and Technology (NIST) and the International System of Units (SI). The Laboratory quality system conforms to ISO/IEC 17025, 1999, ANSI/NCSL Z540-1-1994 and relevant requirements of the ISO 9000-2000 standard. This certificate shall not be reproduced, except in full, without the written approval of the Southwest Research Institute Calibration Laboratory. This certificate shall not be used to claim product endorsement by Southwest Research Institute, American Association for Laboratory Accreditation (A2LA) or any agency of the U. S. Government. Results of this calibration relate only to the instrument described above at the time of calibration and does not imply any long term stability of the instrument.

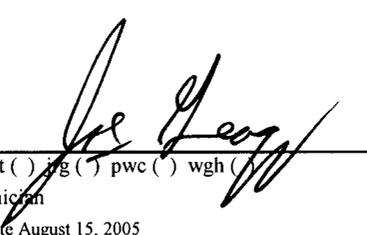
*Determined by the customer, does not imply the instrument will remain within tolerance as any number of factors may cause an out-of-tolerance condition before this date. **Found/Left = adjustment and/or repair was not required, As Left = adjusted and/or repaired was required. The client has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance. See Remarks or attached Measurement Report with the same Work Order number for data.

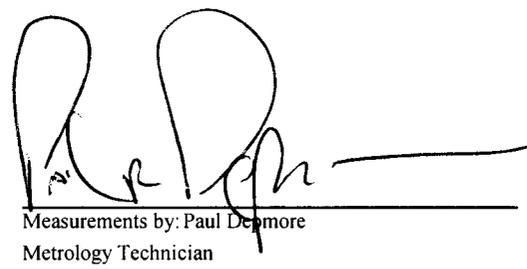
Reported uncertainty calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM) and represents an expanded uncertainty with a coverage factor of k=2 to approximate a 95% confidence level.

Remarks: None

Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
004164	6380025	FLUKE	5500A/SC300	CALIBRATOR	Aug 04, 06

Reviewed by: 
Metrology Technician
m:\a2la1.rpt Rev date August 15, 2005


Measurements by: Paul DeMore
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303066234	Mfr.	ABB	Technician	PRD
Asset No.	002292	Model	SE120	Procedure	
Serial No.	0515265	Type.	Chart Recorder	Cal Date.	04-Nov-05
Remarks:					

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
DCV Ch 1	mVolts	mVolts	mVolts	mVolts	mVolts	Result
1 mV	1.000	0.999	-0.001	0.010	0.58	Pass
2 mV	2.000	1.994	-0.006	0.010	0.58	Pass
5 mV	5.000	4.991	-0.009	0.025	0.58	Pass
10 mV	10.00	9.98	-0.02	0.05	0.58	Pass
20 mV	20.00	19.98	-0.02	0.10	0.58	Pass
50 mV	50.00	50.00	0.00	0.25	0.58	Pass
100 mV	100.0	100.0	0.0	0.5	0.58	Pass
	50.0	49.9	-0.1	0.3	0.58	Pass
	25.0	25.0	0.0	0.1	0.58	Pass
DCV	Volts	Volts	Volts	Volts	Volts	
1 V	1.000	1.000	0.000	0.005	0.58	Pass
2 V	2.000	2.000	0.000	0.010	0.58	Pass
5 V	5.000	4.990	-0.010	0.025	0.58	Pass
10 V	10.00	10.00	0.00	0.05	0.58	Pass
20 V	20.00	20.02	0.02	0.10	0.58	Pass
50 V	50.00	50.04	0.04	0.25	0.58	Pass
100 V	100.0	100.1	0.1	0.5	0.58	Pass
200 V	200.0	200.1	0.1	1.0	0.58	Pass
DCV Ch 2	mVolts	mVolts	mVolts	mVolts	mVolts	
1 mV	1.000	1.000	0.000	0.010	0.58	Pass
2 mV	2.000	2.000	0.000	0.010	0.58	Pass
5 mV	5.000	5.000	0.000	0.025	0.58	Pass
10 mV	10.00	10.00	0.00	0.05	0.58	Pass
20 mV	20.00	20.00	0.00	0.10	0.58	Pass
50 mV	50.00	50.00	0.00	0.25	0.58	Pass
100 mV	100.0	100.0	0.0	0.5	0.58	Pass
	50.0	50.0	0.0	0.3	0.58	Pass
	25.00	25.00	0.00	0.13	0.58	Pass
DCV	Volts	Volts	Volts	Volts	Volts	
1 V	1.000	1.000	0.000	0.005	0.58	Pass
2 V	2.000	2.000	0.000	0.010	0.58	Pass
5 V	5.000	5.000	0.000	0.025	0.58	Pass
10 V	10.00	10.00	0.00	0.05	0.58	Pass
20 V	20.00	20.00	0.00	0.10	0.58	Pass
50 V	50.00	50.00	0.00	0.25	0.58	Pass
100 V	100.00	100.00	0.00	0.50	0.58	Pass
200 V	200.0	200.0	0.0	1.0	0.58	Pass

END OF REPORT