



SOUTHWEST RESEARCH INSTITUTE®

6220 Culebra Road, P.O. Drawer 28510
Institute Quality Systems
Institute Calibration Laboratory
Phone: 210-522-5215 Fax 210-522-4834



Certificate of Calibration

Submitted By: DIV20

Address: B57

Contact: DON BANNON

Manufacturer / Model: TCC / S102C

Description: RESISTOR

Serial No: 1

Asset No: 011354

Procedure: DECADE RESISTOR TO 100 MOHM-STEP - 21 MAR 2006

Work Order: 303072227

Date Issued: Dec 19, 2006

Calibration Date: Dec 19, 2006

***Calibration Due:** Jun 19, 2007

Calibration Location: Bldg. 64

Environment: Temp. 70.0°F Hum. 43 %RH

****Data Type:** FOUND-LEFT

DivID/Location: N/A

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, 2005, 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: Unit value of 250.0563 ohms; Uncertainty of measurement is 0.0050 ohms

Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
001505	2823A07741	HEWLETT-PACKARD	3458A/OPT 002	MULTIMETER	May 01, 07

Reviewed by: blt () jrg () pwc () wgh ()
Metrology Technician

Measurements by: Melissa Macintyre
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303072227	Mfr:	TCC	Technician:	MLM
Asset No:	11354	Model:	S102C	Cal Date:	19-Dec-06
Serial No:	1	Type:	Resistor 250 Ohm		
Remarks:	Unit value of 250.0563 ohms; Uncertainty of measurement is 0.0050				

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Resistance	Ohm 250	Ohm 250.0563	Ohm 0.0563	Ohm 10	Ohm 0.0050	Result Pass
END OF REPORT						