



Model PCR100 100 Ohm Precision Resistor

- **Measured Accuracy:** to a value within $\pm 0.5\text{ppm}$ measured with 10mA at 23°C.
- **Nominal Value:** 100 ohms
- **Calibration Uncertainty:** $\pm 0.5\text{ppm}$
- **Stability (1 Year):** Typically $\pm 2\text{ppm}$
- **Temperature Coefficient:** $\pm 1.5\text{ppm}/^\circ\text{C}$ (temperature correction graph provided to correct out temperature effects)
- **Max. Working Operating Current:** 110mA
- **4-Wire Operation**
- **Calibration Cycle:** One year
- **Certified to N.I.S.T.**

GENERAL DESCRIPTION

The Krohn-Hite PCR100 Precision Current Resistor is a highly accurate on-site current resistor (standard) with excellent temperature stability that can be used from 20°C to 26°C. A calibration graph is supplied with each PCR100 that shows all corrections in 0.5°C increments, reducing uncertainty to near zero. No cumbersome oil or air baths are required. Because the PCR100 is small and rugged, it is easy to transport. Care has been taken to reduce resistance changes brought about by thermal and mechanical shock. Retrace (permanent shift in resistance) is typically $< 2\text{ppm}$ after cycling between 0°C and 50°C.

SALIENT FEATURES

The PCR100 is designed for use when calibrating the Krohn-Hite Model 523 DC Source/Calibrator. Also, with its outstanding performance, the PCR100 can be used for other calibration laboratory purposes where a highly accurate and stable current resistor is needed.

SPECIFICATIONS

Measured Accuracy: $\pm 0.5\text{ppm}$ at 10mA, 23°C.

Nominal Value: 100 ohms $\pm 100\text{ppm}$

Calibration Uncertainty: $\pm 0.5\text{ppm}$

Stability (1 Year): $\pm 6\text{ppm}$

Temperature Coefficient: $\pm 1.5\text{ppm}/^\circ\text{C}$; (best straight line method, 18°C to 26°C, a graph in 0.5° increments is provided with each resistor).

Max. Working Current: 110mA

Max. Working Voltage: 11V

GENERAL SPECIFICATIONS

Retrace Error (hysteresis):

23°C to 18°C to 23°C cycle: negligible resistance shift

23°C to 28°C to 23°C cycle: negligible resistance shift

23°C to 0°C to 23°C cycle: $< 2\text{ppm}$ resistance shift

23°C to 40°C to 23°C cycle: $< 2\text{ppm}$ resistance shift

Operating Temperature Range: 20°C to 26°C

Storage Temperature: 0°C to 50°C

Size: 3.318" high x 4.76" wide x 3.165" deep.

Weight: 1.1 lbs net, 2 lbs shipping.

OPTIONAL ACCESSORIES

CAB-005: Cable, Two Conductor Shielded Balance Line

CAB-018: Cable, Multi-stacking Double Banana plug

CAB-023: Cable Set, Low Thermal EMF Retractable Banana

CAB-024: Cable Set, Low Thermal EMF Spade Lug

The PCR100 is used in the calibration of the Krohn-Hite Model 521, 522, 523 and CR-103 Precision Source/Calibrators.

ORDERING INFORMATION

PCR100: 100 Ohm Precision Current Resistor

Specifications are subject to change without notice.