ELTEC INSTRUMENTS, INC.

ELTECdata # 129

Eltec Testing of High Megohm Thick Film Resistors

Every resistor shipped by Eltec has been individually tested for resistance. Since these resistors typically have a high voltage coefficient of resistance (VCR), about a negative 4 to 6 percent per Volt, they are tested at 1 Volt DC so measurements at Eltec and the user's facility can be easily correlated.

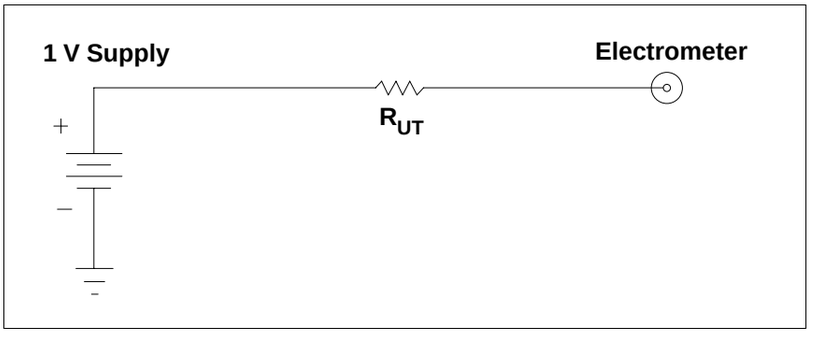
In the Eltec procedure, a Keithley Electrometer is operated in the current measuring function. An external 1.000 VDC source is applied across the resistor under test and the current through the resistor is read on the electrometer. The resistance value is then the reciprocal of the current measured:

$$R = E / I$$

Please note: With high value resistors, the current through the resistor is very small. Thus any stray leakage paths will significantly degrade the measurement. Special care should be taken to maintain cleanliness. The use of alcohol is not recommended as it may bind insulation-degrading moisture to test fixtures. Resistors should not be touched with fingers as skin oils may act as contaminants.

Also, since the application of voltages above 60 Volts may permanently change the resistance value, it is recommended that standard ESD procedures be followed in the handling of the resistors.

EXPLANATION NOTE: Resistance can be checked at voltages other than 1 Volt on special order. Pricing will be given by quotation. Purchase orders must state the test voltage to be used.



ELTEC Instruments, Inc. P.O. Box 9610 Daytona Beach, Florida 32120-9610 U.S.A.
Tel (USA and Canada): (800) 874-7780 Tel (Outside USA): (386) 252-0411 Fax: (386) 258-3791
Web: www.eltecinstruments.com E-Mail: Sales@eltecinstruments.com