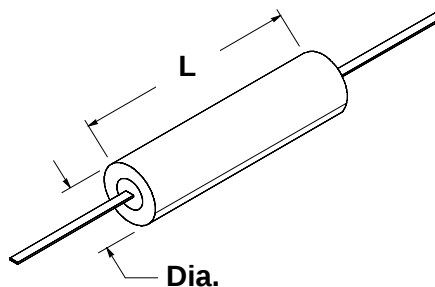


Model 104

High Megohm Tubular Resistor With Leads



Model 104 incorporates an ELTEC Model 112 chip resistor element (with nickel ribbon leads) encapsulated within a ceramic sleeve with epoxy. Resistor performance is identical to leaded resistor Model 102 except shunt capacitance is slightly higher. The epoxy is highly moisture resistant and qualifies for use in a vacuum to 10^{-7} torr (satisfactory operation at 10^{-9} reported). The Model 104 is suggested in situations where its larger size makes it easier to handle.



Resistor Dimensions	L(Max)	Dia(Max)		
Inches	0.265	0.070		
Millimeters	6.73	1.78		
Nickel Leads	L(Min)	W(Max)	T(Max)	
Inches	0.500	0.012	0.004	
Millimeters	12.7	0.305	0.102	

Applications:

- High Impedance Load Resistors
- Low Noise, High Gain Feedback Resistors
- Low Current Biological & Medical Instrumentation
- Photon Infrared Detectors
- Piezoelectric Accelerometers
- Hydrophone Preamplifiers
- Electret Microphones
- Telecommunications Line Station Monitoring

SPECIFICATIONS

Tolerance: 1×10^6 to $9 \times 10^9 \Omega \pm 5\% \pm 10\% \pm 20\% \pm 30\%$
 1×10^{10} to $1 \times 10^{12} \Omega \pm 10\% \pm 20\% \pm 30\%$

Noise figure, 1V bias, noise above

thermal (Johnson) noise level: 0.5 dB

Operating Voltage Range (Recommended): 0 to 1 Volt

Maximum Operating Voltage: to 60 Volts

Operating Temperature: -25°C to $+170^{\circ}\text{C}$
 (248K to 443K)

Resistors with intermediate values are available. Resistors below 1×10^6 as well as resistors beyond 1×10^{12} are also available (special order).

Note 1: Each resistor is measured at 1 VDC @ 25°C . Testing at other voltages is available on special order.

Note 2: If user anticipates difficulty soldering nickel ribbon leads, tinned nickel ribbon leads are available on special order.