

# Model 112M50R (RoHS Compliant) High Megohm Miniature Chip Resistor with Modified Glass Geometry

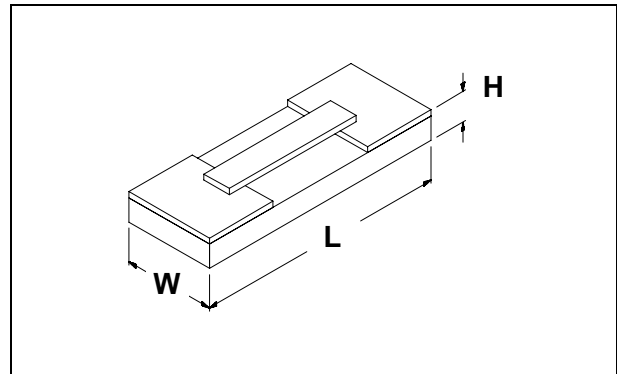


**Model 112M50R** High Megohm Miniature Chip Resistor has thick film platinum/gold terminals fired to one side of a ceramic chip at about 900°C. The resistive glass does not contain any organic materials and is applied as a continuous film so exposure in hard vacuum environments will not create any problems due to outgassing.

The smaller glass area (located nearer to the center of the substrate) reduces the possibility of chipping/damaging the glass during handling which can cause a permanent value change.

Platinum/gold terminals can be soldered. However, ultrasonic ball bonding using gold wire has proven the best way to bond to standard platinum/gold terminals.

For TC bonding using gold or aluminum wire, this chip resistor is available with gold terminals on special order.



## Applications:

- Hybrid Circuits
- High Impedance Load Resistors
- Low Noise, High Gain Feedback Resistors
- Low Current Biological & Medical Instrumentation
- Photon Infrared Detectors
- Piezoelectric Accelerometers
- Hydrophone Preamplifiers
- Extremely Low Noise Cryogenically Cooled First Stage Detection Circuits
- Electret Microphones
- Telecommunications Line Station Monitoring

Dimensions	L	W	H
Inches	0.105	0.038	0.015
(Tolerance +/-)	0.005	0.003	0.003
Millimeters	2.67	0.97	0.38
(Tolerance +/-)	0.13	0.08	0.08

## SPECIFICATIONS

Value / Tolerance: .....  $1 \times 10^7$  to  $9 \times 10^9 \Omega \pm 5\% \pm 10\% \pm 20\% \pm 30\%$   
 $1 \times 10^{10}$  to  $1 \times 10^{11} \Omega \pm 10\% \pm 20\% \pm 30\%$   
 $2 \times 10^{11}$  to  $1 \times 10^{12} \Omega \pm 20\% \pm 30\%$   
*Tighter tolerances available on a "Best Efforts" basis*

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: ..... -270°C to +200°C  
 (3K to 473K)

Resistors with intermediate values are available. Resistors below  $1 \times 10^7$  as well as resistors up to  $5 \times 10^{12}$  maximum are also available (special order).

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

**NOTICE:** The information provided herein is believed to be reliable. However, ELTEC Instruments, Inc. assumes no responsibility for inaccuracies or omissions. Due to industry components being incorporated into ELTEC's devices and ELTEC continually striving for product improvement, specifications may change without notice.



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