Type T912 and T914 Precision Resistor Networks

Resistor Pairs and Quads with Ratio Characteristics for Precision Analog Circuits

Type T912 and T914 Precision Resistor Networks are constructed with Caddock Tetrinox® resistance films to achieve the precise ratio performance and stability required by highly accurate amplifier circuits, voltage reference circuits, and precision bridge circuits.

- **Ratio Tolerance** - from 0.1% to 0.01%.
- **Ratio Temperature Coefficient** - 10 ppm/°C, 5 ppm/°C or 2 ppm/°C.
- **Absolute Temperature Coefficient** - 25 ppm/°C.
- **Ratio Stability of Resistance at Full Load for 2,000 hours** - within 0.01%.
- **Shelf Life Stability of Ratio for 6 Months** - within 0.005%.

Both the T912 and the T914 are available in 14 standard resistance values between 1K and 1 Megohm. Caddock's high thru-put manufacturing capability assures that prototype and large-volume production quantities are available either from stock or within 6 weeks after receipt of order.

**Standard Type T912 and Type T914 Precision Resistor Networks**

In addition to the 14 standard equal value models of the Type T912 and T914, the Type T912 can also be ordered with:

- **10:1 Resistance Ratio** - for use in amplifier gain-setting.

**Ordering Information:**

<table>
<thead>
<tr>
<th>Ratio Code Letter</th>
<th>Ratio (K ohms): 10K to 1 Megohm</th>
<th>Ratio Tolerance:</th>
<th>Ratio Temperature Track (0°C to +70°C):</th>
</tr>
</thead>
<tbody>
<tr>
<td>T912 - A</td>
<td>10K - 010 - 02</td>
<td>±0.1%</td>
<td>-10% = 10 ppm/°C, -5% = 5 ppm/°C, +2% = 2 ppm/°C</td>
</tr>
</tbody>
</table>

**Type T912**

Ratios Available: 1:1, 9:1, 10:1, and Custom.

**Type T914**

Ratios Available: 1:1 and Custom.

**Specifications:**

- **Absolute Tolerance:** ±0.1% for all resistors.
- **Absolute Temperature Coefficient:** 25 ppm/°C referenced to +25°C, AR taken at 0°C and +70°C.
- **Ratio Tolerance:** Options for ratio tolerance are provided as shown in the Ordering Information panel.
- **Ratio Temperature Coefficient:** Options for ratio temperature coefficient are provided as shown in the Ordering Information panel.
- **Voltage Rating:** 30 volts DC or RMS AC applied to R1, R2, R3 and R4.
- **Power Rating:** 0.10 watt applied to R1, R2, R3 and R4 (not to exceed rated voltage).
- **Package Power Rating:** Type T912, 0.20 watt. Type T914, 0.40 watt.
- **Storage Temperature:** -55°C to +105°C.
- **Insulation Resistance Between Isolated Pins:** Pin 2 to Pin 3, Pin 4 to Pin 5, or Pin 6 to Pin 7, 1,000 Megohms, minimum.
- **Dielectric Strength Between Isolated Pins:** 50 volts RMS AC.
- **Ratio Stability Under Load:** Ratio change between any two resistors in the network under full load for 2,000 hours at +70°C, 0.01% maximum.
- **Shelf Stability of Ratio:** Six months at shelf conditions, 50 ppm maximum.

**Custom Model T912 and T914 Precision Resistor Networks**

For applications requiring non-standard resistance values, the T912 and T914 custom configurations can include these special features:

- Mixed resistance values with a maximum ratio of 250-to-1. (Example: 1 Megohm and 4 K)
- Absolute TC as low as 15 ppm/°C.
- Ratio TC as low as 2 ppm/°C.
- Custom voltage ratings.
- Matched resistors of any special value between 1 K and 2 Megohms.

Contact our Applications Engineering for performance, price, and availability of these custom resistor networks.