

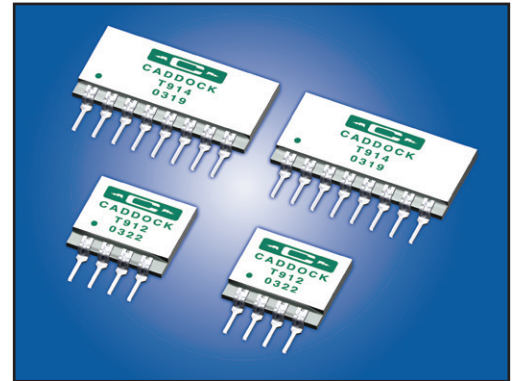
# Type T912 and T914 Precision Resistor Networks

## 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.
- **9:1 Resistance Ratio** - for use in voltage reference dividers.

**Ordering Information:** T912 - A 10K - 010 - 02

Model Number: \_\_\_\_\_

Ratio Code Letter: \* \_\_\_\_\_

**A** - T912 with R<sub>1</sub>: R<sub>2</sub> where R<sub>2</sub> = 10R<sub>1</sub>  
 1K:10K    10K:100K    40K:400K  
 2K:20K    20K:200K    50K:500K  
 5K:50K    25K:250K    100K:1 Meg

**B** - T912 with R<sub>1</sub>: R<sub>2</sub> where R<sub>2</sub> = 9R<sub>1</sub>  
 1K:9K    10K:90K    40K:360K  
 2K:18K    20K:180K    50K:450K  
 5K:45K    25K:225K    100K:900K

**No Letter** - T912 with R<sub>1</sub> = R<sub>2</sub>  
**No Letter** - T914 with R<sub>1</sub> = R<sub>2</sub> = R<sub>3</sub> = R<sub>4</sub>

**Ratio Temperature Track (0°C to +70°C):\***  
 -10 = 10 ppm/°C    -05 = 5 ppm/°C  
 -02 = 2 ppm/°C

**Ratio Tolerance:\***  
 -100 = 0.10%    -020 = 0.02%  
 -050 = 0.05%    -010 = 0.01%

**Standard Resistance Values:\*** (R<sub>1</sub>)  
 1K    10K    40K    200K    500K  
 2K    20K    50K    250K    1 Meg  
 5K    25K    100K    400K

Special or mixed resistance values are available as custom networks. See the custom section at the bottom of this page.

\* (This information appears on the back side of the network)

## Specifications:

**Absolute Tolerance:** ±0.1% for all resistors.

**Absolute Temperature Coefficient:** 25 ppm/°C referenced to +25°C, ΔR 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 R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub>.

**Power Rating:** 0.10 watt applied to R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> (not to exceed rated voltage).

**Package Power Rating:** Type T912, 0.20 watt. Type T914, 0.40 watt.

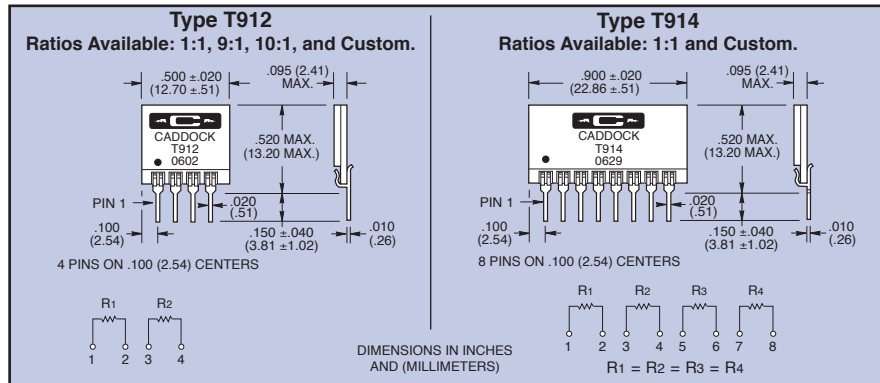
**Storage Temperature:** -55°C to +105°C.

**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.

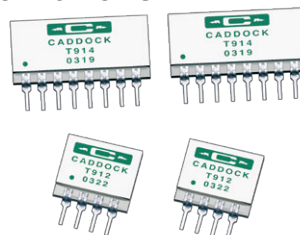
**Shelf Stability of Ratio:** Six months at shelf conditions, 50 ppm maximum.



## 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.

**CADDOCK ELECTRONICS, INC.**

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For Caddock Distributors listed by country see [caddock.com/contact/dist.html](http://caddock.com/contact/dist.html)

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