

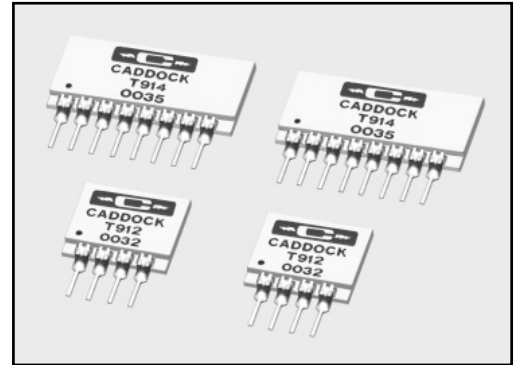
# Type T912 and T914 Precision Resistor Networks

## Resistor Pairs and Quads with Ratio Characteristics for Precision Analog Circuits

Type T912 and T914 Precision Resistor Networks are constructed with Caddock Tetrinox<sup>®</sup> 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 1,000 ohms 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.

### 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.

**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.

### 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 = 0.1% -020 = 0.02%  
 -050 = 0.05% -010 = 0.01%

Standard Resistance Values: \* (R<sub>1</sub>)

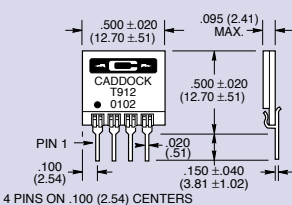
1K 10K 40K 200K 500K  
 2K 20K 50K 250K 1 Meg  
 5K 25K 100K 400K

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)

### Type T912

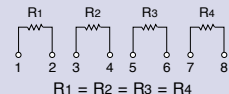
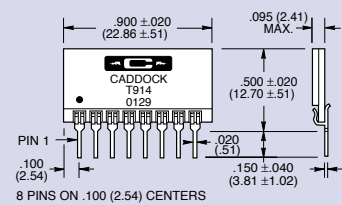
Ratios Available: 1:1, 9:1, 10:1 and Custom.



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### Type T914

Ratios Available: 1:1 and Custom.

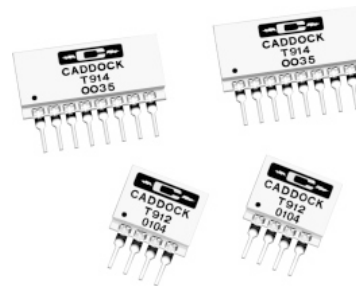


R<sub>1</sub> = R<sub>2</sub> = R<sub>3</sub> = R<sub>4</sub>

### 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: 1.0 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.



Call or write our Applications Engineering for performance, price and availability of these custom resistor networks.

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 Roseburg, Oregon 97470-9422  
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