

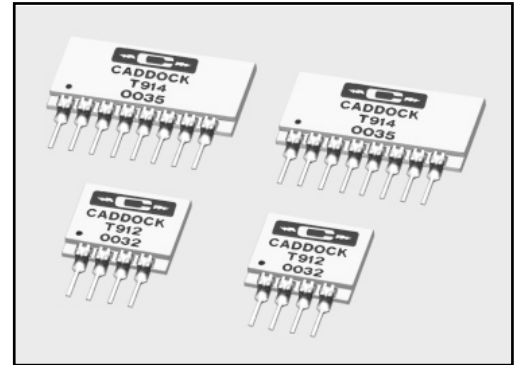
# Type T912 and T914 Precision Resistor Networks

## 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.

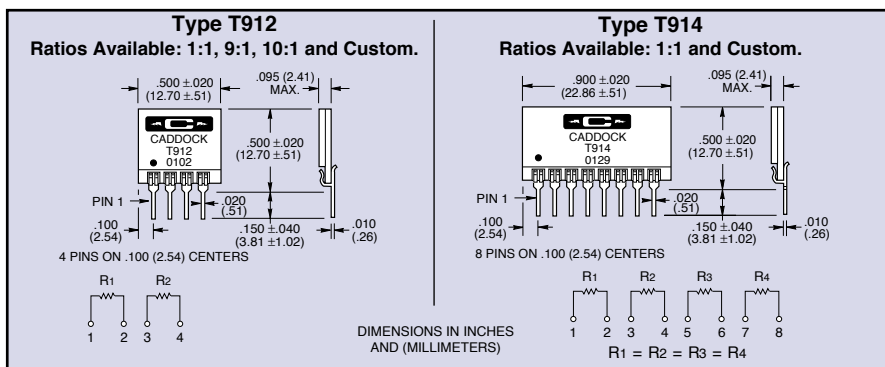
**Ratio Stability Under Load:** Ratio change between any two resistors in the network under full load for 2,000 hours at +70°C, 0.01% maximum.

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

### Ordering Information:

**T912 - A 10K - 010 - 02**

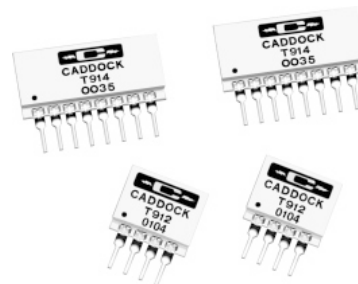
<b>Model Number</b>	<b>Ratio Temperature Track (0°C to +70°C):*</b>
<b>Ratio Code Letter: *</b>	-10 = 10 ppm/°C    -05 = 5 ppm/°C
<b>A - T912 with R<sub>1</sub>: R<sub>2</sub> where R<sub>2</sub> = 10R<sub>1</sub></b>	-02 = 2 ppm/°C
1K:10K    10K:100K    40K:400K	<b>Ratio Tolerance: *</b> -100 = 0.1%    -020 = 0.02%
2K:20K    20K:200K    50K:500K	-050 = 0.05%    -010 = 0.01%
5K:50K    25K:250K    100K:1 Meg	<b>Standard Resistance Values: *(R<sub>1</sub>)</b>
<b>B - T912 with R<sub>1</sub>: R<sub>2</sub> where R<sub>2</sub> = 9R<sub>1</sub></b>	1K    10K    40K    200K    500K
1K:9K    10K:90K    40K:360K	2K    20K    50K    250K    1 Meg
2K:18K    20K:180K    50K:450K	5K    25K    100K    400K
5K:45K    25K:225K    100K:900K	
<b>No Letter - T912 with R<sub>1</sub> = R<sub>2</sub></b>	Special or mixed resistance values are available as custom networks.
<b>No Letter - T914 with R<sub>1</sub> = R<sub>2</sub> = R<sub>3</sub> = R<sub>4</sub></b>	See the custom section at the bottom of this page.
	* (This information appears on the back side of the network)



### 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.

**Applications Engineering**  
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