

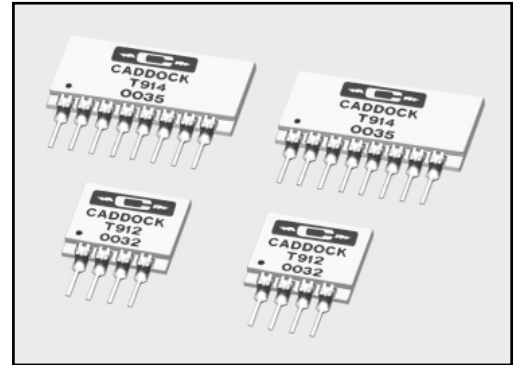
Type T912 and T914 Precision Resistor Networks

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 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.

Ordering Information:

T912 - A 10K - 010 - 02

Model Number

Ratio Code Letter: *

A - T912 with R₁: R₂ where R₂ = 10R₁
1K:10K 10K:100K 40K:400K
2K:20K 20K:200K 50K:500K
5K:50K 25K:250K 100K:1 Meg

B - T912 with R₁: R₂ where R₂ = 9R₁
1K:9K 10K:90K 40K:360K
2K:18K 20K:180K 50K:450K
5K:45K 25K:225K 100K:900K

No Letter - T912 with R₁ = R₂

No Letter - T914 with R₁ = R₂ = R₃ = R₄

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: * (R₁)

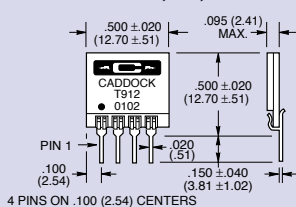
1K 10K 40K 200K 500K
2K 20K 50K 250K 1 Meg
5K 25K 100K 400K

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

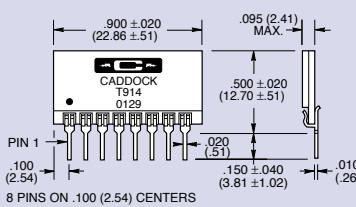
Ratios Available: 1:1, 9:1, 10:1 and Custom.



DIMENSIONS IN INCHES
AND (MILLIMETERS)

Type T914

Ratios Available: 1:1 and Custom.



R₁ R₂ R₃ R₄
1 2 3 4 5 6 7 8
R₁ = R₂ = R₃ = R₄

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 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.

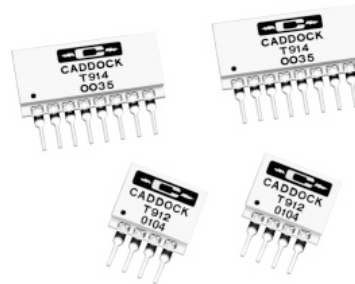
Ratio Stability Under Load: Ratio change between any two resistors in the network under full load for 2,000 hours at +70°C, 0.01% maximum.

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: 1.0 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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Roseburg, Oregon 97470-9422
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