

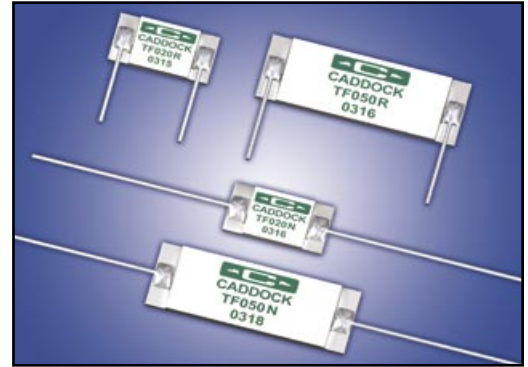
Type TF Low TC Ultra-Precision Film Resistors

Absolute TC to 5 ppm/°C, Values from 1 Kohm to 125 Megohms, Absolute Tolerance to ±0.01%

Type TF precision resistors employ the Caddock Tetrinox® resistance films - the resistance system that sets a new standard for high value, ultra-stable precision resistors that provide an exceptional combination of performance characteristics:

- **Ultra-Precision** - Five standard resistance tolerances from ±1% to ±0.01%.
- **A Wide Range of Resistance Values** - from 1 Kohm to 125 Megohms.
- **Low Temperature Coefficient** - 5 ppm/°C, 10 ppm/°C, or 15 ppm/°C.
- **Long-Term Stability** - to 0.01% per 1,000 hours.

This approach to quantity production of ultra-precision discrete resistors is the result of combining our unique complex oxide resistance film technology with an advanced high thru-put laser manufacturing capability.

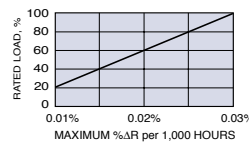


Type TF - Standard Resistance Range - 1 Kohm to 10 Megohms

| Model Number | | Wattage @ +70°C | Maximum Continuous Oper. Voltage | Resistance | | Dimensions inches (mm) | |
|--------------|--------------|-----------------|----------------------------------|------------|--------|-----------------------------|----------------------------|
| Axial Leads | Radial Leads | | | Min. | Max. | A | B |
| TF020N | TF020R | 0.33 | 300 | 1 K | 2 Meg | .750 ±.020 (19.05 ±.51) | .375 ±.020 (9.53 ±.51) |
| TF050N | TF050R | 0.75 | 1,400 | 10 K | 10 Meg | 1.500 ±.020 (38.10 ±.51) | .500 ±.020 (12.70 ±.51) |

Shelf Life: Typically 0.0025% per year

Load Stability:



Specifications:

Apply to all Type TF resistor models.

Absolute Temperature Coefficient: 5 ppm/°C, 10 ppm/°C, or 15 ppm/°C referenced to +25°C, ΔR taken at -15°C and +105°C.

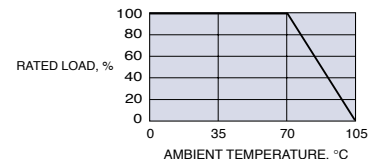
Resistance Tolerance: ±0.01%, ±0.025%, ±0.05%, ±0.10%, or ±1.0%.

Load Life: For ±0.10% or tighter tolerance, 1,000 hours at +70°C. Load stability versus applied power is shown in the load stability curve on this page.

Storage Temperature: -55°C to +105°C.

Leadwire: Tinned Copper.

Derating Curve:

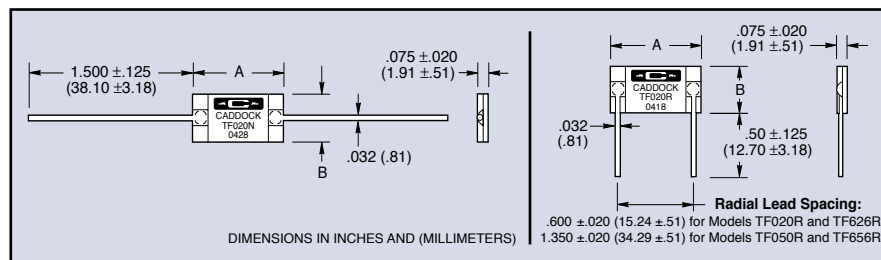


Type TF - Extended Resistance Range - 2 Megohms to 125 Megohms

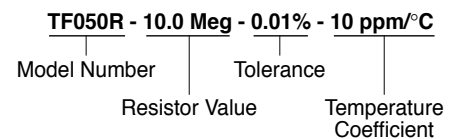
| Model Number | | Wattage @ +70°C | Maximum Continuous Oper. Voltage | Resistance | | Dimensions inches (mm) | |
|--------------|--------------|-----------------|----------------------------------|------------|---------|-----------------------------|----------------------------|
| Axial Leads | Radial Leads | | | Min. | Max. | A | B |
| TF626N | TF626R | 0.33 | 300 | 2.01 Meg | 35 Meg | .750 ±.020 (19.05 ±.51) | .375 ±.020 (9.53 ±.51) |
| TF656N | TF656R | 0.75 | 1,400 | 10.01 Meg | 125 Meg | 1.500 ±.020 (38.10 ±.51) | .500 ±.020 (12.70 ±.51) |

Shelf Life: Typically 0.005% per year

Load Stability: 1,000 hours at rated voltage at +70°C, maximum ΔR 0.03%



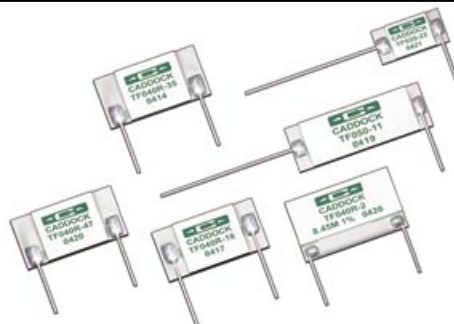
Ordering Information:



Custom Type TF Resistors

Additional cost savings can be realized when your high volume ultra-precision Type TF resistor is optimized for:

- Lightning transient capability
- Voltage rating
- Power rating
- Mechanical configuration
- Ratio matched sets



And for special requirements, custom Type TF resistors are available with:

- TC of 5 ppm/°C, 10 ppm/°C, 15 ppm/°C, 20 ppm/°C, or 25 ppm/°C.
- Shelf stability of 0.0025% per year.

Type TF resistors can also be produced with custom-spaced radial leads that will plug directly into your existing circuit layout.

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