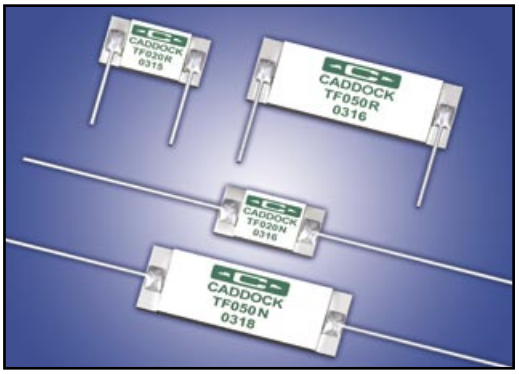
Type TF Low TC Ultra-Precision Film Resistors

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.

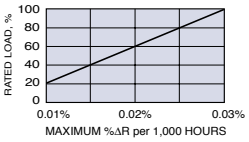


Type TF - Standard Resistance Range - 1 Kohm to 10 Megohms

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:



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%

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.

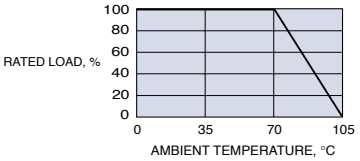
Resistance Tolerance: ±0.01%, ±0.025%, ±0.05%, ±0.10%, or ±1.0%.

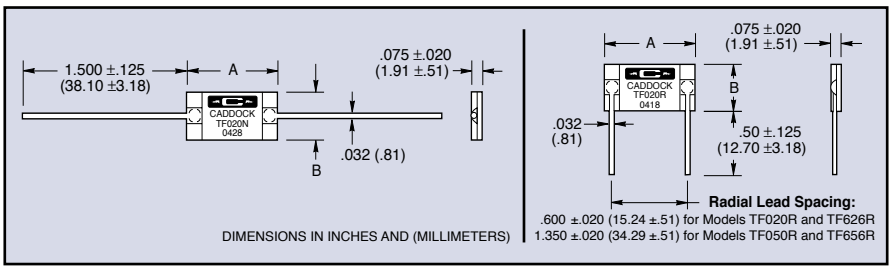
Load Life: For ±0.10% or tighter tolerance, 1,000 hours at +70°C. Load stability versus applied power is shown in the load stability curve on this page.

Storage Temperature: -55°C to +105°C.

Leadwire: Tinned Copper.

Derating Curve:





Ordering Information:

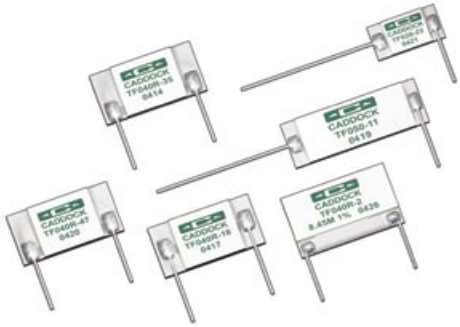
TF050R - 10.0 Meg - 0.01% - 10 ppm/°C

Model Number | Resistor Value | Tolerance | Temperature Coefficient

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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