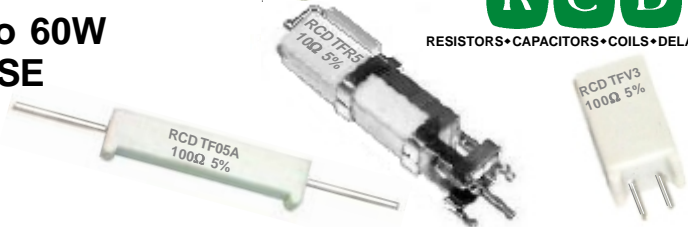


# THERMAL FUSE RESISTORS, 1/2W to 60W PERMANENT OR REPLACEABLE FUSE

## TF SERIES



RESISTORS • CAPACITORS • COILS • DELAY LINES



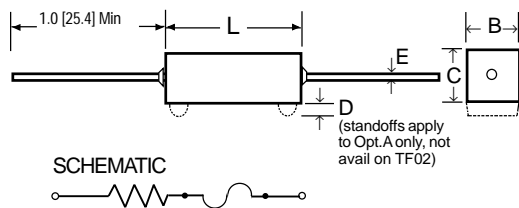
- ☐ Meets UL, FCC, REA, and EIA requirements
- ☐ Fusing-to-operating current ratio as low as 1.25:1!
- ☐ Fusing times can be custom tailored
- ☐ Precision tolerance to  $\pm 0.1\%$ , TC's to 5ppm available
- ☐ Available on exclusive **SWIFT™** delivery program

### OPTIONS

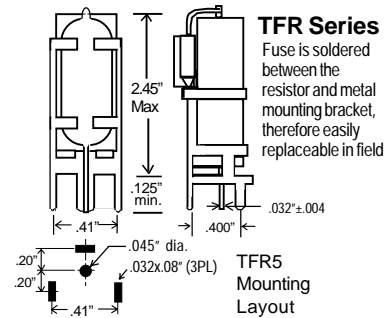
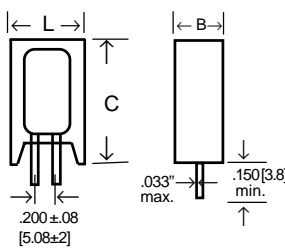
- ☐ Option X: Low inductance design
- ☐ Option P: high pulse design (consult factory for assistance)
- ☐ Option A: ceramic case with standoffs (standard on TFV)
- ☐ Customized fuse time/temp, Hi-rel screening & burn-in, increased V & W, aluminum-housed heat sink design, etc.

RCD's TF Series construction consists of a thermal fuse welded in series with a resistor element. The assembly is potted inside a ceramic case (model TFR fuse is mounted externally in order to provide field-replaceability of the fuse). Under overload conditions, the thermal fuse "senses" the temperature rise of the resistor element and opens upon reaching a predetermined temperature. Devices can be custom tailored to specific fault conditions and do not require the large power overloads necessary with other fuse resistors to achieve proper fusing. Thus, the TF Series offers great safety, since high temperatures are not involved to achieve fusing. Typical applications include telecom line cards, repeaters, trunk carrier systems, RFI suppression, power supply, medical, and automotive circuits.

### TF Series



### TFV Series



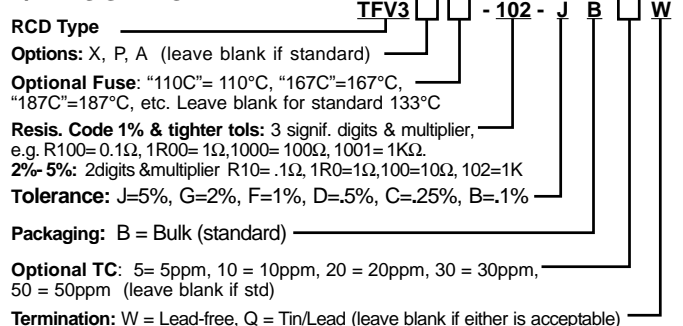
RCD Type <sup>1</sup>	Wattage @ 25°C <sup>2</sup>	Min/Max Fusing Range <sup>3</sup>	Voltage Rating <sup>4</sup>	Resistance Range (Std.) <sup>5</sup>	L $\pm$ .032 [.81]	B $\pm$ .032 [.81]	C $\pm$ .032 [.81]	D $\pm$ .032 [.81]
TF01S	1W	3W to 100W	40V	.05Ω to 1KΩ	.70 [17.8]	.26 [6.6]	.26 [6.6]	.06 [1.5]
TF01	1W	5W to 100W	50V	.05Ω to 4KΩ	.88 [22.4]	.31 [7.9]	.31 [7.9]	.06 [1.5]
TF02	2W	7W to 200W	100V	.05Ω to 10K	.95 [24.1]	.28 [7.1]	.28 [7.1]	N/A
TF04	4W	10W to 400W	150V	.05Ω to 25K	1.39 [35.3]	.38 [9.7]	.35 [8.9]	.12 [3.0]
TF05	5W	15W to 500W	200V	.05Ω to 40K	1.88 [47.8]	.38 [9.7]	.38 [9.7]	.12 [3.0]
TF07	7W	20W to 700W	250V	.05Ω to 60K	1.88 [47.8]	.50 [12.7]	.50 [12.7]	.12 [3.0]
TFV2	2W	4W to 200W	100V	.05Ω to 10K	.435 [11.0]	.30 [7.6]	.80 [20.3]	N/A
TFV3	3W	6W to 300W	150V	.05Ω to 20K	.515 [13.0]	.40 [10]	1.00 [25.4]	N/A
TFV5	5W	8W to 500W	200V	.05Ω to 25K	.500 [12.7]	.40 [10]	1.52 [38.6]	N/A
TFV7	7W	12W to 700W	250V	.05Ω to 40K	.500 [12.7]	.40 [10]	2.02 [51.3]	N/A
TFR5	5W	7W to 500W	200V	.05Ω to 40K	See illustration above			

<sup>1</sup> Other sizes available from 1/2W to 60W. <sup>2</sup> Wattage rating based on 167°C fuse, deduct 24% for 133°C and 40% for 110°C. <sup>3</sup> Expanded range available <sup>4</sup> Maximum resistor working voltage determined by  $E = (PR)^{1/2}$ , E not exceed value listed <sup>5</sup> Resistance range from .005Ω to 1MΩ available. <sup>6</sup> Opt.A standoffs are available on TF1/2 - TF07 (not available on TF02)

### SPECIFICATIONS (133°C fuse design)

Tolerance	0.1% to 10% available
Temperature Coefficient	$\pm 100$ ppm standard, T.C.'s to $\pm 5$ ppm/avail.
Dielectric Strength	500 VAC
Insulation Resistance	10,000 megohms min. (dry)
Operating Temp. Range	-55 to +120°C (up to 225°C avail.)
Derating	1%/°C above 20°C
Fuse Rating ( $\pm 5^\circ\text{C}$ )	Standard = 133°C 2A 250V. Other popular models are 110°C, 167°C and 187°C (72°C to +240°C available, 0.5A to 25A)
Standard FuseTime: TFV Series shall fuse within 30S at 20x rated power, TF and TFR shall fuse within 30S@30x rated W. Refer to chart for approx. fuse curves (custom fusing available).	

### P/N DESIGNATION:



If a custom model is required, please advise the continuous wattage rating, ambient temperature, fusing wattage or current, min/max blow time, resistance value & tolerance, maximum size, pulse voltage & waveform, and a general description of the application.