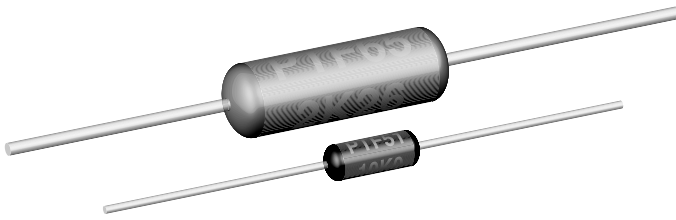


## Metal Film Resistors, Precision, Ultra-high Stability



### FEATURES

- Extremely low temperature coefficient of resistance
- Very low noise and voltage coefficient
- Very good high frequency characteristics
- Can replace wirewound bobbins
- Proprietary epoxy coating provides superior moisture protection

### STANDARD ELECTRICAL SPECIFICATIONS

MODEL	POWER RATING $P_{85^{\circ}\text{C}}$ W	LIMITING ELEMENT VOLTAGE MAX. $V_{\cong}$	TEMPERATURE COEFFICIENT ppm/ $^{\circ}\text{C}$	TOLERANCE %	RESISTANCE RANGE $\Omega$
PTF-51	0.05	200	5, 10, 15	0.02, 0.05, 0.1, 0.25, 0.5, 1	15R - 100K
PTF-56	0.125	300	5, 10, 15	0.01, 0.02, 0.05, 0.1, 0.25, 0.5, 1	15R - 500K
PTF-65	0.25	500	5, 10, 15	0.05, 0.1, 0.25, 0.5, 1	15R - 1M0

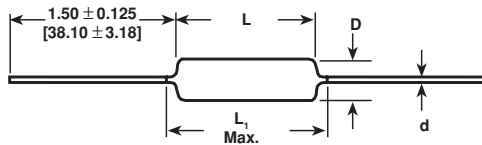
- Marking: Print-marked-model, Value, Tolerance, TC, Date code

### TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	PTF-51	PTF-56	PTF-65
Rated Dissipation at 85 $^{\circ}\text{C}$	W	0.05	0.125	0.25
Limiting Element Voltage	$V_{\cong}$	200	300	500
Insulation Voltage (1 min)	$V_{\text{eff}}$	> 500	> 500	> 500
Thermal Resistance	K/W	< 1300	< 520	260
Terminal Strength, axial	N	> 150	> 50	> 50
Insulation Resistance	$\Omega$	$\geq 10^{11}$	$\geq 10^{11}$	$\geq 10^{11}$
Category Temperature Range	$^{\circ}\text{C}$	- 55/+ 150	- 55/+ 150	- 55/+ 150
Failure Rate	$10^{-9}/\text{h}$	< 1	< 1	< 1
Weight (max)	g	0.11	0.35	0.75

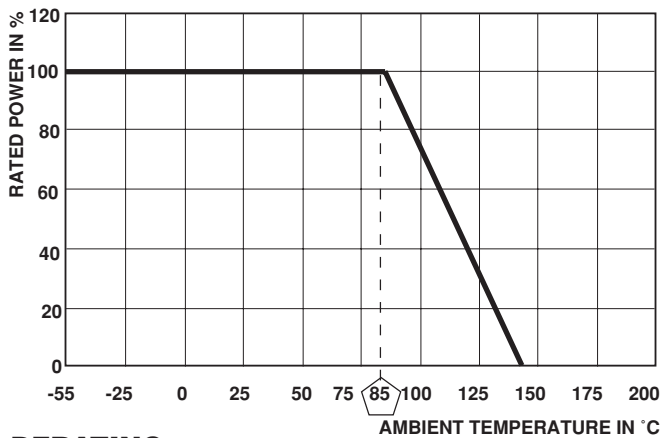
### ORDERING INFORMATION

PTF-56	20K5	B	T-13	R36
MODEL	RESISTANCE VALUE	TOLERANCE	TEMPERATURE COEFFICIENT ppm/ $^{\circ}\text{C}$	PACKAGING See appropriate catalog or web page
PTF 51	$\Omega$	F = $\pm 1\%$	T-10 = $\pm 15$	R36 = Reel
PTF 56		D = $\pm 0.5\%$	T-13 = $\pm 10$	B14 = Bulk
PTF 65	62R2 = 62.2 1M00 = 1M	C = $\pm 0.25\%$ B = $\pm 0.1\%$ A = $\pm 0.05\%$ BC = $\pm 0.02\%$ BB = $\pm 0.01\%$	T-16 = $\pm 5$	

**DIMENSIONS**


\*  $1.08 \pm 0.125$  [27.43 ± 3.18] IF TAPE AND REEL

MODEL	DIMENSIONS in inches [millimeters]			
	L	D	L <sub>1</sub> max	d
PTF-51	$0.150 \pm 0.020$ [3.81 ± 0.51]	$0.070 \pm 0.010$ [1.78 ± 0.25]	0.200 [5.08]	0.016 [0.41]
PTF-56	$0.250 \pm 0.031$ [6.35 ± 0.79]	$0.091 \pm 0.009$ [2.31 ± 0.23]	0.300 [7.62]	0.025 [0.64]
PTF-65	$0.375 \pm 0.062$ [9.53 ± 1.57]	$0.145 \pm 0.016$ [3.68 ± 0.41]	0.475 [12.07]	0.025 [0.64]


**DERATING**
**MATERIAL SPECIFICATIONS**

<b>Element:</b>	Precision deposited nickel chrome alloy with controlled annealing
<b>Encapsulation:</b>	Specially formulated epoxy compounds. Coated construction
<b>Core:</b>	Fire-cleaned high purity ceramic
<b>Termination:</b>	Standard lead material is solder-coated copper. Solderable and weldable per MIL-STD-1276, Type C.

**PERFORMANCE**

TEST	CONDITIONS OF TEST	TEST RESULTS
Endurance	MIL-PRF-55182 Para. 4.7.17 1000 hours rated power at + 85°C	≤ ± 0.04%
Thermal Shock	MIL-STD-202, Method 107 -55°C to + 85°C	≤ ± 0.02%
Short Time Overload	MIL-R-10509, Paragraph 4.6.6	≤ ± 0.01%
Low Temperature Operation	MIL-PRF-55182, Methods 4.7.9	≤ ± 0.02%
Moisture	MIL-STD-202 Method 106	≤ ± 0.08%
Resistance to Soldering Heat	MIL-STD-202, Methods 210	≤ ± 0.02%
Damp Heat IEC 60068-2.3	56 days at 40°C and 92% RH	≤ ± 0.08%
Dielectric Withstanding Voltage	MIL-STD-202, Methods 301 & 105	≤ ± 0.01%