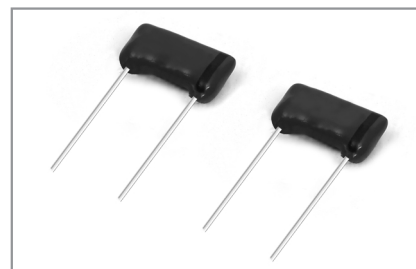


# Precision Metal Film Radial Leaded Resistors

Radial leaded 1/8W, 1/4W, 1/2W, 1W rating and up to 25ppm/°C, 0.1% absolute in series. Precision Ni-Cr thin film resistors, applicable in general use. Color coded, lead forming and taping to available in 1/4W and 1/2W. Featuring long-term stability, low noise, wide operating temperature range and low failure rate. Communications, power control, industrial measurements, automatic testing, medical and high-ended audio systems.



Wire Wound Resistors  
Current Sensing Resistors  
Precision Resistors  
Power Film Resistors  
High Voltage Resistors  
Bulk Ceramic Resistors  
Heaters

## GENERAL SPECIFICATIONS

Model	Power Rating [W]	Resistance Range [Ω], (TCR-Tolerance)		Lead Pitch	Max. Working Voltage [V]
		E - B	C - F		
		25ppm/°C, ±0.1%	50ppm/°C, ±1%		
TP14	1/2W	47 - 750KΩ	-	10mm	√(PR)
	1W	-	10 - 1MΩ		
TP24	1/4W	47 - 750KΩ	-	7.5mm	
	1/2W	-	10 - 1MΩ		
TP44	1/4W	47 - 180KΩ	10 - 250KΩ	5mm	
TP84	1/8W	47 - 33KΩ	10 - 47KΩ	2.5mm	

\* Power rating notations had been changed from previous specifications by results of long term test.  
 \*\* Any combination of TCR and tolerance are available, as such as A-F(100ppm/°C-±1%), Z-D(5ppm/°C-±0.5%) or C-B

## CHARACTERISTICS

Test	E - B (25ppm/°C, ±0.1%)	C - F (50 ppm/°C, ±1.0%)	Conditions
Rated Ambient Temperature	-55°C~+70°C	-55°C~+70°C	
Operating Temperature Range	-55°C~+155°C	-55°C~+155°C	
Storage Temperature Range	-55°C~+155°C	-55°C~+155°C	
Short Time Overload	±[0.10%+0.01Ω]	±[0.25%+0.01Ω]	2.5 x Power rating, 5 seconds
Load Life	±[0.10%+0.01Ω]	±[0.50%+0.01Ω]	70°C, 90minutes on, 30minutes off, 1000hours
Humidity	±[0.25%+0.01Ω]	±[0.50%+0.01Ω]	40°C, 90-95%RH, 90minutes on, 30minutes off, 1000hours
Temperature Cycle	±[0.10%+0.01Ω]	±[0.25%+0.01Ω]	-55°C , 30minutes, +155°C , 30 minutes, 20 cycles
Soldering Heat	±[0.10%+0.01Ω]	±[0.10%+0.01Ω]	4mm portion, 350°C, 3seconds, dipping
Withstanding Voltage	±[0.10%+0.01Ω]	±[0.25%+0.01Ω]	
Terminal Strength	±[0.10%+0.01Ω]	±[0.25%+0.01Ω]	
Insulation Resistance	>10,000MΩ	>10,000MΩ	

\*\*\* Up to TCR±1ppm/°C, tolerance±0.01% are available. Please call factory.

## DIMENSIONS [mm]

Model	A	B	C	D	E	F
TP14	14 max.	8.5 max.	2.5 max.	0.5 dia.	10±0.5	10±2
TP24	10 max.	7.5 max.	2.5 max.	0.5 dia.	7.5±0.5	10±2
TP44	7.5 max.	5.5 max.	2.5 max.	0.5 dia.	5±0.5	10±2
TP84	5 max.	5 max.	2.5 max.	0.5 dia.	2.5±0.5	10±2

## ORDERING PROCEDURE EXAMPLE

