

# TNP10 Series

## Thin Film TO-126 Resistor



Ohmite offers a high power heatsinkable TO-126 packaged resistor. They can achieve 1W in free air and 10W when attached to a proper heatsink. The non-inductive design is ideal for high speed circuits. These models exhibit low noise, high frequency operation and high density installation. Applications include: Constant current sources, electronic load circuits, LSI tests, measurement, audio PA systems and motor control.

### SPECIFICATIONS

Series	Wattage*	Resistance Range ( $\Omega$ )	Tolerance	TCR (ppm/ $^{\circ}$ C)	Heat Resistance**
TNP10S	10W	0.09-0.1	5% (J)	$\pm 250$	5.9 $^{\circ}$ C/W
		0.1-9.1	$\pm 1\%$ (F), 5% (J)	$\pm 100$	
		10-51K	$\pm 1\%$ (F)	$\pm 50$	

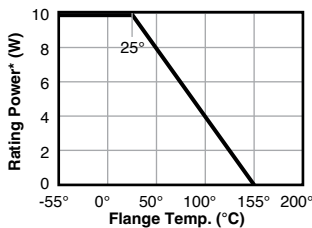
\* Flange temp. -55 $^{\circ}$  - 25 $^{\circ}$ C; 1W at free air \*\*From hot spot to flange

### CHARACTERISTICS

<b>Resistance Range</b>	Values listed below; others on request
<b>Temp. Range</b>	-55 $^{\circ}$ C to +155 $^{\circ}$ C
<b>Rated Temperature</b>	+25 $^{\circ}$ C
<b>Rated Power</b>	10W (-55 to 25 $^{\circ}$ C flange temperature), 1W free air

Item	Performance	Condition
<b>Dielectric Withstanding Voltage</b>	2000VAC	60 sec., between terminals and flange
<b>Insulation Resistance</b>	Over 1000M $\Omega$	Between terminals and flange
<b>Moisture Resistance</b>	$\pm(1.0\%+0.05\Omega)$	60 $^{\circ}$ C, 90 to 95%RH, DC 0.1W, 1000 hrs.
<b>Load Life</b>	$\pm(1.0\%+0.05\Omega)$	25 $^{\circ}$ C, 90min. ON, 30min. OFF, 1000hrs
<b>Soldering Heat</b>	$\pm(1.0\%+0.05\Omega)$	350 $\pm 5^{\circ}$ C, 3 sec.
<b>Solderability</b>	Over 95% of surface	230 $\pm 5^{\circ}$ C, 3 sec.
<b>Vibration</b>	$\pm 0.25\%$	IEC 60068-2-6

#### Derating



\*with 2.8K/W heatsink

#### Temperature Rise



#### Construction



### THIS PRODUCT IS DESIGNED FOR USE WITH PROPER HEATSINKING.

Maximum base plate temperature of the resistor must be monitored and kept within specified limits to establish the power rating. Best technique is to attach a thermocouple to the side of the base plate of the resistor. Temperature of plastic housing or heat sink cannot be used to establish rating of the resistor.

(continued)

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### DIMENSIONS

(in./mm)



### ORDERING INFORMATION

Tolerance F = 1% J = 5%			
<b>T N P 1 0 S C 5 0 R 0 F E</b>			
Series	TCR	Resistance	RoHS compliant
	H = 250ppm A = 100ppm C = 50ppm	R500 = 0.500Ω 1R00 = 1Ω 250R = 250Ω 1K00 = 1,000Ω 25K5 = 25,500Ω	

#### Standard part numbers

Other values on request

TNP10SHR100JE	TNP10SA5R00FE	TNP10SC75R0FE
TNP10SHR150JE	TNP10SA7R50FE	TNP10SC100RFE
TNP10SAR200JE	TNP10SC10R0FE	TNP10SC120RFE
TNP10SHR250JE	TNP10SC12R0FE	TNP10SC150RFE
TNP10SHR330JE	TNP10SC15R0FE	TNP10SC200RFE
TNP10SAR500JE	TNP10SC20R0FE	TNP10SC330RFE
TNP10SA1R00FE	TNP10SC25R0FE	TNP10SC560RFE
TNP10SA1R50FE	TNP10SC27R0FE	TNP10SC1K00FE
TNP10SA2R00FE	TNP10SC47R0FE	TNP10SC10K0FE
TNP10SA3R00FE	TNP10SC50R0FE	

### ASSOCIATED PARTS



TNP10 resistors may be mounted with Ohmite **C Series (parts C126-XXX) heatsinks:**  
[http://www.ohmite.com/cat/sink\\_c.pdf](http://www.ohmite.com/cat/sink_c.pdf)