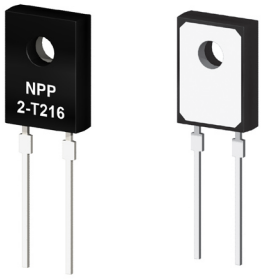
NPR NPP 2-T126

TO-126 Power Film Resistors



- **Resistances from 0.01 to 51K Ohms**
- **Power Rating to 20Watt**
- **Resistance Tolerances to ±0.05%**
- **TCR to ±5ppm/K**
- **TO-126 Housing**
- **Convenient SMD DPak Available**
- **Low Inductance (<50nH)**

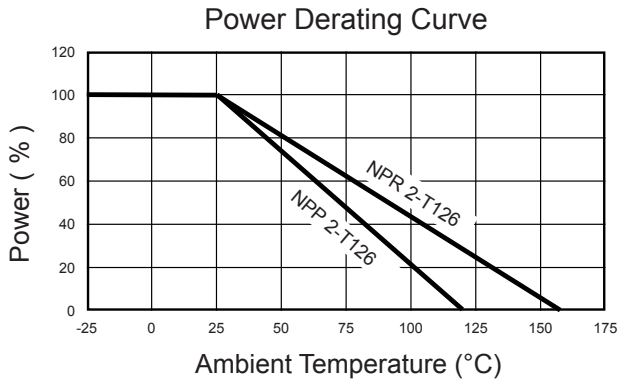
SPECIFICATIONS

Type	Power Rating Heatsink[1]	Power Rating Free Air[2]	Thermal Resistance	Resistance Range[3] Min	Resistance Range[3] Max	Tolerances	Temperature Coefficients
NPR 2-T126	20W	1W	5.9K/W	0.01Ω	51KΩ	±1% (R>0.1Ω) ±5%	±50ppm/K (R>10Ω) ±100ppm/K (R>0.1Ω) ±250ppm/K
NPP 2-T126	5W	0.5W	6.0K/W	0.1Ω	51KΩ	±0.05% / ±0.1% / ±0.25% (R>5Ω) ±0.5% (R>1Ω) / ±1% (R>0.1Ω) ±2% / ±5%	±5 / ±10ppm/K (R>1Ω) ±25ppm/K (R>0.1Ω) ±100ppm/K

[1] Power rating based on 25°C Flange Temperature
[2] Power rating based on 25°C Ambient Temperature
[3] Consult Factory for Higher or Lower Values

Specification	Value	
Maximum Current	25A	
Temperature Range	-55°C to +155°C : NPP 2T126 -55°C to +120°C : NPR 2-T126	
Dielectric Strength	2000 VAC	
Max. Operating Voltage	500 V	
Insulation Resistance	>1000 Meg-Ohm	
Environmental Performance	ΔR	Test Conditions
Load Life	±1%	25°C / 90 min ON / 30 min OFF / 1000 hr
Humidity Resistance	±1%	40°C / 90-95% RH / DC 0.1W / 1000 hr
Temperature Cycle	±0.25%	-55°C for 30 min / +155°C for 30 min / 1000 hr
Solder Heat	±0.1%	+350°C / 3s
Vibration	±0.25%	

SPECIFICATIONS (continued)



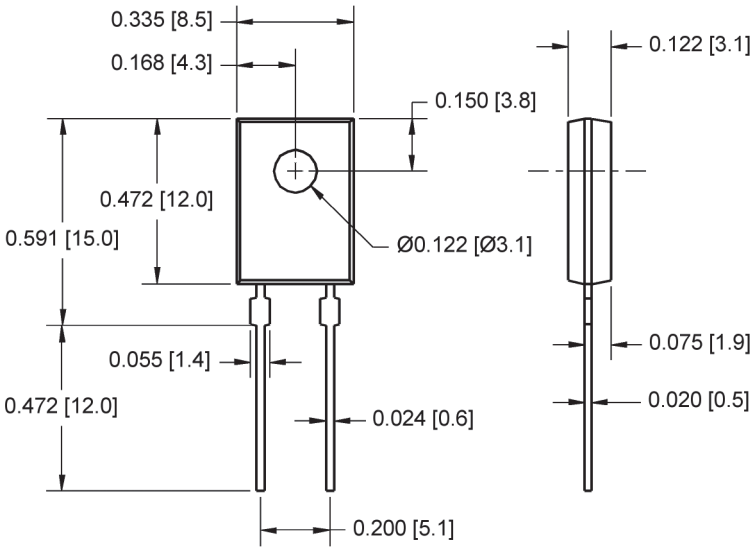
Power Rating Notes -

The NPR 2-T126 Series Foil Resistors must be attached to a suitable heatsink. The maximum internal resistor temperature is 155°C (120°C for the NPP 2-T126).

To specify an appropriate heatsink use the following formula :

$$R_{\theta H} = \frac{T_{MAX} - (P \times R_{\theta R}) - T_A}{P}$$

Where: $R_{\theta H}$ = Thermal Resistance of Heatsink (K/W)
$R_{\theta R}$ = Thermal Resistance of Resistor (K/W)
T_{MAX} = Maximum Temperature of Resistor
T_A = Ambient Temperature of Heatsink (°C)
P = Power Through Resistor (W)



Mounting Notes -

The NPR 2-T126 Series Film Resistors must be attached to a suitable heatsink. Mount resistor using thermal grease to a clean / flat surface. Use a compression washer to provide 150 to 300 pounds (665 to 1330N) of mounting force. Torque mounting screw to 8 in-lbs (0.9 Nm).

Ordering Information

Part Number - Resistance - Tolerance - TCR
Example: NPR 2-T126 0.5 Ohm 1% 100ppm