

**FEATURES**

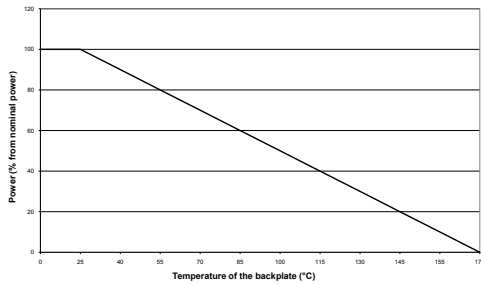
- Resistances from 0.025Ohm to 10kOhms
- Power Rating to 25Watt
- Resistance Tolerances to  $\pm 1\%$
- TCR to  $\pm 100\text{ppm/K}$
- Load Stability to 0.5%
- TO-126 Housing (D-Pak)
- Solder Reflow Secure at 260°C / 20s



TABLE 1 – SPECIFICATIONS					
TYPE		NPS 2-T126B			
Resistance Range		0.025 to 0.049Ohms	0.05 to 0.099Ohms	0.1 to 0.99Ohms	1.0 to 10kOhms
Power Rating	With heatsink	25W			
Tolerances (others upon request)		2% / 5%		1% / 2% / 5%	
Thermal Resistance		6.0 K/W			
Stability (1000h)		0.5%			
Temperature Coefficient		$\pm 500\text{ ppm/K}$	$\pm 400\text{ ppm/K}$	$\pm 300\text{ ppm/K}$	$\pm 100\text{ ppm/K}$
Voltage Proof		2.0 kVDC			
Operating Temperature Range		-40°C to 175°C			
Resistor Material		Thick Film			
Substrate		Al <sub>2</sub> O <sub>3</sub>			
Backplate		Copper / Nickel-plated			
Housing		PPS			
Connector Material		Cu / Ni-flash / lead-free tinned			
Terminals		2 (standard contact S)			
Reflow soldering		lead free soldering time above 220°C max. 90 s max. temperature 245°C and JEDEC-J-STD-020			

ORDERING INFORMATION
Part Number - Resistance - Contact - Tolerance
NPS 2-T126B 1R100 S 1%

**FIGURE 1 – DERATING**



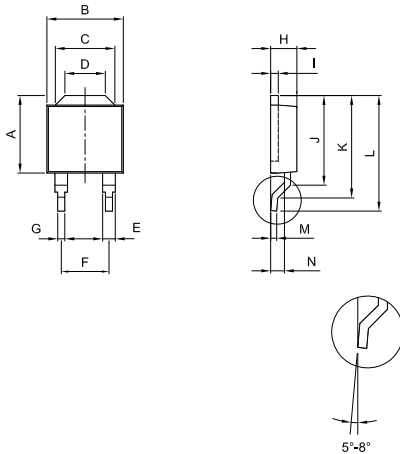
**Power Rating Notes -**

The NPS Series Resistors must be attached to a suitable heat-sink. The maximum internal resistor temperature is 175°C. To specify an appropriate heatsink use the following formula :

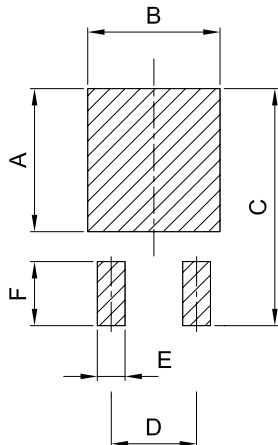
$$R_{0H} = \frac{T_{MAX} - ( P \times R_{0R} ) - T_A}{P}$$

Where:  $R_{0H}$  = Thermal Resistance of Heatsink ( K/W )  
 $R_{0R}$  = Thermal Resistance of Resistor ( K/W )  
 $T_{MAX}$  = Maximum Temperature of Resistor  
 $T_A$  = Ambient Temperature of Heatsink ( °C )  
 $P$  = Power Through Resistor ( W )

**FIGURE 2 – DIMENSIONS** in mm (inches)



Dimension	
A ±0.2 (±0.008)	8.26 (0.33)
B ±0.2 (±0.008)	8.13 (0.32)
C ±0.1 (±0.004)	6.35 (0.25)
D ±0.1 (±0.004)	4.31 (0.17)
E ±0.1 (±0.004)	1.35 (0.05)
F ±0.1 (±0.004)	5.08 (0.20)
G ±0.1 (±0.004)	0.76 (0.03)
H ±0.1 (±0.004)	2.79 (0.11)
I ±0.1 (±0.004)	0.8 (0.03)
J ±0.2 (±0.008)	9.55 (0.38)
K ±0.2 (±0.008)	10.92 (0.43)
L ±0.2 (±0.008)	12.32 (0.49)
M ±0.1 (±0.004)	0.6 (0.02)
N ±0.1 (±0.004)	1.47 (0.06)



Dimension	
A	8.51 (0.335)
B	7.87 (0.310)
C	14.1 (0.555)
D	5.08 (0.200)
E	1.65 (0.065)
F	3.81 (0.150)