

FEATURES

- Resistances from 0.02Ohm to 100kOhms
- Power Rating to 50Watt
- Resistance Tolerances to $\pm 1\%$
- TCR to $\pm 50\text{ppm/K}$
- Load Stability to 0.5%
- TO-220 Housing
- Convenient SMD D2Pak

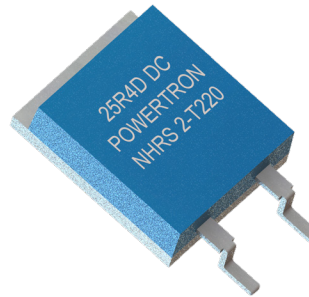
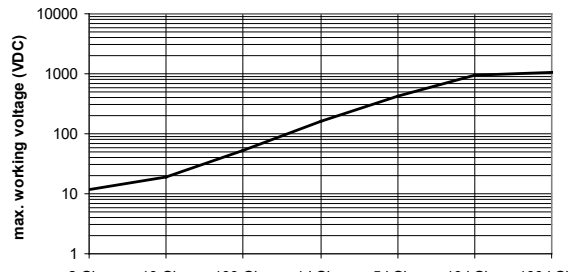


TABLE 1 – SPECIFICATIONS	
TYPE	
NHRS 2-T220	
Resistance Range 0.02 Ohms to 15kOhms	
Power Rating	Free air 70°C
	With heatsink
Tolerances	
from 0.02 Ohms	
from 1.0 Ohms	
Thermal Resistance	
Stability (1000h)	
Temperature Coefficient	
0.02 to 0.049 Ohms	
0.05 to 0.099 Ohms	
0.1 Ohms to 100 kOhms	
Voltage Proof	
Max. Voltage depending on resistance value	
	
Operating Temperature Range	
Resistor Material	
Substrate	
Backplate	
Housing	
Connector Material	
Soldering Profile	
Terminals	

ORDERING INFORMATION
Part Number - Resistance - Contact - Tolerance
NHRS 2-T220 1K100 S 1%

FIGURE 1 – TEMPERATURE COEFFICIENT

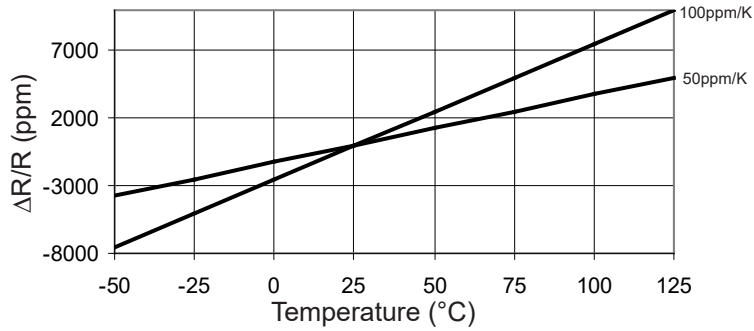
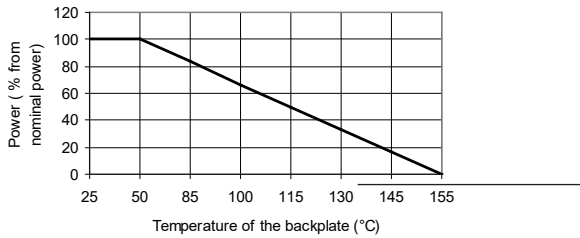


FIGURE 2 – DERATING



Power Rating Notes -

The NHRS Series Resistors must be attached to a suitable heatsink.

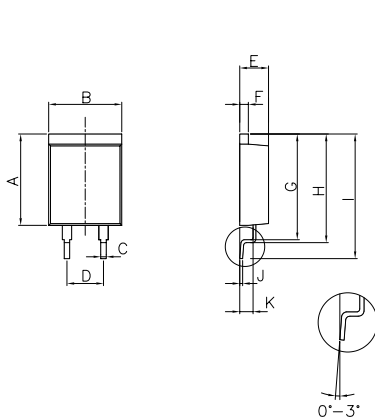
The maximum internal resistor temperature is 155°C.

To specify an appropriate heatsink use the following formula :

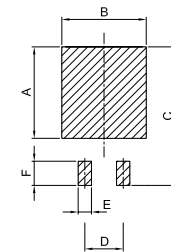
$$R_{0H} = \frac{T_{MAX} - (P \times R_{0R}) - T_A}{P}$$

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 3 – DIMENSIONS in mm (inches)



Dimension	mm
A ±0.2 (±0.008)	12.50 (0.50)
B ±0.2 (±0.008)	10.16 (0.40)
C ±0.1 (±0.004)	0.76 (0.03)
D ±0.1 (±0.004)	5.08 (0.20)
E ±0.1 (±0.004)	4.00 (0.16)
F ±0.1 (±0.004)	1.20 (0.05)
G ±0.2 (±0.008)	14.50 (0.57)
H ±0.2 (±0.008)	14.90 (0.59)
I ±0.2 (±0.008)	17.12 (0.67)
J ±0.1 (±0.004)	0.40 (0.02)
K ±0.1 (±0.004)	1.85 (0.07)



Dimension	mm
A	12.10 (0.476)
B	11.16 (0.439)
C	18.33 (0.722)
D	5.08 (0.200)
E	1.76 (0.069)
F	3.20 (0.126)



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