

FEATURES

- Resistances from 0.005Ohm to 20Ohms
- Power Rating to 40Watt
- Resistance Tolerances to $\pm 0.1\%$
- TCR to $\pm 2\text{ppm/K}$
- Very Low Inductance
- Load Stability to 0.1%



RoHS*
COMPLIANT

TABLE 1 – SPECIFICATIONS	
TYPE	
SHR 4-2321	
Resistance Range	0.005 to 20 Ohms
Power Rating	Free air 70°C
	With heatsink
Tolerances	3W
from 0R005	40W
from 0R01	0.5% / 1% / 2% / 5%
Thermal Resistance	0.1% / 0.25% / 0.5% / 1% / 2% / 5%
Stability (2000h)	2.0 K/W
Temperature Coefficient	0.1% / 0.2% / 0.5% (depends on stress)
Standard (N)	$\pm 10\text{ppm/K}$ (20 to 60°C)
Option (M)	$\pm 5\text{ppm/K}$ (20 to 60°C)
Option (L) upon request for selected values	$\pm 2\text{ppm/K}$ (20 to 60°C) other specifications upon request
Voltage Proof	500 VDC
Maximum Current	150 A
Thermal EMF	< 1 $\mu\text{V/K}$
Operating Temperature Range	-40 to 130 °C
Resistor Material	CuMnSn-Foil
Substrate	Anodized aluminium
Housing	Epoxy or PPS
Connector Material	Cu / tinned
Terminals	4 (standard contact S)
Max. Torque	0.8 Nm

ORDERING INFORMATION
Part Number - Resistance - Contact - Tolerance - TCR
SHR 4-2321 0R050 S 1% M

FIGURE 1 – TEMPERATURE COEFFICIENT

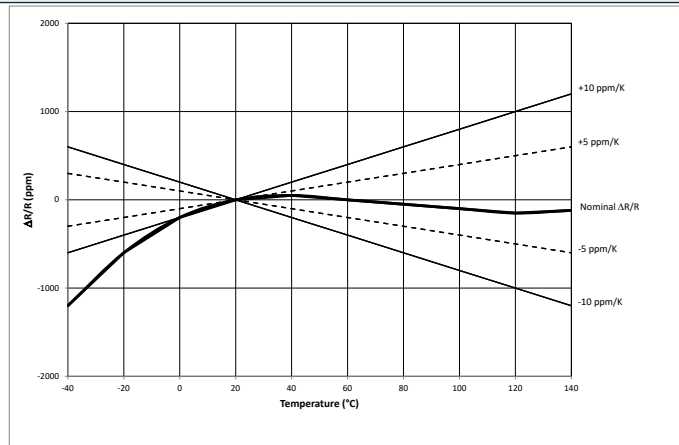
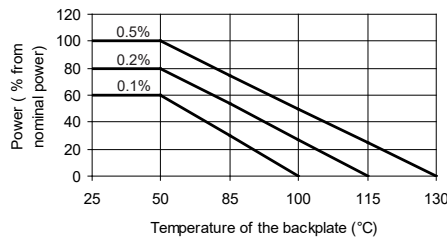


FIGURE 2 – DERATING



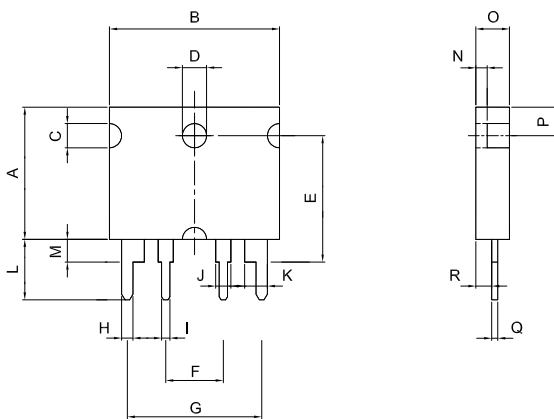
Power Rating Notes -

The SHR Series Resistors must be attached to a suitable heat-sink. The maximum internal resistor temperature is 130°C. 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)

FIGURE 3 – DIMENSIONS in mm (inches)



Dimension	
A ±0.2 (±0.008)	17.25 (0.68)
B ±0.2 (±0.008)	22.30 (0.88)
C ±0.1 (±0.004)	3.20 (0.13)
D ±0.1 (±0.004)	∅3.20 (∅0.13)
E ±0.2 (±0.008)	16.75 (0.66)
F ±0.2 (±0.008)	7.62 (0.30)
G ±0.2 (±0.008)	17.78 (0.70)
H ±0.2 (±0.008)	1.50 (0.06)
I ±0.2 (±0.008)	1.10 (0.04)
J ±0.1 (±0.004)	2.00 (0.08)
K ±0.1 (±0.004)	3.00 (0.12)
L ±0.2 (±0.008)	8.00 (0.31)
M ±0.2 (±0.008)	3.00 (0.12)
N ±0.1 (±0.004)	1.50 (0.06)
O ±0.1 (±0.004)	4.50 (0.18)
P ±0.2 (±0.008)	3.75 (0.15)
Q ±0.1 (±0.004)	0.80 (0.03)
R ±0.2 (±0.008)	2.10 (0.08)



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