

**FEATURES**

- Resistances from 0.5Ohm to 100Ohms
- Power Rating to 25Watt
- Resistance Tolerances to  $\pm 0.01\%$
- TCR to  $\pm 1\text{ppm/K}$
- Load Stability to 0.01%

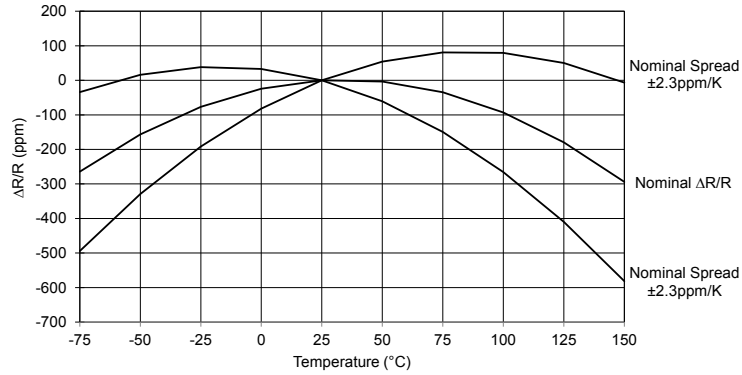


Pb-free  
Available  
**RoHS\***  
COMPLIANT

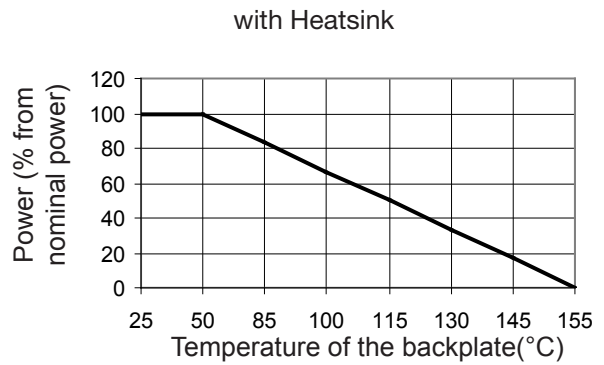
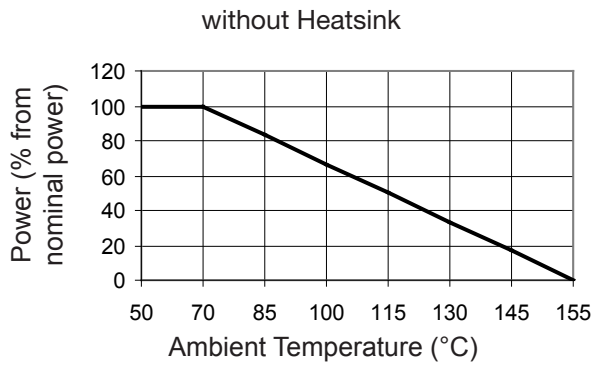
<b>TABLE 1 – SPECIFICATIONS</b>		
<b>TYPE</b>		USR 4-1414
<b>Resistance Range</b>		0.5 to 100 Ohms
<b>Power Rating</b>	Free air 70°C	0.8 W
	With heatsink	25 W
<b>Tolerances</b> from 0.5 Ohms from 1.0 Ohms		0.1% / 0.25% / 0.5% / 1% 0.01% / 0.02% / 0.05% / 0.1% / 0.25% / 0.5% / 1%
<b>Thermal Resistance</b>		< 4.2 K/W
<b>Stability (1000h)</b>		0.01%
<b>Temperature Coefficient</b>		max. $\pm 5\text{ppm/K}$ (-55 to 155°C) typ. $\pm 3\text{ppm/K}$ (-55 to 125°C) upon request $\pm 1\text{ppm/K}$ (25 to 60°C)
<b>Voltage Proof</b>		1.5 kVDC
<b>Thermal EMF</b>		< 0.1 $\mu\text{V/K}$
<b>Operating Temperature Range</b>		-55 to 155°C
<b>Resistor Material</b>		NiCr-Foil
<b>Substrate</b>		Al <sub>2</sub> O <sub>3</sub> upon request: AlN
<b>Housing</b>		Plastic / Epoxy
<b>Connector Material</b>		Cu / tinned
<b>Terminals</b>		4 (standard contact D)

<b>ORDERING INFORMATION</b>
<b>Part Number - Resistance - Contact - Tolerance - TCR (if not standard)</b>
USR 4-1414 0R500 D 0.5% 1ppm/K (25 to 60°C)

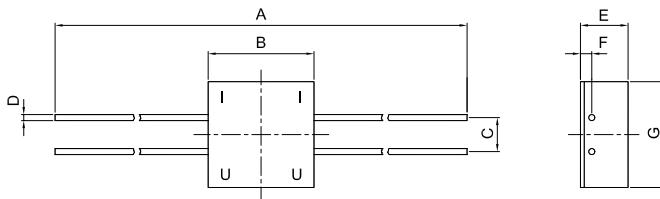
**FIGURE 1 – TEMPERATURE COEFFICIENT**



**FIGURE 2 – DERATING**



**FIGURE 3 – DIMENSIONS** in mm (inches)



Dimension	
A $\pm 0.5$ ( $\pm 0.020$ )	94.00 (3.70)
B $\pm 0.2$ ( $\pm 0.008$ )	14.00 (0.55)
C $\pm 0.1$ ( $\pm 0.004$ )	4.50 (0.18)
D $\pm 0.1$ ( $\pm 0.004$ )	$\varnothing 0.80$ ( $\varnothing 0.03$ )
E $\pm 0.2$ ( $\pm 0.008$ )	6.30 (0.25)
F $\pm 0.2$ ( $\pm 0.008$ )	1.50 (0.06)
G $\pm 0.2$ ( $\pm 0.008$ )	14.00 (0.55)

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