



- Highest Stability
- Nearly Temperature Independent
- Minimum Tolerance
- Low Capacity and Inductance
- Customized Resistor Values

SPECIFICATIONS

ELEKTRICAL

		USR 4-4020	UNR 4-4020 note ¹⁾
Resistance Range	:	0R05 ... 500R other resistance values upon request / power rating depending on resistor value	0R05 ... 500R
Power Rating	:	2.5 W (70°C) without heatsink 30 W* * with heatsink	50 W*
Thermal Resistance Rthj-c	:	3.6 K/W	2.2 K/W
Tolerances	:		
from 0R05	:	0.1%, 0.25%, 0.5%, 1%	
from 10R	:	0.05%, 0.1%, 0.25%, 0.5%, 1%	
from 50R	:	0.01%, 0.02%, 0.05%, 0.1%, 0.25%, 0.5%, 1%	
Stability	:	0.01%	
Temperature Coefficient	:	max. ±5 ppm/K (-55...155)°C typ. ±3 ppm/K (-55...125)°C upon request ±1 ppm/K (0...60)°C	
Voltage Proof	:	750 VDC	
Max. Current	:	15 A	15 A
Thermal EMF	:	<1 µV/K	

ENVIRONMENTAL

Operating Temperature Range : -55°C...155°C

MECHANICAL

Resistor Material	:	NiCr-Foil	
Substrate	:	Al ₂ O ₃	AlN
Housing	:	Epoxy + Al-heatsink	
Connector Material	:	Cu, tinned, 4-pin	
Max. torque backplate	:	1.0 Nm	

note¹⁾: Specially designed for applications with fast changing electrical load.

A line graph showing the relationship between the temperature of the backplate and the power output. The x-axis represents the temperature in degrees Celsius, ranging from 25 to 155. The y-axis represents the power as a percentage of nominal power, ranging from 0 to 120. The power is constant at 100% from 25°C to 50°C, then decreases linearly to 0% at 155°C.

Temperature of the backplate (°C)	Power (% from nominal power)
25	100
50	100
85	83.3
100	66.7
115	50
130	33.3
145	16.7
155	0

from $R \leq 0R1$ leads with $d=0.8\text{mm}$

Dimensions in mm

USR 4-4020 0R3 D 0.25% TK3

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