

USR SERIES

SYMMETRY WIRE WOUND RESISTORS

AEC-Q200 • RoHS

FEATURES

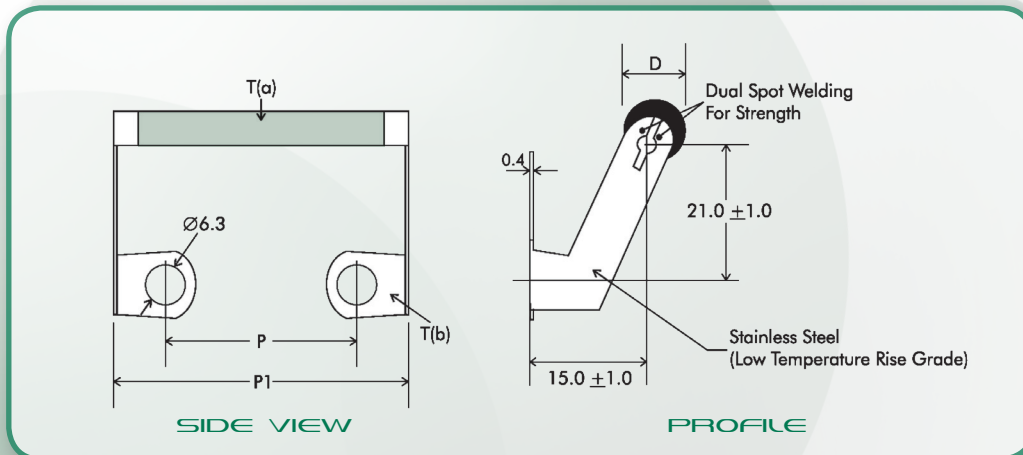
- High Power Capacitor
- Discharge Resistors
- 8.25W to 25W
- 10K to 120K
- Stainless Steel (low temperature rise grade) interface with capacitor
- Flame Retardant Silicone Coating
- Alloy Resistance Wire, wound on thermally efficient ceramic core
- Pb free



APPLICATIONS

- These high power wire wound resistors have low temperature rise stainless steel mounting lugs fitted to them at a pitch which is ideally suitable to mount on capacitors and are used mainly for voltage balancing of aluminium electrolytic capacitors connected in series.
- These resistors are also used in safety applications; wherein they have been found suitable for capacitor voltage discharge applications in high voltage circuits.

PHYSICAL CONFIGURATION (COATED STYLE)



Type	Power Rating		DIMENSION (mm)			Temp. at full power on body T(a) & on interface with capacitor T(b) (amb. temp. 30°C)		Resistance Range		Typical weight per PC gms)
	at 70°C	at 25°C	D ±1.0	P ±1.0	P1 (max)	T (a)	T (b)	min	max	
USR8	8.25W	10W	9.65	22.30	38.0	260°C	57°C	10K	75K	8.0
USR11	11W	13W	9.65	31.85	49.0	264°C	59°C	10K	110K	8.75
USR20	20W	25W	9.65	48.85	66.0	300°C	65°C	10K	120K	13.00

Resistance value lower than the above are possible on request

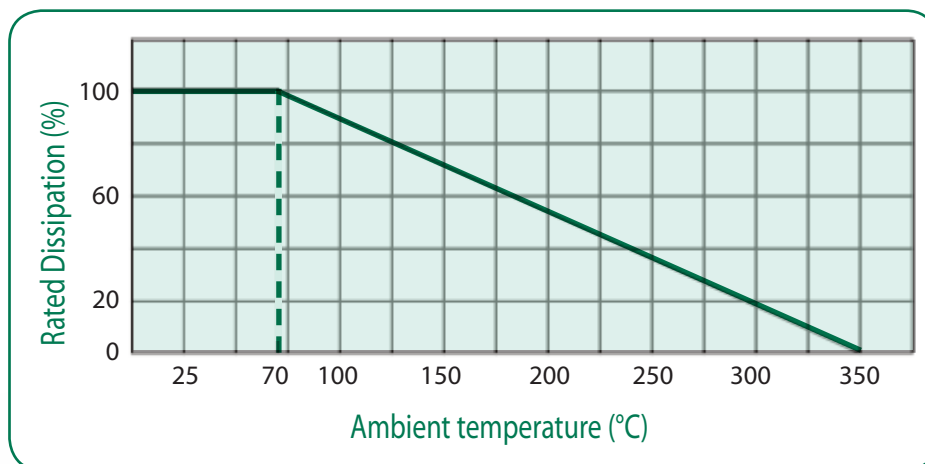


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POWER DERATING CURVE



ELECTRICAL AND ENVIRONMENTAL CHARACTERISTICS

PARAMETER / PERFORMANCE TEST & TEST METHOD	PERFORMANCE REQUIREMENTS
Power Rating (Rated Ambient Temperature) to zero at 350°C (Refer Derating Curve above)	Full Power dissipation at 70°C and linearly derated
Resistance Tolerances	Available $\pm 10\%$ (K); $\pm 5\%$ (J); $\pm 3\%$ (H); $\pm 2\%$ (G); $\pm 1\%$ (F)
Temperature Range	-55°C to +350°C with suitable derating as per derating curve
Voltage Rating / Limiting Voltage / Max. Working Voltage	$\sqrt{P \times R}$
Voltage Proof / Dielectric Withstanding Voltage (based on limiting voltage x 2 or 500V whichever is applicable)	$\Delta R \pm [1\% + R05]$
Temperature Co-efficient of Resistance	± 90 or ± 30 ppm/°C depending on wire selected
Short Time Overload (10 x Rated Power for 5 secs)	$\Delta R \pm [2\% + R05]$
Insulation Resistance (Test Method no. 302 of MIL 202F)	>1000M (Dry) >100M (Wet)
Endurance - Load life (70°C with limiting voltage - 1.5 hours on / 0.5 hours off for 1000 hours)	$\Delta R \pm [\leq 5\% + R05]$
Solvent Resistance (IPA for 60 secs $\pm$ 10 secs)	No effect on coating / marking or case filling
Vibration Test (As per IEC 60571-1)	No effect



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PART NUMBER

USR	B	15K	J
Series	Packing		Resistance Value
USR	B	Bulk	15K
			Tolerance
			J

