THICK-FILM POWER RESISTORS

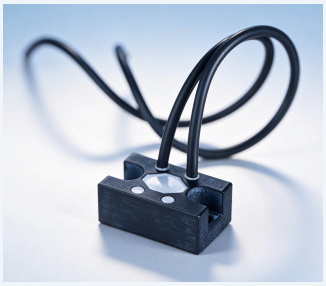
AXP-A-50

Technical specifications

Up to 50 W at 85 °C bottom case

Non-inductive metal-oxide thick film with flexible leads. Available in six wiring configurations for variable-speed drives, power supplies, control devices, telecommunications, robotics, motor control and switching devices.

RoHS compliant. Materials in accordance with UL 94 V-0. See wiring diagrams for terminal assignments.



Electrical and mechanical ratings

PARAMETER	SPECIFICATION
Rated power	Up to 50 W at 85 °C bottom case
Resistance range	1 Ω to 1 MΩ
Resistance tolerance	±1% to ±10%
Temperature coefficient	±50 to ±250 ppm/°C
Operating temperature	−55 °C to +155 °C
Standard working voltage	500 V
Terminal-to-case withstand	5 kV DC (3 kV AC)
R1–R2 dielectric strength	5 kV DC
R1–R2 isolation voltage	500 V
Standard lead length	100 mm · other lengths on request
Standard lead type	Black 4GKW · 0.5 mm²
Mounting screws	2 × M3
Final mounting torque	1.0–1.2 N·m
Weight	Approx. 22 g

TCR measured at +85 °C with +25 °C as the reference.

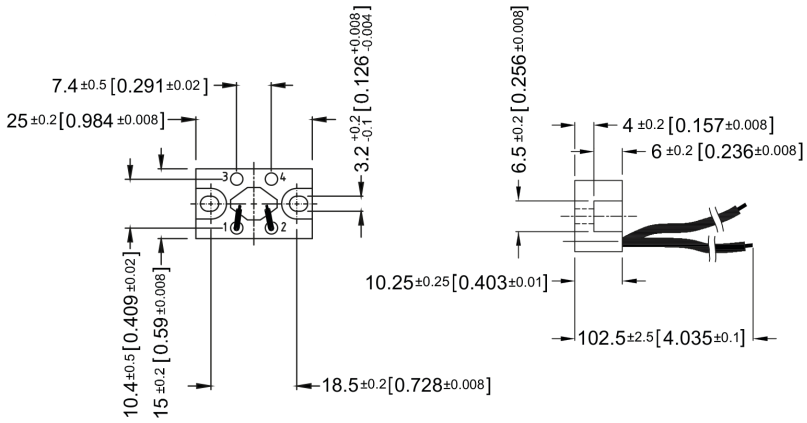
Higher terminal-to-case withstand and R1–R2 isolation values are available on request.

S: up to 1,000 V, special trimming. U: up to 1,000 V, higher pulse capability, untrimmed.

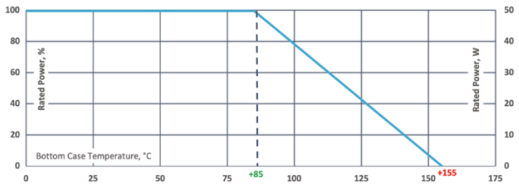
Mounting procedure

1. Position the resistor and press it down by hand.
2. Pre-tighten both M3 screws to 0.1–0.2 N·m.
3. Tighten both screws to 1.0–1.2 N·m.

Outline dimensions · mm [inches]



Power derating



Configurations 1–3: 0.995 W/K (1.005 K/W).

The source curve and stated derating slope differ. Confirm the applicable derating before sizing.

Thermal compound conductivity ≥1 W/(m·K).

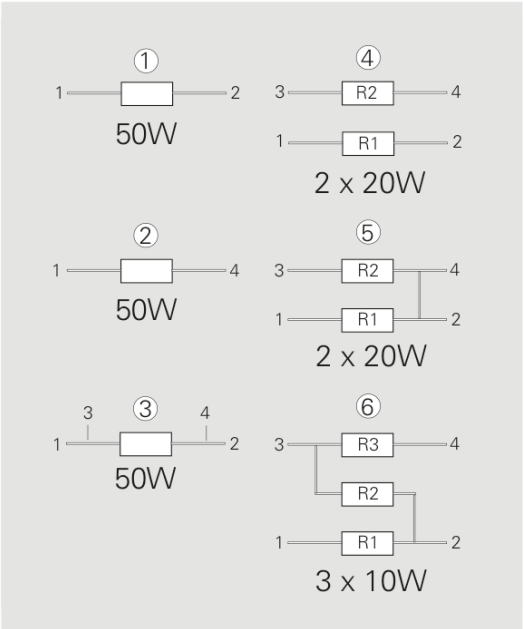
Cooling plate flatness <0.05 mm; surface roughness ≤6.4 µm.

Ordering examples

Model / Configuration / Resistance / Tolerance

AXP-50-A-1 1K 10%
AXP-50-A-4 2×50R 5%
AXP-50-A-1-S 55K 5%

Circuit configurations



Configuration 5: resistance between contacts 2 and 4 is approximately 3 mΩ.