THICK-FILM POWER RESISTORS

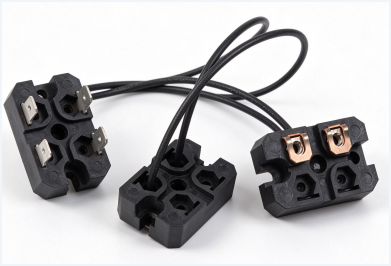
AXS-600 / AXF-600 / AXP-A-600

Electrical specifications and circuit configurations

Up to 600 W at 125 °C bottom case

Non-inductive power resistors for high-frequency and pulse loading. Mount directly on a heatsink. Three terminal styles and six circuit configurations.

RoHS compliant. Materials in accordance with UL 94 V-0. Pulse-load and thermal interface details are available on request.



Technical ratings

PARAMETER	SPECIFICATION
Rated power	Up to 600 W at 125 °C bottom case
Short-time overload	1.25 × rated power, 85 °C, 10 s, ΔR ≤0.4%
Resistance range	0.15 Ω to 5 kΩ
Resistance tolerance	±5% to ±10%
Temperature coefficient	±250 ppm/°C for R >1 Ω
Operating temperature	−55 °C to +155 °C
Working voltage	Up to 1,500 V DC
Dielectric strength to ground	Up to 4,000 V DC
Insulation resistance	>10 GΩ at 1,000 V DC
R1/R2/R3 isolation	500 V DC
Capacitance to case	25 pF typical
Series inductance	50 nH typical
Base plate torque	1.3–1.5 N·m · M4 screws
Contact torque	1.1–1.3 N·m · M4 screws
Contact screw depth	Max. 5 mm
AXP-A standard lead length	100 mm · other lengths on request
AXP-A standard lead type	4GKW-AX 1800 V
Weight	Approx. 16 g
Thermal resistance to cooling plate	≤0.083 K/W

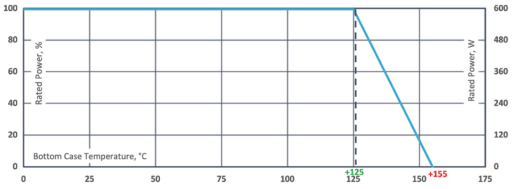
TCR at +85 °C, referenced to +25 °C. Configurations 4–6 are ±10% only.

Higher working voltage and 1,000 V DC inter-resistor isolation are available on request.

Higher resistance and lower TCR for selected resistance values are available on request. Parasitics are typical at 10 kHz and depend on terminal type and configuration.

Protection standards cited in the source: IEC 950, CSA 22.2 950/M-89 and EN 60950.88:2.

Power derating



12.05 W/K · ≤0.083 K/W

Overload applies to configurations 1–3. The source labels the derating curve AXS-600.

Thermal compound conductivity ≥2.9 W/(m·K).

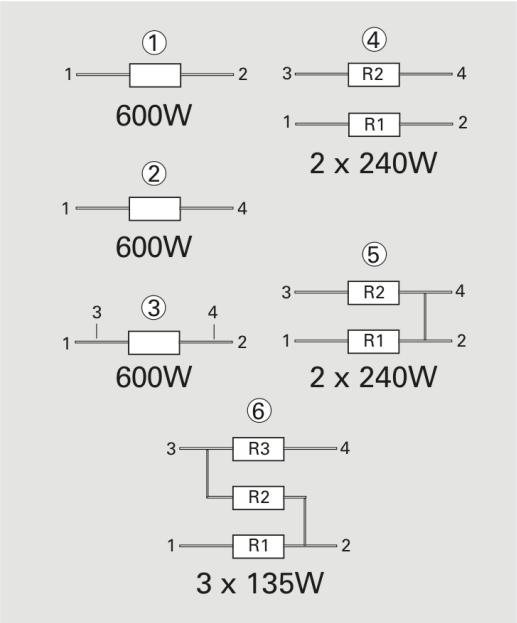
Cooling plate flatness <0.05 mm. Surface roughness ≤6.4 µm.

Ordering example

Model / configuration / resistance / tolerance

AXS-600 27R 10% / AXP-A-600 2×220R 5%

Circuit configurations



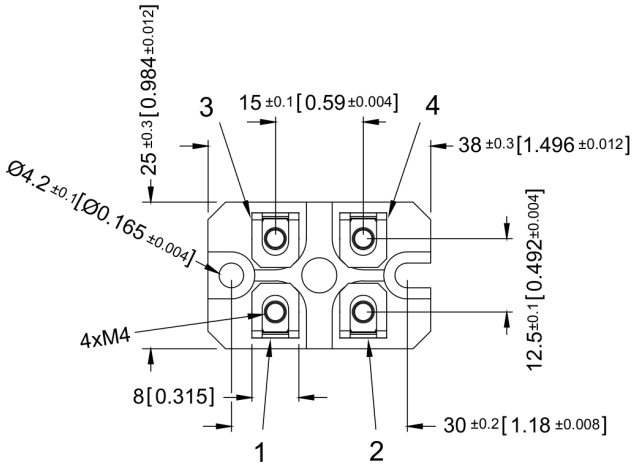
Configuration 5: resistance between contacts 2 and 4 is approximately 3 mΩ.

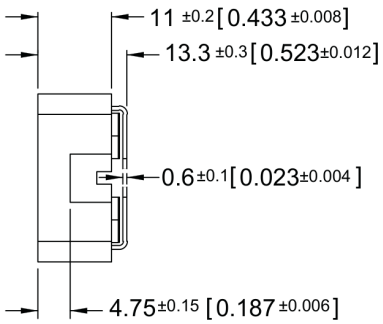
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Terminal drawings and mounting dimensions

AXS-600 · Screw terminals

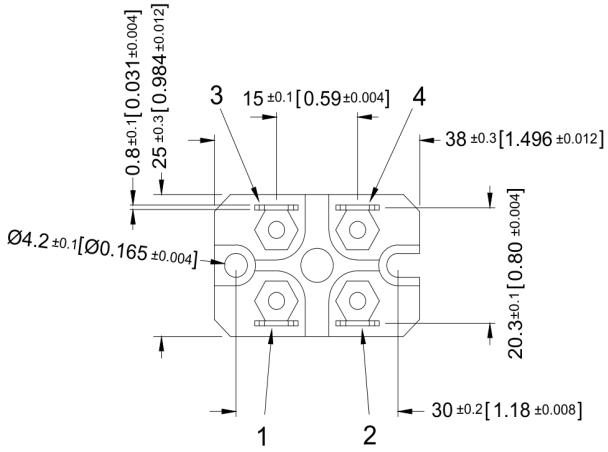
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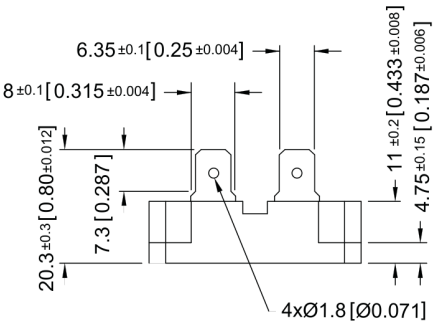




AXF-600 · Quick-connect tabs

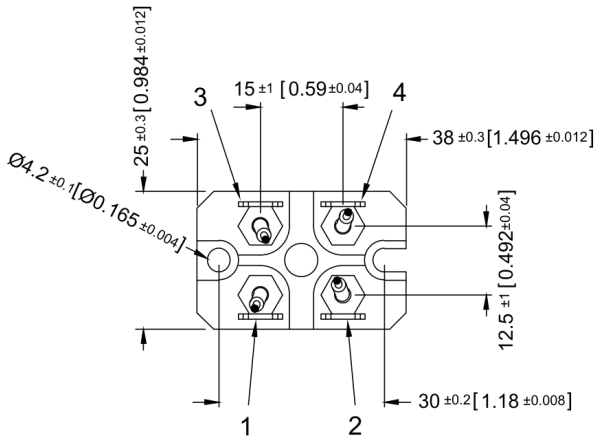
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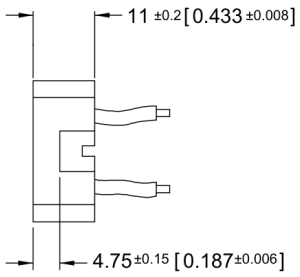




AXP-A-600 · Flexible leads

mm [inches]





AXP-A-600 standard lead length: 100 mm. Other lengths on request.