UXPA250-D01

High-Power Non-Inductive Resistor Module

Applications

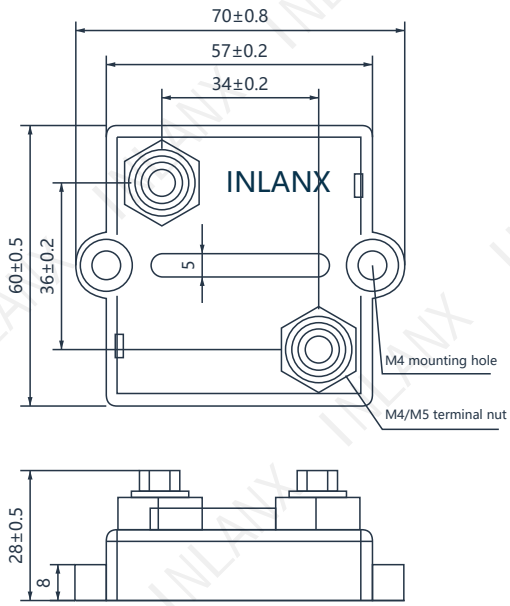
UXPA250 is a general-purpose high-power resistor with a thick-film, non-inductive design. Applications include power generation, HVDC transmission, inverters, variable-speed drives, electric locomotives and marine propulsion.



Features

- Rated power: 250 W at a baseplate center temperature ≤85°C.
- The specially designed housing secures the chip inside an inner case encapsulated with high-voltage-resistant silicone rubber. Spring contacts connect the inner and outer cases. Two M4 screws mount the outer case to the heatsink, providing a contact force of 120-160 N.
- Materials comply with UL94-V0.

Dimensions



Ordering Example

Model - Resistance - Tolerance - Terminal configuration - Terminal nut

UXPA250-440R-2%-(1/2)-M5

Electrical Specifications

Item	Specification
Resistance range	0.5 Ω to 1 MΩ
Resistance tolerance	±2% (G), ±3% (F), ±5% (J), ±10% (K)
Temperature coefficient	±150 ppm/°C (25°C to 105°C); other TCR values available on request.
Rated power	250 W at 85°C; maximum working voltage: 5,000 VDC.

Electrical Specifications (continued)

Item	Specification
Short-time overload	400 W, 70°C, 10 s; ΔR ≤ ±(0.4%R + 0.001 Ω).
Peak current	Up to 1,500 A at low resistance values with narrow pulses.
Dielectric withstand	6 kVrms, 50 Hz, 1 min; up to 12 kVrms for 1 min on request.
Partial discharge	4 kVrms, <10 pC; up to 7 kVrms, <10 pC on request.
Insulation resistance	500 V; minimum 10 GΩ.
Creepage distance	Minimum 42 mm
Clearance	Minimum 14 mm
Inductance	≤80 nH
Distributed capacitance	≤110 pF
Distributed capacitance	≤40 pF
Damp heat resistance	56 days / 40°C, RH ≥95%; ΔR ≤ ±(0.25%R + 0.001 Ω).
Temperature cycling	-55°C / +125°C (0.5 h each), 5 cycles; ΔR ≤ ±(0.2%R + 0.001 Ω).
High-frequency vibration	MIL-Std-202, Method 204, Condition D; ΔR ≤ ±(0.2%R + 0.001 Ω).
Load endurance	1,000 h at rated power, baseplate 85°C; ΔR ≤ ±(0.4%R + 0.001 Ω).
Operating temperature	-55°C to +155°C
Terminal mounting	M5/M4 screws; maximum torque: 2.0 Nm.
Factory / type test	Q/HLF02-2023