

Series SUP300 High Power Resistor

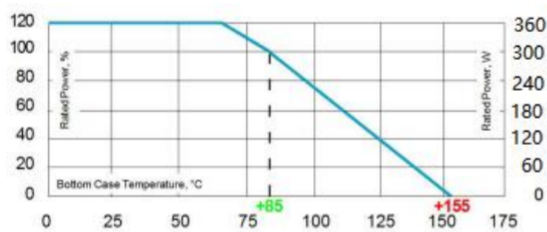
Mainly used as a snubber resistor to compensate the C-R peaks in traction power supplies. Furthermore for speed drives, power supplies, control devices and robotics. The easy mounting fixture guarantees an auto-calibrated pressure to the cooling plate of about 300 N.

- 300W operating power
- Non-Inductive design
- ROHS compliant
- Materials in accordance with UL 94 V-0

Product Detail:



1. Derating

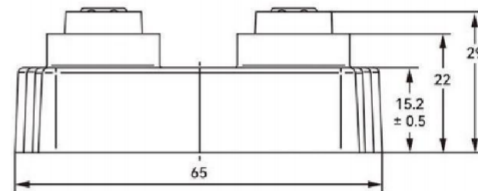
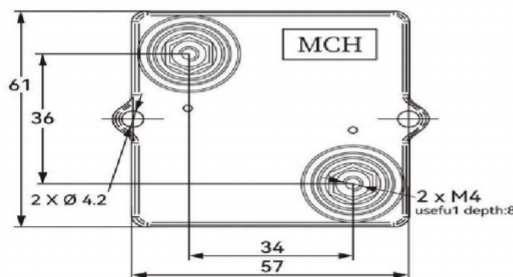


Derating (thermal resist.) SUP300: 4.24W/K (0.24 K/W)

Power rating: 300 W at 85°C bottom case temperature

This value is only applicable when using a thermal conduction to the heat sink $R_{th-cs} < 0.025 \text{ K/W}$. This value can be obtained by using a thermal transfer compound with a heat conductivity of at least 1 W/mK. The flatness of the cooling plate must be better than 0.05 mm overall. Surface roughness should not exceed 6.4 μm .

2. Dimensions in millimeters



3. Specifications

Resistance ranges: $0.1 \Omega \leq 0.2 \Omega$ (HC-version)

$> 0.2 \Omega \leq 1 \text{ M}\Omega$ (higher values on request)

Resistance Tolerance: $\pm 5\%$ to $\pm 10\%$

$\pm 1\%$ to $\pm 2\%$ on special request for limited ohmic values with the reduction of the max. power / pulse rating (ask for details)

Temperature Coefficient: $\pm 500 \text{ PPM}/^\circ\text{C}$ ($0.1 \Omega \leq 0.2 \Omega$) standard

$\pm 150 \text{ PPM}/^{\circ}\text{C}$ ($> 0.25 \Omega \leq 1 \text{ M}\Omega$) standard

lower TCR on special request for limited ohmic values

Power rating: 300 W at 85°C bottom case temperature

Short time overload: 360 W at 70°C for 10sec., $\Delta R = 0.4\%$ max.

Maximum operating voltage: 5,000 V DC = 3,500 V AC RMS (50 Hz)

higher voltage on request, not exceeding max. power

Electric strength voltage: 7 kVrms / 50 Hz / 500 VA, test time 1 min

between terminal und case (up to 12 kVrms on request)

voltages above 10 kVrms are tested at DC equivalent to avoid pre

damage of component

Insulation resistance: $> 10 \text{ G}\Omega$ at 1,000 V

Single shot voltage: up to 12 kV norm wave (1.5/50 μsec)

Creeping distance: $> 29 \text{ mm}$ (standard, higher on request)

Air distance: $> 14 \text{ mm}$ (standard, higher on request)

Inductance: $\leq 80 \text{ nH}$ (typical), measuring frequency 10 kHz

Capacity/mass: $\leq 140 \text{ pF}$ (typical), measuring frequency 10 kHz

Capacity/parallel: $\leq 40 \text{ pF}$ (typical), measuring frequency 10 kHz

Operating temperature: -55°C to $+155^{\circ}\text{C}$

Mounting - torque for contacts: 1.8 Nm to 2 Nm

Mounting - torque: 1.6 Nm to 1.8 Nm M4 screws

Cable variation available on request: HV-cable / Flying leads (ask for details)

Standard cable type: H&S Radox 9 GKW AX 1,5mm² (other cable types on special request)

Weight: $\sim 73.3 \text{ g}$

4. Ordering Information

| Type | ohmic Value | TOL |
|--------|-------------|-----|
| SUP300 | 100K | 5% |