

Series UPT[®]-400

400 W resistor, US Patent-No. 5,355,281

A Miba Group Company

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For variable speed drives, power supplies, control devices, robotics, motor control and other power designs, the easy mounting fixture assures a pressure of the cooling plate of about 300 N.

Features

- 400 W operating power
- Non-Inductive design
- ROHS compliant
- High insulation & partial discharge performance
- Materials in accordance with UL 94 V-0
- Resistor is also available with preapplied PCM (Phase Change Material) (ask for details)



Technical Specifications

| | |
|---|---|
| Resistance value | 0.5 Ω ≤ 1 MΩ |
| Resistance tolerance | ±5 % to ±10 % ±1 % to ±2 % on special request for limited ohmic values with the reduction of the max. power / pulse rating (ask for details) |
| Temperature coefficient | ±150 ppm/°C lower TCR on special request for limited ohmic values |
| Power rating | 400 W at 85°C bottom case temperature |
| Short time overload | 700 W at 70°C for 10sec., ΔR = 0.4 % max. |
| Maximum working 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 |
| Partial discharge | 4 kVrms < 10 pC (up to 7 kVrms < 10 pC on request) acc. to IEC 60270 |
| Insulation resistance | > 10 GΩ at 1,000 V |
| Single shot voltage | up to 12 kV norm wave (1.5/50 μsec) |
| Inductance | ≥ 80 nH (typical), measuring frequency 10 kHz |
| Capacity/mass | ≥ 110 pF (typical), measuring frequency 10 kHz |
| Capacity/parallel | ≥ 40 pF (typical), measuring frequency 10 kHz |
| Operating temperature | -55°C to +155°C |
| Mounting - torque for contacts | 1.8 Nm to 2 Nm, screw-in depth max. 6 mm |
| Mounting - torque | 1.6 Nm to 1.8 Nm M4 screws |
| Terminal tops for additional insulation requirements | on special request (ask for details) |
| Cable variation | on special request (ask for details) |
| General pulse load information | contact our local EBG representative or contact us directly |
| Weight | ~67 g |

General Specifications

Encapsulation

Resin-filled epoxy casing with large creeping distance to mass, large air distance between the terminals and high insulation resistance

Resistance Element

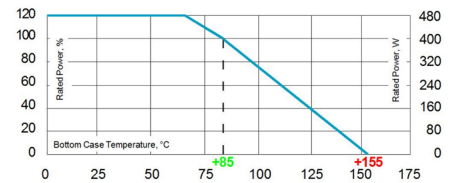
Special design for low inductance and capacitance values. The element employs our special METOXFILM, which demonstrates stability while covering high wattage and pulse loading

Housing

Housings are made without color additives. The color definition is natural and can vary in different pigmentation

Contacts

- Easy load connection with M5 screws (others on request)



Derating (thermal resist.) UPT[®]-400:

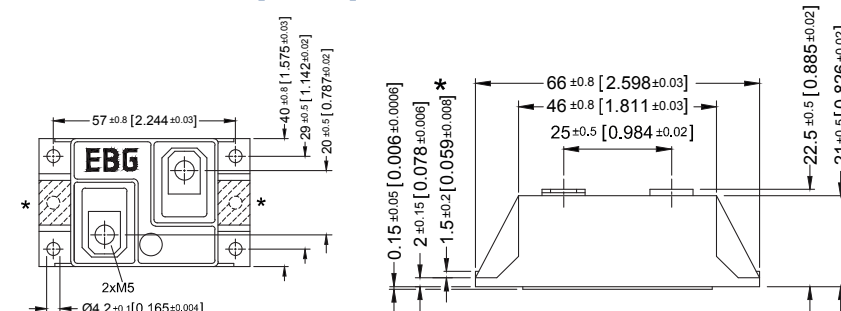
5.55 W/K (0.18K/W)

Power rating: 400 W at 85°C bottom case temperature**

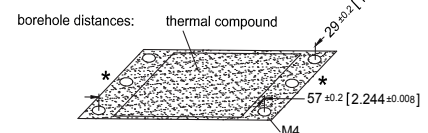
Please ask for detailed mounting procedure!

** This value is only applicable when using a thermal conduction to the heat sink Rth-cs<0.025 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.

Dimensions in mm [inches]



* Optional mounting possibility with 2 mental plates and centered mountig holes.



The above spec. sheet features our standard products. For further options please contact our local EBG representative or contact us directly.