

Ultra-High-Power Resistors

Series UXP 300

300 W Power Resistor, Non-Inductive Design

Mainly used as a snubber resistor to compensate the C-R peaks in traction power supplies.

General Characteristics

Electric support:

- High alumina ceramic metalized on top side with EBG METOXFILM placed on a solid Al heat distribution plate for perfect connection to the main heat sink.

Encapsulation:

- Special resin-filled epoxy casing with large creeping distance to mass, large air distance between the terminals and high insulation resistance (CTI 600).

Resistance Element:

- Special design for perfect current yield over the entire resistor area.

Contacts:

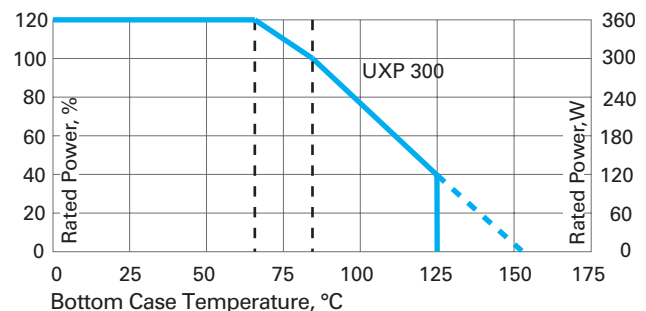
- Easy load connecting with M4 or M5 screws. (Inch thread terminals upon special request)
- Connector height (M+N) available from 25 to 42 mm.
- Various sleeves for increased creeping distance up to 85 mm or potted cable connections are available upon special request.
- The model UXP 300 introduced on this page can be changed according to customer specification.



Please note that almost all of our UXP customers have their own custom designed drawing. Therefore please do not hesitate to discuss your special need with the local representative of EBG.

Specifications

- Resistance values: 0.5 Ω to 1 MΩ
- Resistance tolerance: ±5% to ±10% (1% on special request)
- Temperature coefficient: ±150 ppm/°C (others upon request)
- Maximum working voltage: 5,000 VDC; higher voltage upon request, not exceeding max. power
- Short time overload: 1.5x rated power = 450 W at 70°C for 10 sec, ΔR = 0.4% max.
- Power rating: 300 W at 85°C bottom case temperature.
- Electric strength voltage: 6 kVrms, 50 Hz, 1 min., up to 8,000 Vrms upon special request
- Single shot voltage: up to 12 kV norm wave (1.5/50 μsec)
- Partial discharge: 3 kVrms <10pC, up to 5 kV upon special request
- Insulation resistance: 10 GΩ Min. at 500 V
- Creeping distance: 42 mm min. (higher on request)
- Air distance: 14 mm min. (higher on request)
- Inductance: 80 nH (typical)
- Capacity/mass: 110 pF (typical)
- Capacity/parallel: 40 pF (typical)
- Operating temperature: -55°C to +150°C
- Mounting - max. torque for contacts: 2 Nm
- Mounting - max. torque: 1.8 Nm M4 screws
- Dimensions: please see datasheet UXP-600
- Housing material acc. to UL94-V0
- Standard storage conditions: 0 to 85°C at 80% RH max. for min. 12 months. For different conditions please contact your local EBG representative!
- Pulse load rating: please see our website ([www.ebg-at.com/...](http://www.ebg-at.com/)) for sample pulse load information. For details please contact your local EBG representative!



Derating (thermal resist.) UXP 300: 4.35 W/°K (0.23°K/W)
 Power rating: 300 W at 85°C bottom case temp.*
 Please ask for detailed mounting procedure!

*This value is only applicable when using a thermal conduction to the heat sink $R_{th-cs} < 0.025^{\circ}K/W$. This value can be obtained by using a thermal transfer compound with a heat conductivity of 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.

The above spec. sheet features our standard products. For further options, please contact our local EBG representative or contact us directly. For updated information, please visit our website!