

Ultra-High-Power Resistors

Series ULX 600 (Very low component height)

600 W Resistor · US Patent-No. 5,355,281

For variable speed drives, power supplies, control devices, robotics, motor control and other power designs.

General Characteristics

Electric Support:

- High-purity ceramic metalized with EBG ALTOX film on bottom for better heat transfer and optimum discharge.

Encapsulation:

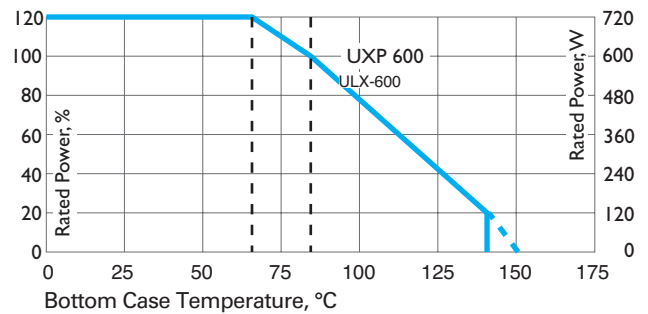
- Special resin-filled epoxy casing. High insulation resistance (CTI 600), high dielectric strength and partial discharge capability.

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.

Specifications

- Resistance values: 0.5 Ω to 1 MΩ (others upon request)
- Resistance tolerance: ±5% to ±10%
- Temperature coefficient: ±150 ppm/°C (others upon request)
- Maximum working voltage: 5,000 V DC, higher voltage upon request, not exceeding max. power
- Short time overload: 1,000 W at 70°C for 10sec., ΔR = 0.4% max. (for conf. 2 and 3)
- Power rating: 600 W at 85°C bottom case temperature (others upon request)
- Peak current: up to 1,500 A depending on pulse length and frequency. Please ask for details!
- Electric strength voltage: 6 kVrms, 50 Hz, up to 12 kVrms upon special request.
- Dielectric strength between R1-R2: >5kV DC (for conf. 4)
- Single shot voltage: up to 12 kV norm wave (1.5/50 μsec)
- Partial discharge: 4 kVrms, <10 pC, up to 7 kV upon special request
- Insulation resistance: 10 GΩ min. at 500 V
- Inductance: 80 nH (typical)
- Capacity/mass: 110 pF
- Capacity/parallel: 40 pF
- Operating temperature: res. body: -55°C to +150°C
std. cables: -40°C to +120°C (other cables upon request)
- Mounting- max. torque: 1.8 Nm, M4 screws
- 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/...) for sample pulse load information. For details please contact your local EBG representative!

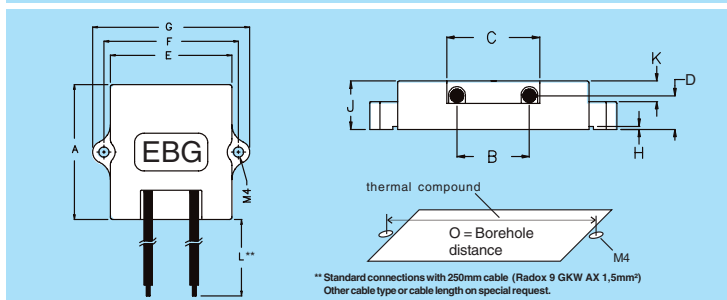
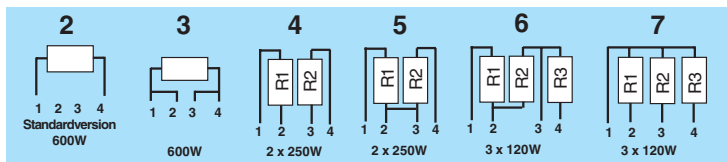


Derating (thermal resist.) ULX 600: 8.33W/°K (0.12°K/W)

Power rating: 600W at 85°C bottom case temp.*

Please ask for detailed mounting procedure!

* This value is only applicable if using 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 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.



Test	Method	Typical results
Short time overload	1,000 W/10sec (for 600 W Element)	0.4%
Humidity steady state	56 days/40°C/95%	0.25%
Temp. cycling	-55/+125/5cycles	0.20%
Shock	40g/4,000 times	0.25%
Vibrations	2-500Hz/10g	0.25%
Load life 3,000cyl	Pn 30 min. on / 30 min off	0.40%

Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	57.0	58.0	2.244	2.283
B	19.5	20.5	0.767	0.807
C	25.5	26.5	1.004	1.043
D	8.0	9.5	0.315	0.374
E	51.0	52.0	2.007	2.047
F	56.5	57.5	2.224	2.264
G	66.2	66.7	2.606	2.626
H	0.5	0.8	0.019	0.032
J	12.5	13.5	0.492	0.532
K	5.3	5.8	0.208	0.228
L	250	255	9.843	10.039
O	56.8	57.2	2.236	2.252

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!