

Ultra High Power Resistors

Series UXP 600

600 Watt Resistor, US Patent # 5,355,281

For variable speed drivers, power supplies, control devices, robotics, motor control and other power designs, the easy mounting fixture guarantees an autocalibrated pressure to the cooling plate of about 120 to 160 N.

General Characteristics

Electric support:

- High alumina ceramic metallized with EBG ALTOX film on the bottom for better heat transfer and optimum discharge.

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

Contacts:

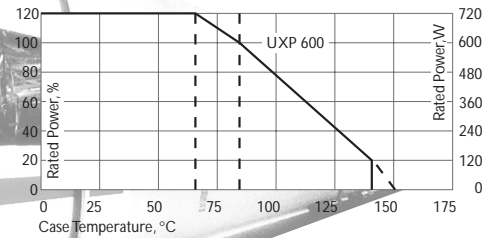
- Easy load connecting with M4 or M5 screws.
- Connector height (M+N) available from 25 to 42mm.
- Various sleeves for increased creeping distance up to 85mm or potted cable connections are available on special request

Materials in accordance with UL94-V0

Specifications

- Resistance Values: 0.5Ω to 100KΩ
- Resistance Tolerance: ±5% to ±10%
- Temperature Coefficient: ±150ppm/°C (others upon request)
- Maximum Working Voltage: 5,000V DC, higher voltage on request, not exceeding max. power
- Short Time Overload: 1,000W at 70°C for 10sec., ΔR = 0.4% max.
- Power Rating: 600W at 85°C Bottom case temperature.
- Peak Current: up to 1500 Amp. depending on pulse length and frequency
- Electric Strength Voltage: 6kVrms, 50Hz, up to 12kVrms on special request.
- Single Shot Voltage: up to 12 kV Normwave (1.5/50 μsec)
- Partial Discharge: 4kVrms, <10pC, up to 7kV on special request
- Insulation Resistance: 10GΩ Min. at 500V
- Creeping Distance: 42 mm Min.
- Air Distance: 14 mm Minimum
- Inductance: - 80 nH
- Capacity/Mass: - 110 pF
- Capacity/Parallel: - 40 pF
- Operation Temperature: -55°C to +150°C
- Max. Torque for Contacts: 2 Nm
- Max. Torque for Mounting: 1.8 Nm

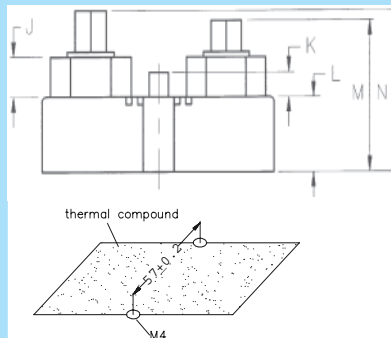
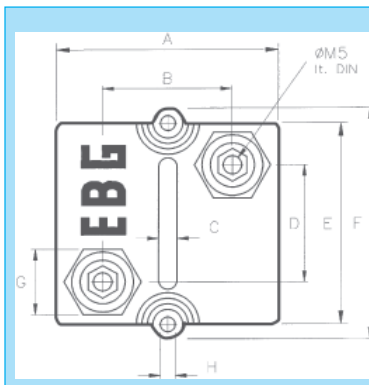
Test	Method	Typical Results
• Short time overload	1,000 W/10sec	0.4%
• Humidity	56days/40°C/95%	0.25%
• Temp. Cycling	-55/+125/5 cycles	0.20%
• Shock	40g/4,000 times	0.25%
• Vibrations	2-500Hz/10g	0.25%
• Load Life	Pn 30 min. on/ 30 min off	0.40%
• Terminal Strengths	200N	0.05%



Derating (thermal resist.) UXP 600: 8.73W/°K (0.115°K/W)

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

* This value is only valid by using a thermal conduction to the heatsink $R_{th-cs} < 0.025^{\circ}\text{K/W}$. This value can be reached by using thermal transfer compound with a heat conductivity of 1W/mK. The flatness of the cooling plate must be better than 0.05mm overall. The roughness of the surface should not exceed 6.4μm.



Dim.	Millimeter		Inches	
	Min.	Max	Min.	Max.
A	59.2	60.8	2.331	2.394
B	35.8	36.2	1.409	1.425
C	4.5	5.5	0.177	0.216
D	33.8	34.2	1.331	1.346
E	56.8	57.2	2.236	2.252
F	64.2	65.8	2.527	2.591
G	17.5	18.5	0.689	0.728
H	4.05	4.3	0.159	0.169
J	6.5	7.5	0.256	0.295
K	4.5	5.5	0.177	0.216
L	14.5	15.5	0.571	0.610
M	29.5	30.5	1.161	1.201
N	31.5	32.5	1.240	1.279

In the above spec sheet, you will find our standard product, please contact your local manufacturing representative or call us direct to find out details of other options available regarding this style:

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