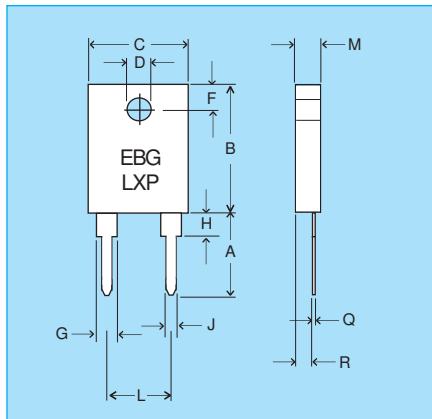


Series LXP 100 TO-247

100 Watt Thick Film Power Resistors for High Frequency and Pulse Loading Applications

EBG offers the totally encapsulated and insulated TO-247 package for low ohmic value and non-inductive design for high frequency and pulsing applications. Ideal use is for power supplies. This series is rated at 100 Watts mounted to a heatsink.

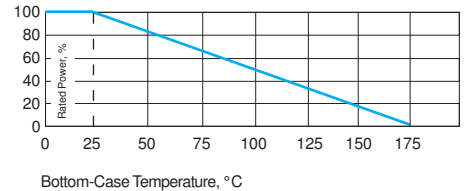
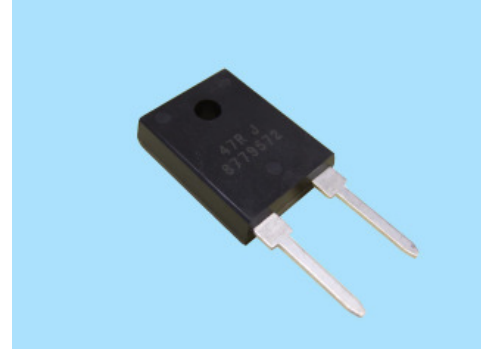
- The special features include:
- 100 Watt power rating at 25 °C case temperature
 - TO-247 package configuration
 - Single screw mounting simplifies attachment to the heatsink
 - A totally molded housing for environmental protection.
 - Non-Inductive design
 - Resistor package totally insulated from heat sink.



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	13.21	15.75	0.520	0.620
B	20.44	20.96	0.805	0.825
C	15.49	16.01	0.610	0.630
D	3.53	3.73	0.139	0.147
F	5.07	5.59	0.200	0.220
G	3.45	3.81	0.136	0.150
H	2.03	3.55	0.080	0.140
J	1.37	1.67	0.054	0.066
L	9.90	10.42	0.390	0.410
M	4.69	5.21	0.185	0.205
Q	0.55	1.07	0.310	0.330
R	2.15	2.67	0.085	0.105

Specifications:

- Resistance Range: 0.05Ω to 1MΩ other values on request
- Resistance Tolerance: ±1%, ±2%, ±5%, ±10%
- Temperature Coefficient: >10Ω: ±50ppm/°C, referenced to 25 °C, ΔR taken at +105 °C; others on request!
- Max. Operating Voltage: 350 V
- Dielectric Strength: 1,800V AC
- Insulation resistance: 10GΩ min.
- Power Rating: 100 W at 25 °C case temperature. derated to 0 W at 175 °C.
- Momentary Overload: 1.5 times rated power and V(DC) < 1.5Vmax for 5 seconds. ΔR < ± (0.50% + 0.0005Ω)
- Dielectric strength: GJB360A-96 method 301, (1,800V AC, 60s) ΔR < ± (0.15% + 0.0005Ω)
- Life: MIL-R-39009D 4.8.13 , 2,000 hours at rated power, ΔR < ±(1.0% + 0.0005Ω).
- Moisture Resistance: -10 °C - +65 °C, RH>90%, cycle 240 h ΔR < ±(0.50% + 0.0005Ω)
- Thermal Shock: GJB360A-96 method 107, Cond. F, ΔR < ±(0.50% + 0.0005Ω)
- Terminal Strength: GJB360A-96 method 211, Cond. A (Pull Test) 2.4N., ΔR < ±(0.20% + 0.0005Ω)
- Vibration, High Frequency: GJB360A-96 method 204, Cond. D, ΔR < ±(0.40% + 0.0005Ω)
- Lead Material: Tinned Copper
- Installation - max. Torque: Using a M3 screw and a compression washer mounting technique is 0.9 Nm



* This value is only valid by using a thermal conduction to the heatsink $R_{th-cs} < 0.025 \text{ } ^\circ\text{K/W}$. 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.

Derating (thermal resistance): 0.666W/°K (1.5K/W). Without a heatsink, when in free air at 25 °C, the LXP100 is rated for 3.5W. Derating for temp. above 25 °C is 0.0234W/°K.

The case temperature is to be used for the definition of the applied power limit. The case temperature measurement must be made with a thermocouple contacting the center of the component mounted on the designed heat sink. Thermal grease should be applied properly.

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. Please see our website for the most updated information!

Series UPT 400

400 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.

Encapsulation:

- Special 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.

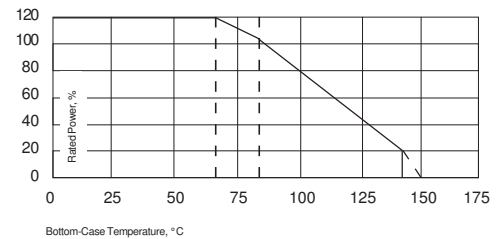
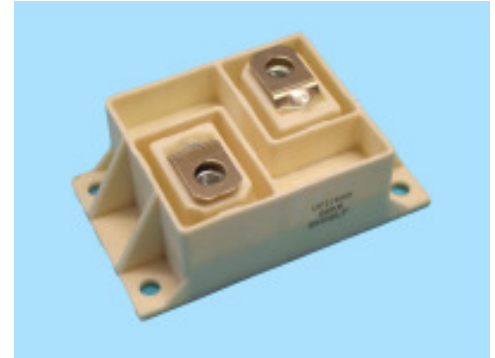
Contacts:

- Easy load connecting with M5 screws. (others on special request)

Materials in accordance with UL94-V0

Specifications

- Resistance Values: 0.5Ω to 1MΩ
- Resistance Tolerance: ±5% to ±10%, tighter tolerances are available on request, with the reduction of the max. power / pulse rating. Please ask your local representative.
- Temperature Coefficient: ±150ppm/°C (others upon request)
- Maximum Working Voltage: 5,000V DC, higher voltage on request, not exceeding max. power
- Short Time Overload: 700W at 70°C for 10sec., ΔR = 0.4% max.
- Power Rating: up to 400W at 85°C bottom case temperature.
- Electric Strength Voltage: 6kVrms, 50Hz, higher 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
- 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 M4 screws
- For pulse power details, please contact EBG.



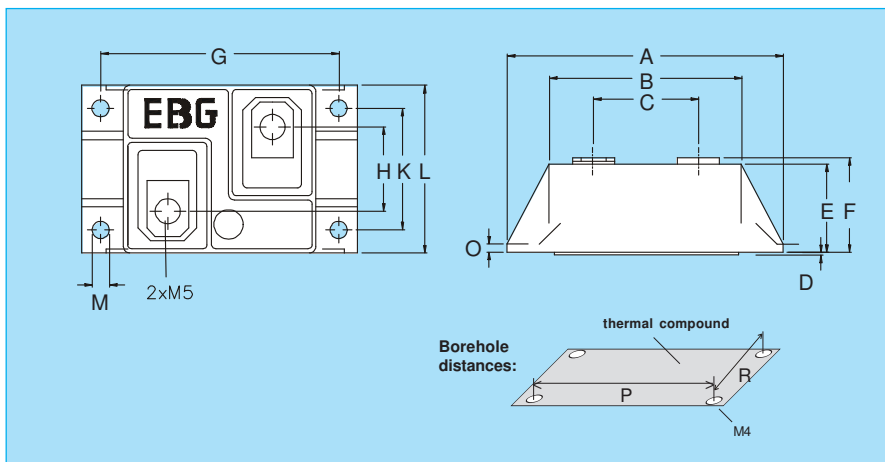
Derating (thermal resist.)

UPT 400: 8.73W/°K (0.115°K/W)

Power Rating: 400W at 70°C heatsink temp.*

* This value is only valid by using a thermal conduction to the heatsink $R_{th-cs} < 0.025^{\circ}K/W$. 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.

Dimensions:



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	65.2	66.8	2.567	2.630
B	45.2	46.8	1.780	1.843
C	24.5	25.5	0.965	1.004
D	0.1	0.2	0.004	0.008
E	20.5	21.5	0.807	0.846
F	22.0	23.0	0.866	0.906
G	56.2	57.8	2.213	2.276
H	19.5	20.5	0.768	0.807
K	28.5	29.5	1.122	1.161
L	39.2	40.8	1.543	1.606
M	4.1	4.4	0.161	0.173
O	1.85	2.15	0.073	0.085
P	56.8	57.2	2.236	2.252
R	28.8	29.2	1.134	1.150

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. Please see our website for the most updated information!