

# Power Resistors

## Series LXP 100TO-247

100 W Thick Film Power Resistor for high-frequency and pulse-loading applications, version B for enforced mechanical stability

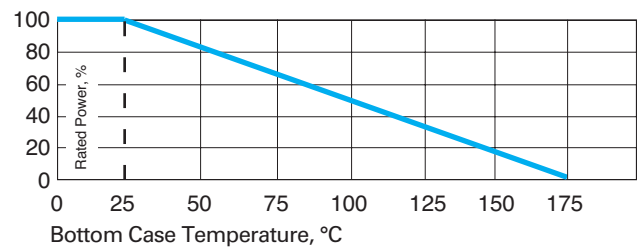
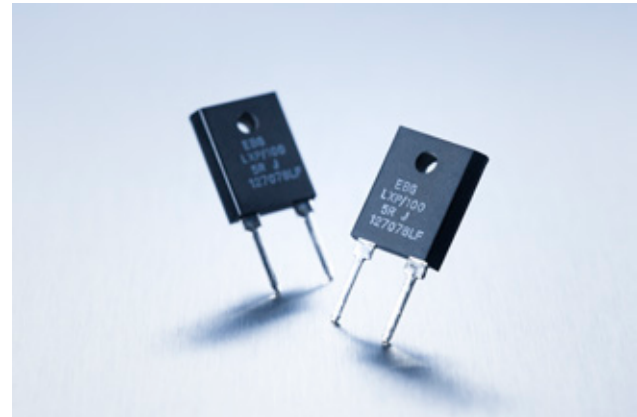
EBG offers the completely encapsulated and insulated TO-247 package for low ohmic value and Non-Inductive Design for high-frequency and pulse-loading applications. Ideal use for power supplies. This series is rated at 100 W mounted to a heat sink.

### General Characteristics

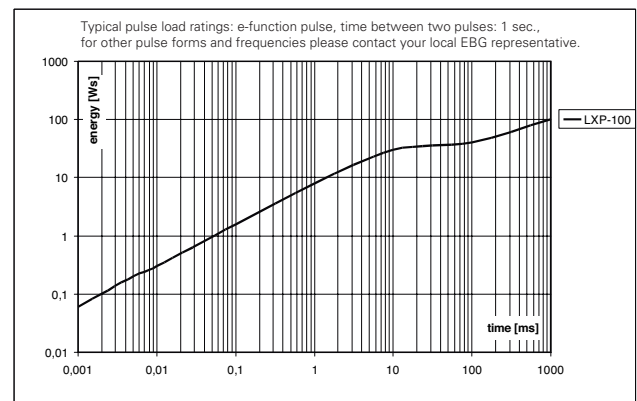
- 100 W power rating at 25°C case temperature
- TO-247 package configuration
- Single-screw mounting simplifies attachment to the heat sink
- Fully molded housing for environmental protection.
- Non-Inductive Design
- Resistor package completely insulated from heat sink.
- Tube packing available! (packing unit: 35 pcs./tube)
- For perfect heat dissipation, the use of mounting clamps is suggested. Please ask for details!
- Housing material acc. to UL94-V0

### Specifications

- Resistance range: 0.05 Ω to 1 MΩ other values upon request
- Resistance tolerance: ±1% ±2% ±5% ±10%
- Temperature coefficient: >10 Ω: ±50 ppm/°C, referenced to 25°C, ΔR taken at +105°C, others upon request
- Max. operating voltage: 350 V max. 500 V upon request
- Dielectric strength: 1,800 V AC
- Insulation resistance: 10 GΩ min.
- Power rating: 100 W at 25°C case temperature derated to 0 W at 175°C
- Short time overload: 1.5x rated power with applied voltage not to exceed 1.5x V max. for 5 seconds. ΔR < ± (0.50% + 0.0005 Ω)
- Dielectric strength: Mil-Std-202 method 301 (1,800 V AC, 60 s) ΔR < ± (0.15% + 0.0005 Ω)
- Load life: MIL-R-39009D 4.8.13, 2,000 hours at rated power ΔR < ±(1.0% + 0.0005 Ω)
- Moisture resistance: -10°C to +65°C, RH>90% cycle 240 h ΔR < ±(0.50% + 0.0005 Ω)
- Thermal shock: Mil-Std-202, Method 107, Cond. F ΔR < ±(0.50% + 0.0005 Ω)
- Terminal strength: Mil-Std-202, Method 211, Cond. A (Pull Test) 2.4 N ΔR < ±(0.20% + 0.0005 Ω)
- Vibration, high frequency: Mil-Std-202, Method 204, Cond. D ΔR < ±(0.40% + 0.0005 Ω)
- Lead material: tinned copper
- Mounting - max. torque: 0.9 Nm using a M3 screw and a compression washer mounting technique
- Inductance (serial): typical 20nH
- Standard storage conditions: 0 to 85°C at 80% RH max. for min. 12 months. For different conditions please contact your local EBG representative!

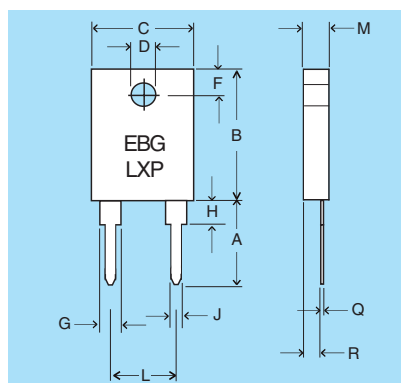


\*This value is only applicable when using thermal conduction to heat sink Rth-cs<0.025 K/W. This value can be attained by using a thermal transfer compound with a heat conductivity of 1 W/mK. The flatness of the cooling plate must be better than 0.05 mm overall. Surface roughness should not exceed 6.4 μm.



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

\* longer contacts available



Derating (thermal resistance): 0.66 W/K (1.5 K/W). Without a heat sink, when in open air at 25°C, the LXP 100 is rated for 3 W. Derating for temperature above 25°C is 0.023 W/°K.

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

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!