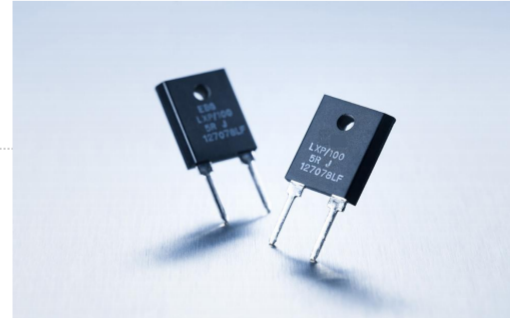


Series LXP100 /LXP100 L TO-247

100 W Thick Film Resistor for high-frequency and pulse-loading applications

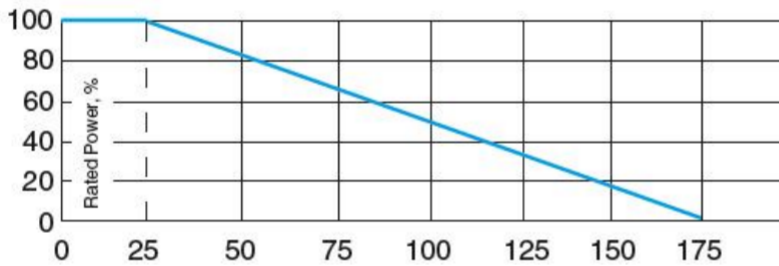
Version L for pin lengthening type

- 100 W operating power
- TO-247 package configuration
- Single-screw mounting simplifies attachment to heat sink
- Non-Inductive design
- ROHS compliant
- Materials in accordance with UL 94 V-0



Product Detail:

1. Derating



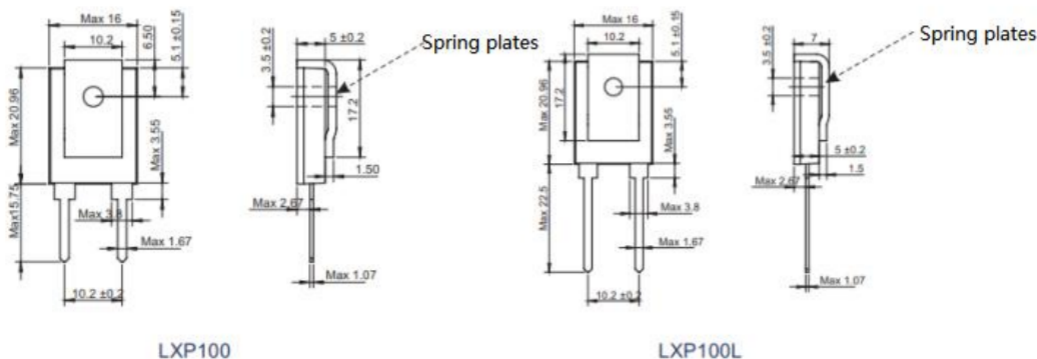
Derating (thermal resist.) LXP100 /LXP100 L: 0.66 W/K (1.5 K/W)

Without a heat sink, when in open air at 25°C, the LXP100 /LXP100 L 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.

This value is only applicable when using thermal conduction to heat sink $R_{th-cs} < 0.025$ 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 μ m.

2. Dimensions in millimeters



3. Specifications

Resistance ranges: $0.05 \Omega \leq 1 \text{ M}\Omega$ (other values on special request)

Resistance Tolerance: $\pm 1.0\%$ to $\pm 1\%$

Temperature Coefficient: $\geq 10 \Omega$: $\pm 50 \text{ ppm}/^\circ\text{C}$ referenced to 25°C , ΔR taken at $+105^\circ\text{C}$

(other TCR on special request for limited ohmic values)

Power rating: 100 W at 25°C bottom case temperature derated to 0 W at 175°C

Maximum operating voltage: 350 V, max. 500 V on special request

Dielectric strength voltage: 1,800 V AC

Insulation resistance: $> 10 \text{ G}\Omega$ at 1,000 V DC

Dielectric strength: MIL-STD-202, method 301 (1,800 V AC, 60 sec.) $\Delta R < \pm(0.15\% + 0.0005 \Omega)$

Load life: MIL-R-39009D 4.8.13, 2,000 hours at rated power, $\Delta R < \pm(1.0\% + 0.0005 \Omega)$

Moisture resistance: -10°C to $+65^\circ\text{C}$, RH $> 90\%$ cycle 240 h, $\Delta R < \pm(0.50\% + 0.0005 \Omega)$

Thermal shock: MIL-STD-202, method 107, Cond. F, $\Delta R = (0.50\% + 0.0005\Omega)$ max

Working temperature range: -55°C to $+175^\circ\text{C}$

Terminal strength: MIL-STD-202, method 211, Cond. A (Pull Test) 2.4 N, $\Delta R = (0.5\% + 0.0005\Omega)$

Vibration, high frequency: MIL-STD-202, method 204, Cond. D, $\Delta R = (0.4\% + 0.0005\Omega)$

Lead material: tinned copper

Torque: 0.7 Nm to 0.9 Nm M4 using a M3 screw and a compression washer mounting technique

Heat resistance to cooling plate: $R_{th} < 1.5 \text{ K/W}$

Weight: $\sim 4 \text{ g}$

4. Ordering Information

| Type | ohmic Value | TOL |
|--------|-------------|-----|
| LXP100 | 100R | 5% |