

Power Resistors

Series MSP 35 SMD - TO 220

35 Watt Thick Film Power Resistors for Surface Mount including Metal Tab

The special performance feature of the Type MSP include:

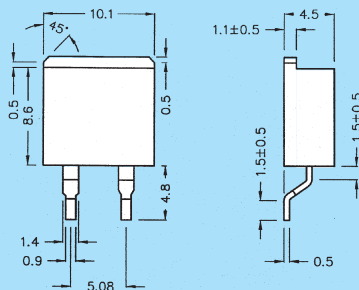
- 35 Watt power rating at 25°C
- **SMD - TO-220** package configuration
- Heat resistance to cooling plate:
 $R_{th} < 4.28 \text{ }^{\circ}\text{K/W}$
- A molded case for environmental protection.
- Resistor element is electrically insulated from the metal sink tab.

Specifications:

- Resistance Range: 0.1Ω to 10KΩ other values on request
- Resistance Tolerance: $\pm 1\%$ to $\pm 10\%$ (0.5% on request)
- Temperature Coefficient: 10Ω and above, $\pm 50 \text{ ppm}/^{\circ}\text{C}$, referenced to 25°C, DR taken at +105°C. Between 1Ω and 10Ω, $\pm (100 \text{ ppm} + 0.002 \Omega)/^{\circ}\text{C}$, referenced to 25°C, DR taken at +105°C.
- Max. Operating Voltage: 350V
- Dielectric Strength: 1,800VAC
- Insulation Resistance: 10GΩ min.
- Momentary Overload: 2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds, DR $\pm (0.3\% + 0.01 \Omega)$ max.
- Load Life: MIL-R-39009, 2,000 hours at rated power, DR $\pm (1.0\% + 0.01 \Omega)$.
- Power Rating: Depends upon case temperature. See Derating Curve.
- Moisture Resistance: MIL-Std-202, Method 106, DR $\pm (0.5\% + 0.01 \Omega)$ max.
- Thermal Shock: MIL-Std-202, Method 107, Cond. F, DR $\pm (0.3\% + 0.01 \Omega)$ max.
- Working Temperature Range: -55°C to +175°C
- Terminal Strength: MIL-Std-202, Method 211, Cond. A (Pull Test) 2.4N, DR $\pm (0.2\% + 0.01 \Omega)$ max.
- Vibration, High Frequency: MIL-Std-202, Method 204, Cond. D, DR $\pm (0.2\% + 0.01 \Omega)$ max.
- Lead Material: Ni-plated copper

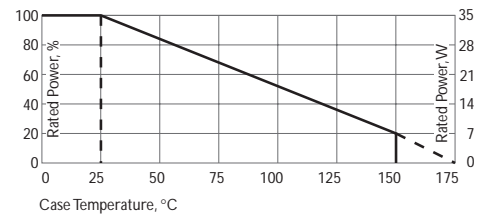


Dimensions:



Tolerances, unless noted: $\pm 0.2 \text{ mm}$

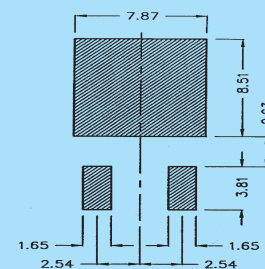
TO 220 style power package for SMD applications
35W power rating at 25°C case temperature



Derating (thermal resistance):
 $0.23 \text{ W}/^{\circ}\text{K}$ ($4.28 \text{ }^{\circ}\text{K/W}$)

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.

Soldering Template:



Soldering Note: During surface mount soldering the soldering temperature profile must not cause the metal tab of this device to exceed 220°C!

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:

<http://www.ebg.at> & <http://www.ebgusa.com> & e-mail: sales@ebg.at & sales@ebgusa.com