EBG RESISTORS

A Miba Group Company

Ultra-High-Power Resistors

Series UXM-400

400 W resistor, High Pulse Load Resistor

For variable speed drives, power supplies, control devices, robotics, motor control and other power designs, the easy mounting fixture assures an auto-calibrated pressure to the cooling plate of about 120 to 160 N.

Features

- 400 W operating power
- Tolerance range ±10 % to ±5 % (tighter on special request)
- Ohmic range 0.1 Ω to 10 Ω
- Non-Inductive design
- ROHS compliant
- High insulation & partial discharge performance
- Materials in accordance with UL 94 V-0

Technical Specifications

Resistance value	0.1 Ω ≤ 10 Ω
Resistance tolerance	±10 % to ±5 % tighter tolerances on special request
Temperature coefficient	±500 ppm/°C typical lower TCR on special request
Power rating	400 W at 85°C bottom case temperature higher on request
Short time overload	600 W at 70°C for 10sec., ΔR = 0.4% max.
Maximum working voltage	depending on max. pulse load capability (ask for details)
Electric strength voltage	standard 6 kV DC (up to 12 kV DC on request)
Partial discharge	on request
Insulation resistance	> 10 GΩ at 1,000 V
Creeping distance	> 42 mm (standard, higher on request)
Air distance	> 14 mm (standard, higher on request)
Inductance	400 nH ÷ 1 µH (typical)
Capacity/mass	≥ 110 pF (typical), measuring frequency 10 kHz
Operating temperature	-55°C to +155°C
Mounting - max. torque for contacts	2 Nm
Mounting - max. torque	1.8 Nm M4 screws
Contacts	standard M5 (M4 on request) connection screw thread max. 7mm
General pulse load information	contact our local EBG representative or contact us directly
Weight	~127 g

General Specifications

Electric support

Alumina ceramic metalized with EBG ALTOX film on the bottom for improved heat transfer and optimum discharge

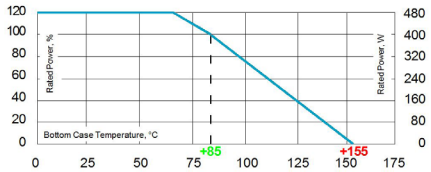
Encapsulation

Resin-filled epoxy casing with large creeping distance to mass, large air distance between the terminals and high insulation resistance (CTI 600)

Contacts

- Easy load connection with M4 or M5 screws
- Connector height available from 25 to 42 mm
- Various sleeves for increasing creeping distance up to 85 mm or potted cable connections are available on request

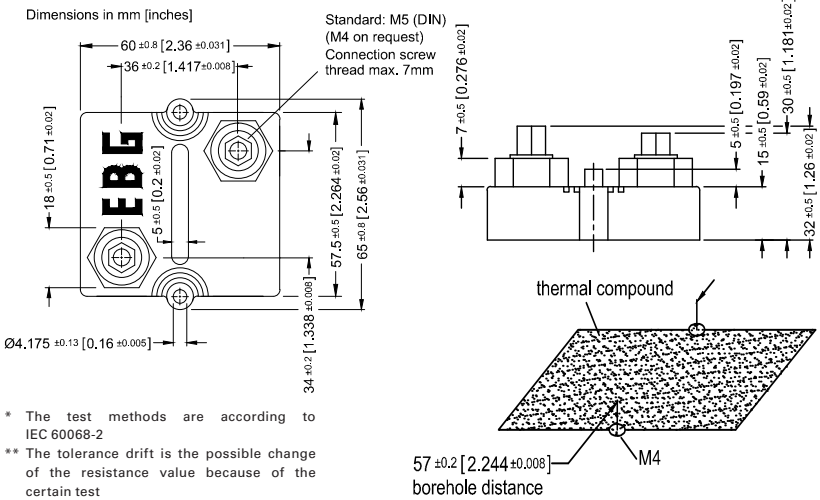
Power Rating



Best results can be obtained by using a thermal transfer compound with a heat conductivity of at least 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.

Test	Method	Tolerance Drift**
Short time overload	1,000 W/10sec.	0.40%
Humidity steady state	56 days/40°C/95%	0.25%
Temp. Cycling	-55/+125/5cycles	0.20%
Shock	40g/4,000 times	0.25%
Vibrations	2-500Hz/10g	0.25%
Load life 3,000cyl	PN 30 min. on / 30 min off	0.40%
Terminal strengths f. contacts	200N	0.05%

Dimensions



* The test methods are according to IEC 60068-2

** The tolerance drift is the possible change of the resistance value because of the certain test