Ultra-High-Power Resistors

Series UPT®-800

800 W resistor, US Patent-No. 5,355,281

EBG RESISTORS

A Miba Group Company

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 300 N.

Features

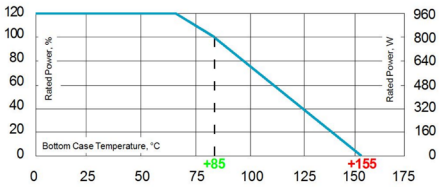
- multiple resistors in 1 package
- Non-Inductive design
- ROHS compliant
- High insulation & partial discharge performance
- Materials in accordance with UL 94 V-0
- Resistor is also available with preapplied PCM (Phase Change Material) (ask for details)

Technical Specifications

Resistance value	0.1 Ω ≤ 0.2 Ω (HC-version) > 0.2 Ω ≤ 1 MΩ (higher values on special request)
Resistance tolerance	±5 % to ±10 % ±1 % to ±2 % on special request for limited ohmic values with the reduction of the max. power / pulse rating (ask for details)
Temperature coefficient	±500 ppm/°C (0.1 Ω ≤ 0.2 Ω) standard ±150 ppm/°C (> 0.2 Ω ≤ 1 MΩ) standard lower TCR on special request for limited ohmic values
Power rating	up to 800 W at 85°C bottom case temperature (see configurations)
Short time overload	1,000 W at 70°C for 10sec., ΔR = 0.4% max. (for configuration 2 and 3)
Maximum working voltage	5,000 V DC ≙ 3.500 V AC RMS (50 Hz) higher voltage on request, not exceeding max. power
Electric strength voltage	7 kVrms / 50 Hz / 500 VA, test time 1 min. between terminal und case (up to 12 kVrms on request) voltages above 10 kVrms are tested at DC equivalent to avoid pre damage of component
Dielectric strength between R1-R2	> 5 kV DC (for conf. 4)
Partial discharge	4 kVrms < 10 pC (up to 7 kVrms < 10 pC on request) acc. to IEC 60270
Insulation resistance	> 10 GΩ at 1.000 V
Single shot voltage	up to 12 kV norm wave (1.5/50 µsec)
Inductance	≥ 80 nH (typical), measuring frequency 10 kHz
Capacity/mass	≥ 140 pF (typical), measuring frequency 10 kHz
Capacity/parallel	≥ 40 pF (typical), measuring frequency 10 kHz
Operating temperature	-55°C to +155°C
Mounting - torque for contacts	1.8 Nm to 2 Nm, screw-in depth max. 6 mm
Mounting - torque	1.6 Nm to 1.8 Nm M4 screws
Contacts	standard M5 (M4 on special request)
Terminal tops for additional insulation requirements	on special request (ask for details)
General pulse load information	contact our local EBG representative or contact us directly

General Specifications

Housing
Housings are made without color additives. The color definition is natural and can vary in different pigmentation



Derating (thermal resist.) UPT®-800:
9.09 W/K (0.11 K/W) for configuration 2 and 3

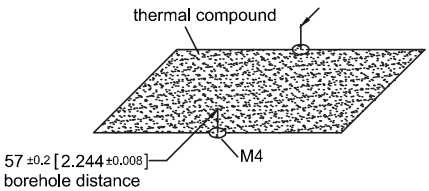
Power rating: 800 W at 85°C bottom case temperature*

* This value is only applicable when using a thermal conduction to the heat sink Rth-cs<0.025 K/W. This value 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.

Please note most all of our UPT customers have their own custom designed drawing. Therefore please do not hesitate to discuss your special needs with the local representative or contact us directly.

Borehole Distance

Dimensions in mm [inches]



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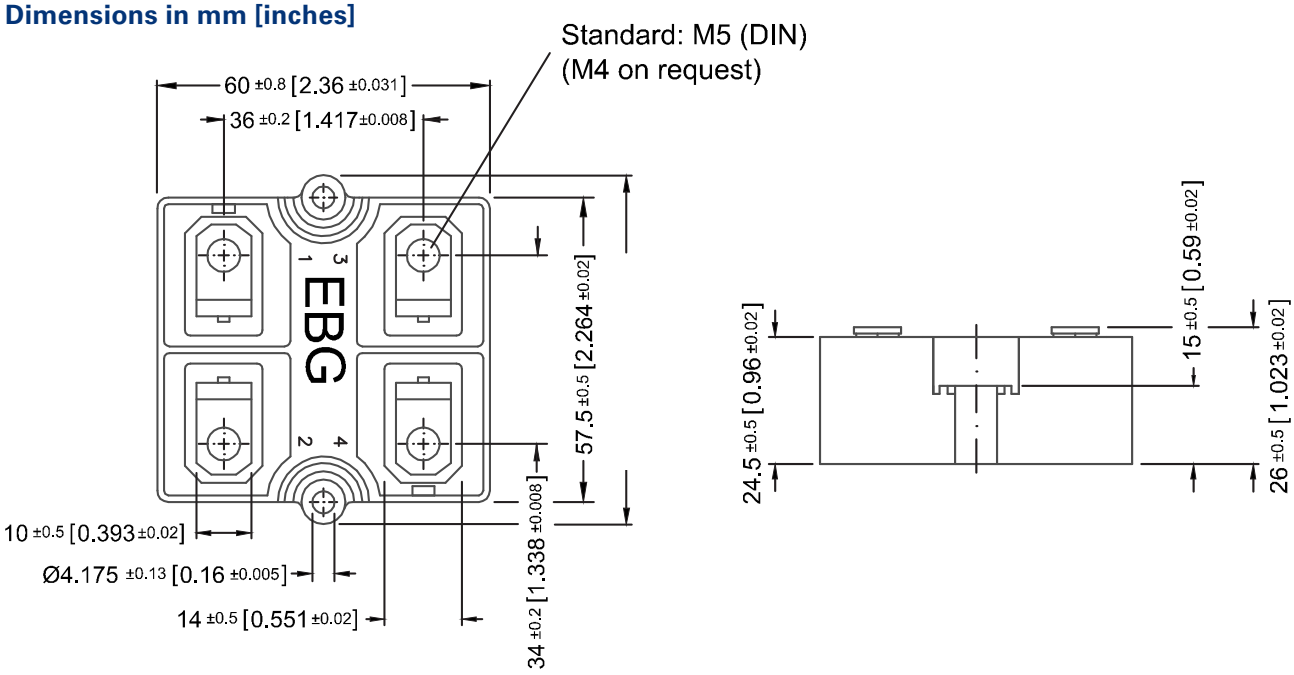
Dimensions in mm [inches]



How to make an order

UPT-800-Configuration_Ohmic Value_Tolerance

For example:
UPT-800-2 5R 10% or UPT-800-4 2x1K 5%

Configurations (P / package)

Standard version