Ultra-High Pulse Load Resistors

Series UXM

400 W High Pulse Load Resistor

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

General Characteristics

Electric support:

- High alumina ceramic metalized with EBG ALTOX film on bottom for better heat transfer and optimum discharge.

Encapsulation:

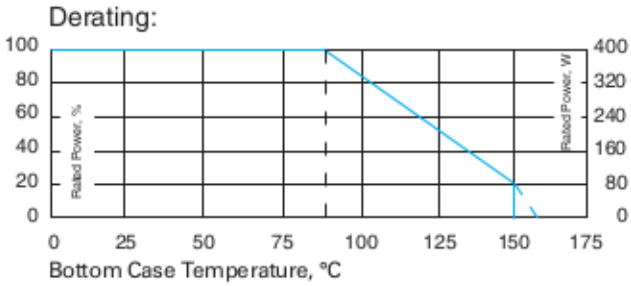
- Special resin-filled epoxy casing with large creeping distance to mass, large air distance between the terminals and high insulation resistance (CTI 600).

Contacts:

- Easy load connecting with M4 or M5 screws.
- Connector height (M+N) available from 25 to 42 mm.
- Various sleeves for increased creeping distance up to 85 mm or potted cable connections are available upon special request
- Materials in accordance with UL94-V0

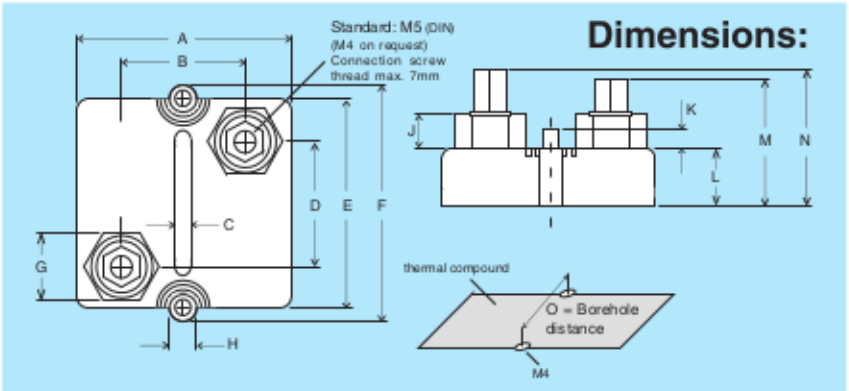
Specifications

- Resistance values: 0.1 Ω to 5 Ω
- Resistance tolerance: ±5% to ±10% (others upon request)
- Temperature coefficient: +500 ppm/°C typical (others upon request)
- Maximum working voltage: Depending on max. pulse load capability. Please ask for details!
- Short time overload: 600 W at 70°C for 10 sec., ΔR = 0.4% max.
- Power rating: 400 W at 85°C bottom case temperature. (higher upon request)
- Electric strength voltage: Standard: 6 kV DC, up to 12 kV DC upon request
- Partial discharge: upon request
- Insulation resistance: 10 GΩ min. at 1000 V
- Creeping distance: 42 mm min.
- Air distance: 14 mm min.
- Inductance: 400 nH ÷ 1µH (typical)
- Capacity/mass: 110 pF (typical)
- Operating temperature: –55°C to +150°C
- Mounting - max. torque for contacts: 2 Nm
- Mounting- max. torque: 1.8 Nm M4 screws



Best results can be obtained by using a thermal transfer compound with a heat conductivity of better than 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	Typical results
Short time overload	1,000 W/10sec	0.4%
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%



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	59.2	60.8	2.331	2.394
B	35.8	36.2	1.409	1.425
C	13.5	14.5	0.531	0.571
D	33.8	34.2	1.331	1.346
E	57.0	58.0	2.244	2.283
F	64.2	65.8	2.527	2.591
G	9.5	10.5	0.374	0.413
H	4.05	4.3	0.159	0.169
J	6.5	7.5	0.256	0.295
K	4.5	5.5	0.177	0.216
L	14.5	15.5	0.571	0.610
M	29.5	30.5	1.161	1.201
N	31.5	32.5	1.240	1.279
O	56.8	57.2	2.236	2.252