

Power Resistors

Series VHP

Non-Inductive 180 W Power Resistors according to VDE 0160 and UL 94-V0

EBG's VHP series is rated at 180 W mounted to a heat sink. There are four configurations of resistive patterns available in the package. The increased height of the package makes this resistor ideal in applications where creeping distance must meet VDE 0160 and UL 094-V0 standards.

General Characteristics

- 180 W at 85°C
- Non-Inductive Design
- Four configurations of resistive patterns
- Up to three resistors in one package
- Easy mounting using already existing infrastructure

Specifications

- Resistance range: 1 Ω to 1 MΩ (other values upon request)
- Tolerance: ±1%, ±2%, ±5%, ±10%
- Temperature coefficient: ±250 ppm (at +105°C ref. to +25°C), better TCR on request
- Max. working voltage: 500 V (up to 1,000 V upon special request)
- Power rating at 85°C: 180 W (others upon request)
- Voltage proof: 5,000 V DC, 3,000 V AC
- Insulation resistance: 10 GΩ min. at 1 kV DC
- Isolation voltage between R1 and R2: 500 V (1,000 V upon special request)
- Heat resistance to cooling plate: <math><0.47^{\circ}\text{K/W}</math>
- Capacitance/mass: 45 pF (typical)
- Working temperature range: -55°C to +155°C
- Mounting - max. torque for base plate (static): 1.5 Nm, M5 screws
- Housing material acc. to UL94-V0
- Standard storage conditions: 0 to 85°C at 80% RH max. for min. 12 months. For different conditions please contact your local EBG representative!
- Pulse load rating: please see our website ([www.ebg-at.com/...](http://www.ebg-at.com/)) for sample pulse load information. For details please contact your local EBG representative!

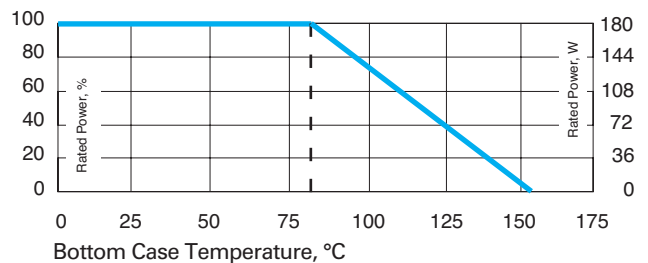
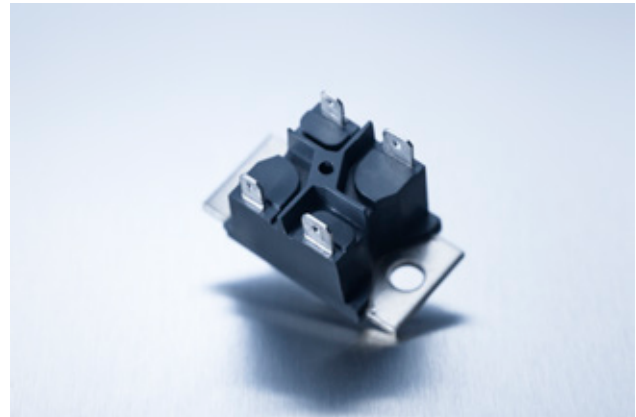
Derating (thermal resistance): 2.5 W/°K (0.40°K/W). (for conf. 3)

Air distance contact to contact:

- ③ Contacts 1 and 2 resp. 3 and 4 without fast-on-Plug: 9.2 mm
with fast-on-Plug: 8.2 mm
- ④ Contacts 1 and 4 resp. 2 and 3 without fast-on-Plug: 21.9 mm
with fast-on-Plug: 20.9 mm
- ⑤ Contacts 2 resp. 3 and M5 - mounting screw with washer without fast-on-Plug: 16.3 mm
with fast-on-Plug: 15.9 mm
- ⑥ Contacts 1 resp. 4 and M5 - mounting screw with washer without fast-on-Plug: 15.5 mm
with fast-on-Plug: 15.0 mm

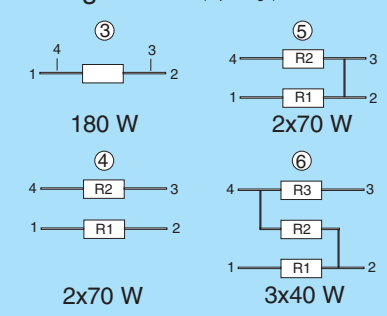
Creeping distance:

- ③ Contacts 1 and 2 resp. 3 and 4 without fast-on-Plug: 20.0 mm
with fast-on-Plug: 19.0 mm
- ④ Contacts 1 and 4 resp. 2 and 3 without fast-on-Plug: 27.4 mm
with fast-on-Plug: 25.8 mm
- ⑤ Contacts 2 resp. 3 to base plate without fast-on-Plug: 20.2 mm
with fast-on-Plug: 19.8 mm
- ⑥ Contacts 1 resp. 4 to base plate without fast-on-Plug: 19.5 mm
with fast-on-Plug: 18.9 mm

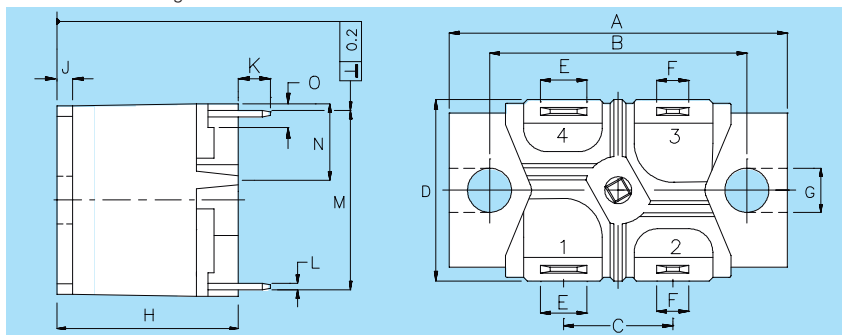


Best results can be obtained by using a thermal transfer compound with a heat conductivity of better than 1 W/mK. The flatness of the cooling plate must be better than 0.05 mm overall. Surface roughness should not exceed 6.4 μm.

Configurations (P/package)



Version 5: ohmic value between contact 2 and 3 = 3 mΩ



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	44.7	46.5	1.760	1.831
B	34.7	35.3	1.366	1.390
C	14.8	15.2	0.583	0.598
D	--	26.5	--	1.043
E	6.2	6.4	0.244	0.252
F	4.7	4.9	0.185	0.193
G	5.9	6.1	0.232	0.240
H	20.9	21.3	0.823	0.839
J	1.9	2.1	0.075	0.083
K	3.4	4.0	0.134	0.157
L	0.77	0.83	0.0303	0.0326
M	23.0	23.4	0.905	0.921
N	9.4	9.8	0.370	0.386
O	1.9	2.1	0.075	0.083

The above spec. sheet features our standard products. For further options, please contact our local EBG representative or contact us directly. For updated information, please visit our website!