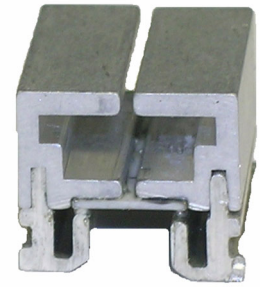


HPC Series — High Power Surface Mount Resistors

The HPC series represents a breakthrough in functional design, thermal management and end-user benefits. Borrowing from long-proven techniques used in power semiconductors, the HPC series provides up to eight times more useful power than SMD power resistors currently available.

The HPC series, through superior characterization, is intended to remove the mystery of managing board level power by combining established techniques in new ways. The result is superior technology in designs options, in a cost effective package.



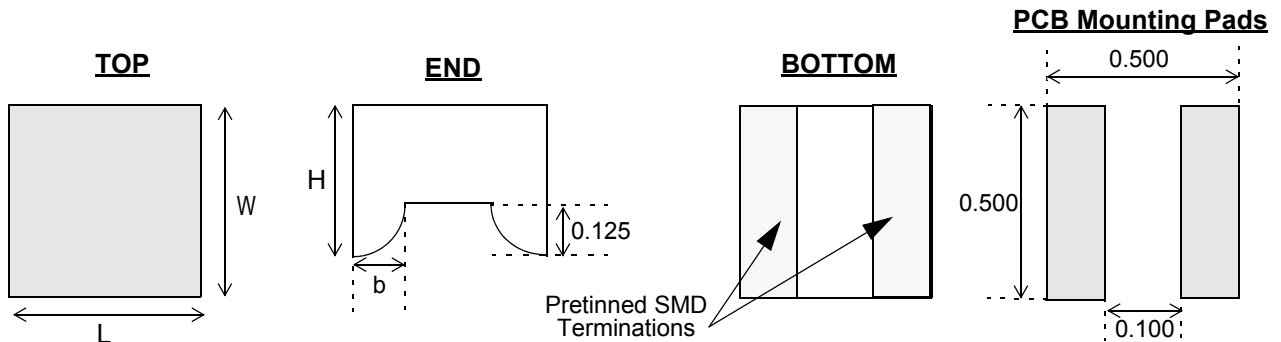
Features

- Up to 12W with no external heat sinks
- Compatible with conventional pick and place
- Only 0.5 x 0.5 PCB footprint
- Non inductive resistive element
- Up to 50W for short duration
- Available in tolerances of 1%, 5% and 10%
- Patent pending
- RoHS compliant / lead-free

Electrical Specifications

Type / Code	Power Rating (Watts) @ 40°C w/400 LFM air flow	Power Rating (Watts) @ 40°C no air flow	Maximum Working Voltage	Max Overload Voltage	Dielectric Strength	Inductance	Resistance Temperature Coefficient	Ohmic Range and Tolerance
								5% & 10%
HPC 12	12W	5W	200	400	1,500	<2nH	±150 ppm/°C	0.025Ω – 250K

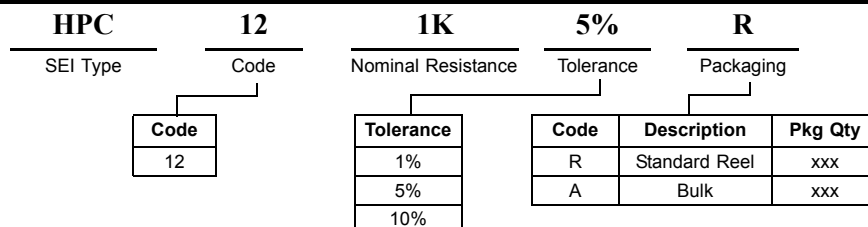
Dimensions +/- 0.010



Mechanical Specifications

Type / Code	L Body Length	W Body Width	H Body Height	b Bottom Termination	Units
HPC 12	0.480 12.18	0.500 12.69	0.400 10.15	0.110 2.79	inches mm

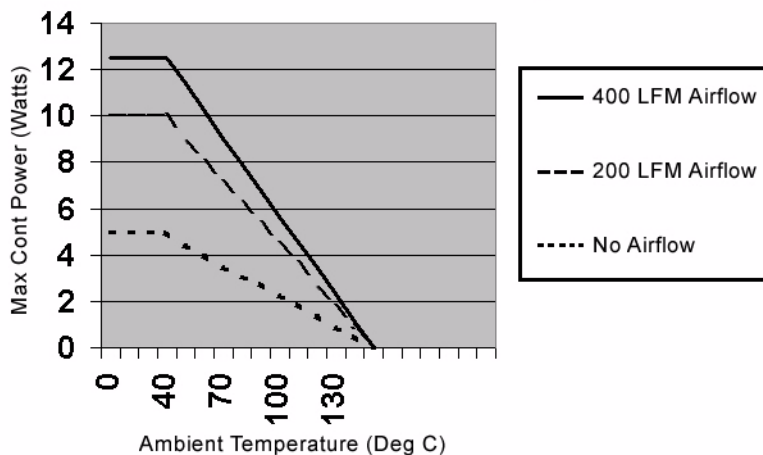
How to Order



HPC Series — High Power Surface Mount Resistors

Performance Characteristics		
Test	Test Conditions (JIS C 5202)	Test Results
Short Time Overload	2.5x rated voltage for 5 seconds	±(2% +0.1Ω)
Dielectric Withstanding Voltage	100VAC, 1 minute	±(1% +0.05Ω)
Resistance to Soldering Heat	260°C ±5°C, for 10 sec. ±0.5 sec. (Solder Bath)	±(1% +0.05Ω)
Solderability	235°C ±5°C, for 2 sec. ±0.5 sec. (Colophonium flux)	95% coverage, minimum
Temperature Cycle	-65°C: 30 min. 25°C: 2 to 3 min. 150°C: 30 min. 25°C: 2 to 3 min. (5 Cycles)	±(1% +0.05Ω) Jumper (<0.05Ω)
Endurance (Damp load)	40°C ± 2°C, 90% to RH, Rated Load 90 min. On, 30 min. Off, (1,000 hrs. - 0 hrs. + 48 hrs.)	±(3% +0.1Ω) Jumper (<0.05Ω)
Endurance (Rated load)	70°C ± 2°C, 90% to RH, Rated Load 90 min. On, 30 min. Off, (1,000 hrs. - 0 hrs. + 48 hrs.)	±(3% +0.1Ω) Jumper (<0.05Ω)
Voltage Coefficient	1/10 rated voltage for 3 sec. max, then rated voltage for 3 sec. max.	±100 (ppm/V)
Robustness of Termination	Bend of 3mm for 5 ± 1 sec.	±(1.0% + 0.05 Ohm)

HPC 12 Power Derating Curve



HPC 12 Power vs. Duration

