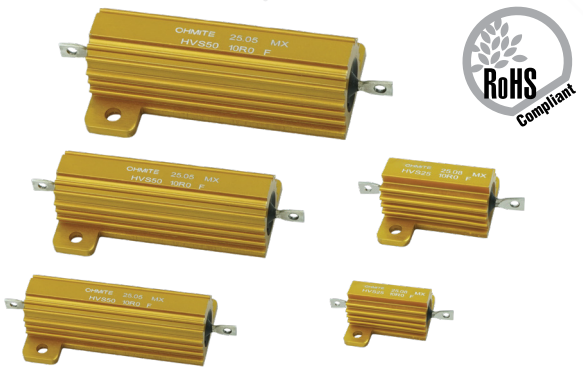
HVS Series

Aluminium Housed Resistors

Manufactured in line with the requirements of MIL 18546, designed for direct heatsink mounting with thermal compound to achieve maximum performance.



FEATURES

- High Power to volume
- Wound to maximise High Pulse Capability
- Excellent stability in operation
- Custom designs welcome
- RoHS Compliant

CHARACTERISTICS

Temperature coefficients:	±20 for 10Ω and above; ±50 for 1Ω to 9.9Ω, ±100 for 0.1Ω to 0.99Ω
Maximum working voltage:	$(PxR)^{1/2}$
Insulation resistance:	10,000 MΩ minimum dry, 1000 MΩ minimum after moisture test
Solderability:	Meets requirements of ANSI J-STD-002
Operating temperature range:	-55 to +250

Power Rating

Resistor wattage ratings are based on mounting to the following heat sink:

25: 5x7x2x0.040" thick aluminum chassis (167 sq. in. surface area)
50: 12x12x0.059" thick aluminum panel (291 sq. in. surface area)

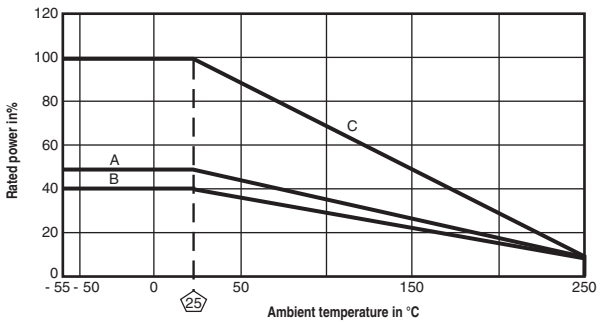
Free Air Power Rating

Serie:	25	50
W at 25 °C:	12.5	20

Ambient Temperature Derating

Derating is required for ambient temperatures above 25 °C, see the following graph.

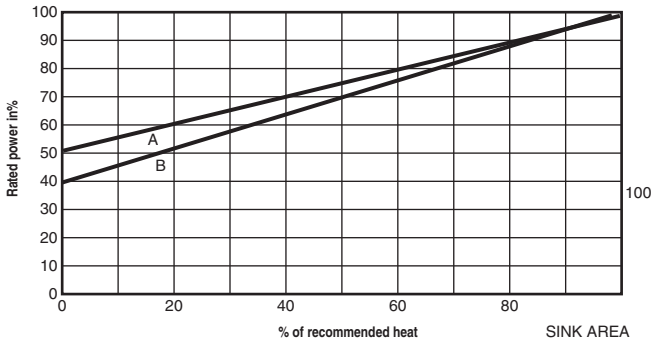
A= 25 size resistor, unmounted
B= 50, size resistor, unmounted
C= All types mounted to recommended aluminum heat sink



Reduced Heat Sink Derating

Derating is also required when recommended heat sink area is reduced.

A= 25 size resistor
B= 50, size resistor



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ELECTRICAL SPECIFICATIONS

Serie	Power rating $P_{25°C}$ W	Resistance range Ω ±1%, ±3%, ±5%	Weight (typical) g
HVS25	25	0.01 to 95.2K	12
HVSN25	25	0.05 to 47.6K	12
HVS50	50	0.01 to 273K	28
HVSN50	50	0.05 to 136K	28

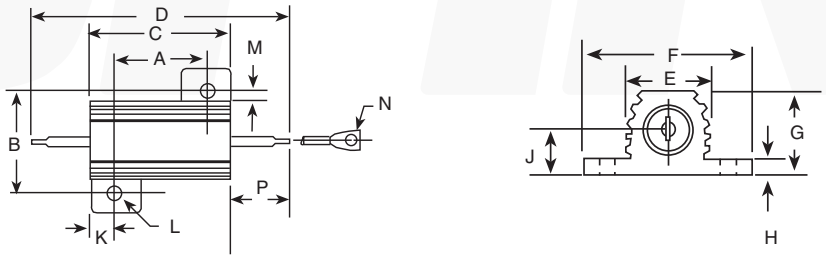
PERFORMANCE

Test	Conditions of test	Test limits
Thermal Shock	Rated power applied until thermally stable, then a minimum of 15 min at -55 °C	± (0.5%+0.05Ω) ΔR
Short Time Overload	5x rated power for 5 s	± (0.5%+0.05Ω) ΔR
Dielectric Withstanding	1000 V_{RMS} for 25; 2000 V_{RMS} for 50;	± (0.2 %+0.05Ω) ΔR
Voltage Temperature	250 °C for 2h	± (0.5%+0.05Ω) ΔR
Moisture Resistance	MIL-STD-202 Method 106, 7b not applicable	±(1.0%+0.05Ω)ΔR
Shock, Specified Pulse	MIL-STD-202 Method 213, 100g's for 6 ms, 10 shocks	± (0.2 %+0.05Ω) ΔR
Vibration, High Frequency	Frequency varied 10 Hz to 2000 Hz, 20 g peak, 2 directions 6 h each	± (0.2 %+0.05Ω) ΔR
Load Life	1000 h at rated power, +25 °C, 1.5 h "ON", 0.5 h "OFF"	±(1.0%+0.05Ω)ΔR
Terminal Strength	30 s, 5 pound pull test, 10 pound pull test for other sizes; torque test	± (0.2 %+0.05Ω) ΔR

DIMENSIONS

mm/(in)

HVS 25, 50
HVSN 25, 50



Serie	A	B	C	D	E	F	G	H	J	K	L	M	N	P
HVS25 HVSN25	18.26±0.127 (0.719±0.005)	19.84±0.127 (0.781±.005)	26.97±0.787 (1.062±0.031)	49.23±1.57 (1.938±0.062)	13.97± 0.381 (0.550±0.015)	27.43±0.381 (1.080±0.015)	13.87±0.381 (0.546±0.015)	1.91±0.254 (0.075±0.010)	5.87±0.254 (0.231±0.010)	4.37±0.254 (0.172±0.010)	3.18±0.127 (0.125±0.005)	2.92±0.381 (0.115±0.015)	2.16±0.127 (0.085±0.005)	11.13±1.57 (0.438±0.062)
HVS50 HVSN50	39.67±0.127 (1.562±0.005)	21.44±0.127 (0.844±0.005)	49.99±0.787 (1.968±0.031)	70.64±1.57 (2.781±0.062)	16.00±0.381 (0.630±0.015)	28.96±0.381 (1.140±0.015)	15.49±0.381 (0.610±0.015)	2.24±0.254 (0.088±0.010)	6.60±0.254 (0.260±0.010)	4.98±0.254 (0.196±0.010)	3.18±0.127 (0.125±0.005)	2.72±0.381 (0.107±0.015)	2.16±0.127 (0.085±0.005)	11.13±1.57 (0.438±0.062)

ORDERING INFORMATION

Optional non-inductive

H V S N 2 5 1 0 R 0 F

- **Series**
- **Wattage**: 25w, 50w
- **Resistance value**: R= decimal; K= thousand; 15R00= 15Ω; 10K00= 10Ω
- **Tolerance**: F= 1%, H= 3%, J= 5%