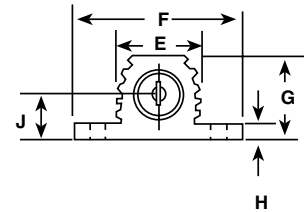
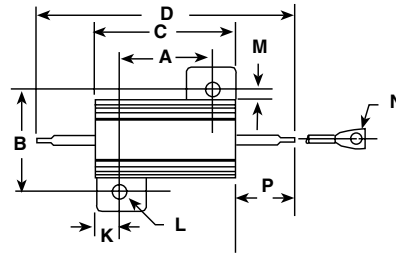


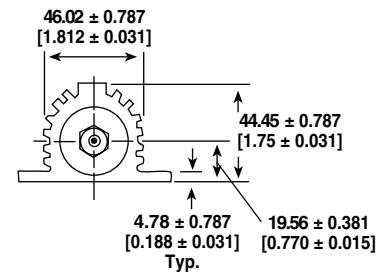
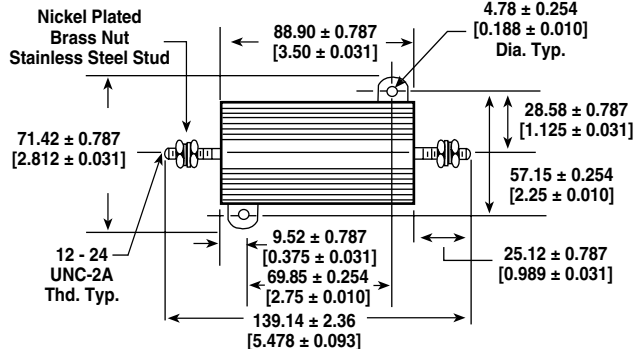
DIMENSIONS

RH-5, -10, -25, -50
NH-5, -10, -25, -50


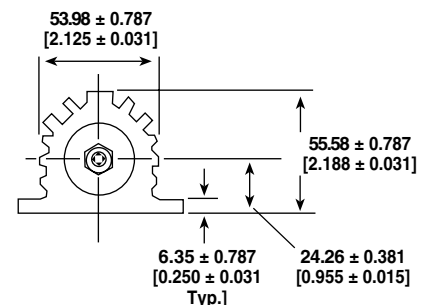
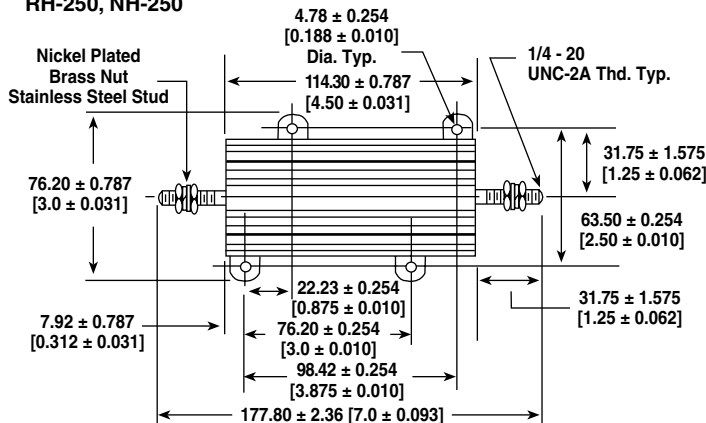
MODEL	DIMENSIONS in millimeters [inches]													
	A	B	C	D	E	F	G	H	J	K	L	M	N	P
RH-5 NH-5	11.28 ± 0.127 [0.444 ± 0.005]	12.45 ± 0.127 [0.490 ± 0.005]	15.24 ± 0.787 [0.600 ± 0.03]	28.58 ± 1.57 [1.125 ± 0.062]	8.48 ± 0.381 [0.334 ± 0.015]	16.41 ± 0.381 [0.646 ± 0.015]	8.13 ± 0.381 [0.320 ± 0.015]	1.65 ± 0.254 [0.065 ± 0.010]	3.38 ± 0.254 [0.133 ± 0.010]	1.98 ± 0.254 [0.078 ± 0.010]	2.36 ± 0.127 [0.093 ± 0.005]	1.98 ± 0.381 [0.078 ± 0.015]	1.27 ± 0.127 [0.050 ± 0.005]	6.76 ± 1.57 [0.266 ± 0.062]
RH-10 NH-10	14.27 ± 0.127 [0.562 ± 0.005]	15.88 ± 0.127 [0.625 ± 0.005]	19.05 ± 0.787 [0.750 ± 0.031]	34.93 ± 1.57 [1.375 ± 0.062]	10.67 ± 0.381 [0.420 ± 0.015]	20.32 ± 0.381 [0.800 ± 0.015]	9.91 ± 0.381 [0.390 ± 0.015]	1.91 ± 0.254 [0.075 ± 0.010]	4.19 ± 0.254 [0.165 ± 0.010]	2.36 ± 0.254 [0.093 ± 0.010]	2.39 ± 0.127 [0.094 ± 0.005]	2.59 ± 0.381 [0.102 ± 0.015]	2.16 ± 0.127 [0.085 ± 0.005]	7.92 ± 1.57 [0.312 ± 0.062]
RH-25 NH-25	18.26 ± 0.127 [0.719 ± 0.005]	19.84 ± 0.127 [0.781 ± 0.005]	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]
RH-50 NH-50	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]

DIMENSIONS

RH-100, NH-100



RH-250, NH-250



TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	RH RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 100 for 0.1 Ω to 0.99 Ω, ± 50 for 1 Ω to 9.9 Ω, ± 20 for 10 Ω and above
Dielectric Withstanding Voltage	V _{AC}	1000 for RH/5, RH-10 and RH/25, 2000 for RH/50, 4500 for RH/100 and RH/250
Short Time Overload	-	5 × rated power for 5 seconds
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Insulation Resistance	Ω	10 000 MΩ minimum dry, 1000 MΩ minimum after moisture test
Terminal Strength	lb	5 minimum for RH-5 and RH-10, 10 minimum for all others
Solderability	-	MIL-PRF-18546 Type - Meets requirements of ANSI J-STD-002
Operating Temperature Range	°C	- 55/+ 250

POWER RATING

Vishay RH resistor wattage ratings are based on mounting to the following heat sink:

RH-5 and RH-10:	4" × 6" × 2" × 0.040" thick aluminum chassis (129 sq. in. surface area)
RH-25:	5" × 7" × 2" × 0.040" thick aluminum chassis (167 sq. in. surface area)
RH-50:	12" × 12" × 0.059" thick aluminum panel (291 sq. in. surface area)
RH-100 and RH-250:	12" × 12" × 0.125" thick aluminum panel (294 sq. in. surface area)

AMBIENT TEMPERATURE DERATING

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

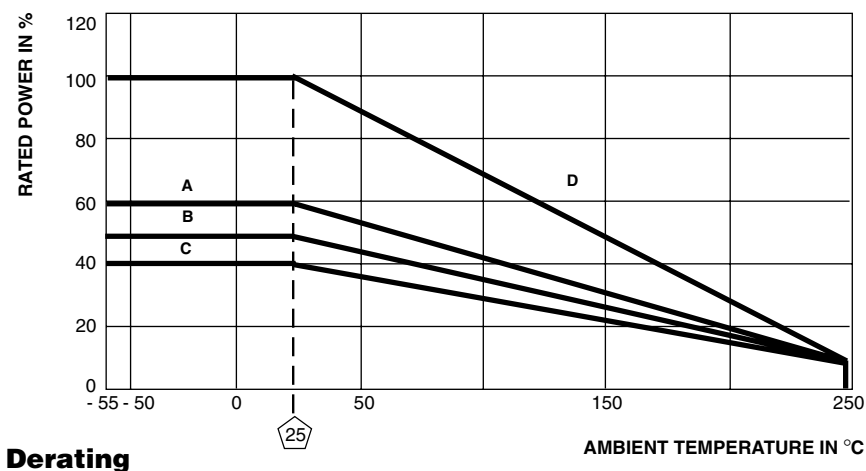
Curves **A**, **B**, **C** apply to operation of unmounted resistors. Curve **D** applies to all types when mounted to specified heat sink.

A = RH-5 and RH-10 size resistor, unmounted

B = RH-25 size resistor, unmounted

C = RH-50, RH-100 and RH-250 size resistor, unmounted

D = All types mounted to recommended aluminum heat sink



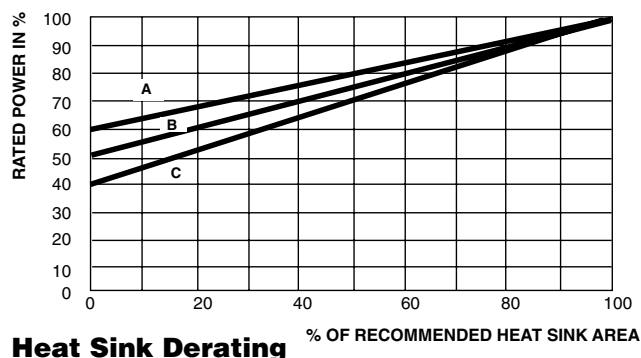
REDUCED HEAT SINK DERATING:

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

A = RH-5 and RH-10 size resistor

B = RH-25 size resistor

C = RH-50, RH-100 and RH-250 size resistor



**MATERIAL SPECIFICATIONS**

Element: Copper-nickel alloy or nickel-chrome alloy, depending on resistance value

Core: Ceramic, steatite or alumina, depending on physical size

Encapsulant: Silicone molded construction

Housing: Aluminum with hard anodic coating

End Caps: Stainless steel

Standard Terminals: For RH-5 through RH-50 size terminal finish - Tin/lead is 60/40 Sn/Pb w/Nickel underplate & Lead (Pb)-free is Ni/Pd/Au, finish is on copper clad steel core terminal. For RH-100 & RH-250 terminals are threaded stainless steel.

Note: Military (RE) parts are only available with tin/lead finish

Part Marking: DALE, Model, Wattage, Value, Tolerance, Date Code

NH NON-INDUCTIVE

Models of equivalent physical and electrical specifications are available with non-inductive (Aryton-Perry) winding. They are identified by substituting the letter N for R in the model number (NH-5, for example).

SPECIAL MODIFICATIONS

A number of special modifications to the aluminum housed resistor style are available upon request. Special modifications include:

- Terminal configurations and materials
- Resistance values and tolerances
- Low resistance temperature coefficient (RTC)
- Housing configuration
- Threaded mounting holes
- Preconditioning and other additional testing

APPLICABLE MIL SPECIFICATIONS

MIL-PRF-18546 is the military specification covering aluminum housed, chassis mount, power resistors. VISHAY RH and NH resistors are listed as qualified on the MIL-PRF-18546 QPL.

PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	Rated power applied until thermally stable, then a minimum of 15 minutes at - 55 °C	$\pm (0.5 \% + 0.05 \Omega) \Delta R$
Short Time Overload	5 × rated power for 5 seconds	$\pm (0.5 \% + 0.05 \Omega) \Delta R$
Dielectric Withstanding Voltage	1000 V _{rms} for RH-5, RH-10 and RH-25; 2000 V _{rms} for RH-50 4500 V _{rms} for RH-100 and RH-250; duration one minute	$\pm (0.2 \% + 0.05 \Omega) \Delta R$
Temperature	250 °C for 2 hours	$\pm (0.5 \% + 0.05 \Omega) \Delta R$
Moisture Resistance	MIL-STD-202 Method 106, 7b not applicable	$\pm (1.0 \% + 0.05 \Omega) \Delta R$
Shock, Specified Pulse	MIL-STD-202 Method 213, 100 g's for 6 ms, 10 shocks	$\pm (0.2 \% + 0.05 \Omega) \Delta R$
Vibration, High Frequency	Frequency varied 10 to 2000 Hz, 20 g peak, 2 directions 6 hours each	$\pm (0.2 \% + 0.05 \Omega) \Delta R$
Load Life	1000 hours at rated power, + 25 °C, 1.5 hours "ON", 0.5 hours "OFF"	$\pm (1.0 \% + 0.05 \Omega) \Delta R$
Terminal Strength	30 second, 5 pound pull test for RH-5 and RH-10, 10 pound pull test for other sizes, torque test - 24 pound inch for RH-100 and 32 pound inch for RH-250	$\pm (0.2 \% + 0.05 \Omega) \Delta R$



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