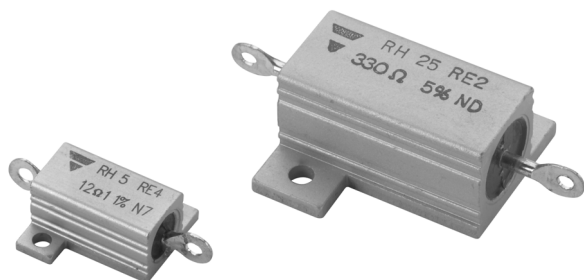


Heatsink Encased Wirewound Power Resistors



FEATURES

- 5 W to 50 W at 25 °C
- NF C 83-210
- CECC 40 203
- High stability < 0.05 % year
- Low temperature coefficient typically ± 15 ppm/°C
- Wide range of values from 0.006 Ω to 130 k Ω
- Termination = Sn/Ag/Cu
- Compliant to RoHS directive 2002/95/EC

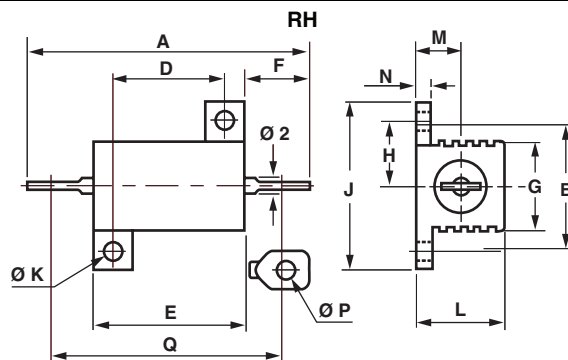


RoHS
COMPLIANT

Encased in a compact and light heatsink offering complete environmental protection, great mechanical strength and easy mounting. Non inductive versions can be supplied under the RHNI designation (please indicate required specifications and frequency range upon ordering).

NF F 16101, 10/1988 and 16102, 04/1992: Not applicable (our parts contain less than 10 g of combustible materials).

DIMENSIONS in millimeters



SERIES	A	B $\pm$ 0.2	D $\pm$ 0.2	E $\pm$ 0.5	F	G $\pm$ 1	H $\pm$ 0.7	J $\pm$ 0.5	$\varnothing$ K $\pm$ 0.1	L MAX.	M $\pm$ 0.5	N $\pm$ 0.3	$\varnothing$ P MIN.	Q	WEIGHT g
RH5	28.5 $\pm$ 1.5	12.5	11.3	16.3	6.8 $\pm$ 1.5	8.5	6.2	16.4	2.4	8.9	4.3	1.6	2.1	25.3 $\pm$ 1.5	4
RH10	35.5 $\pm$ 1.5	15.9	14	19	7.9 $\pm$ 1.5	11	7.9	20.6	2.4	11	5.6	2	2.1	30.6 $\pm$ 1.5	6.4
RH25	49 $\pm$ 1.3	19.8	18.3	28	11.1 $\pm$ 1.5	14	9.9	27.5	3.2	15	8	2.4	2.1	44.6 $\pm$ 1.3	16.1
RH50	70.2 $\pm$ 1.4	21.4	39.7	50	11 $\pm$ 1.2	15.5	10.7	29.4	3.2	15	8	2.4	2.1	66.5 $\pm$ 1.4	28.6

ELECTRICAL SPECIFICATIONS

VISHAY SFERNICE MODEL AND STYLE			RH5 	RH10 	RH25 	RH50 
NF C 83-210 (CECC 40 203)			RE4	RE1	RE2	RE3
POWER RATING Chassis Mounted Resistors	MIL Limits	25 °C	5 W	10 W	20 W	30 W
		70 °C	4 W	8 W	16 W	24 W
	Vishay Sfernice Limits	25 °C	10 W	12.5 W	25 W	50 W
		70 °C	8 W	10 W	20 W	40 W
Unmounted Resistors	Vishay Sfernice Limits	25 °C	4 W	6 W	9W	12 W
		70 °C	3.2 W	4.8 W	7.2 W	9.6 W
Rated Maximum Voltage (V _{RMS})			160 V	250 V	550 V	1285 V

ELECTRICAL SPECIFICATIONS						
VISHAY SFERNICE MODEL AND STYLE			RH5 	RH10 	RH25 	RH50 
Dielectric Strength V _{RMS}			1000 V	1500 V	2500 V	2500 V
Vishay Sfernice			0.01 Ω 12 kΩ	0.006 Ω 20 kΩ	0.006 Ω 62 kΩ	0.006 Ω 130 kΩ
NF C 83-210			0.1 Ω 2.7 kΩ	0.1 Ω 4.99 kΩ	0.1 Ω 11.8 kΩ	0.1 Ω 33.2 kΩ
Minimum Ohmic Values in Relation to Tolerance	E 96	± 0.1 %	1 Ω		1 Ω	
	E 96	± 0.5 %	0.1 Ω		0.1 Ω	
	E 96	± 1 %	0.1 Ω		0.05 Ω	
	E 48	± 2 %	0.01 Ω		0.01 Ω	
	E 24	± 5 %	0.01 Ω		0.01 Ω	
	E 12	± 10 %	0.01 Ω	0.008 Ω	0.006 Ω	

Note

-  Undergoes European Quality Insurance System (CECC)

PERFORMANCE			
MIL-R-18546 D		NF C 83-210	TYPICAL DRIFTS
TESTS	CONDITIONS	REQUIREMENTS	
Operating Temperature Range	- 55 °C + 200 °C	-	-
Momentary Overload	5 P_T /5 s	$\pm (0.25 \% + 0.05 \Omega)$	$\pm (0.1 \% + 0.05 \Omega)$
Climatic Sequence	- 55 °C + 200 °C 5 cycles	$\pm (0.25 \% + 0.05 \Omega)$	$\pm (0.1 \% + 0.05 \Omega)$
Load Life Test at High Temperature	2 h at + 275 °C	$\pm (1 \% + 0.05 \Omega)$ Ins. resistance $\geq 1 \text{ G}\Omega$	$\pm (0.1 \% + 0.05 \Omega)$
Humidity (Steady State)	56 days	$\pm (1 \% + 0.05)$ Ins. resistance $\geq 100 \text{ M}\Omega$	$\pm (0.5 \% + 0.05 \Omega)$
Resistance to Moisture	Climatic sequences test, with load and polarisation	$\pm (1 \% + 0.05 \Omega)$	$\pm (0.5 \% + 0.05 \Omega)$
Temperature Coefficient	5 to 10 > 10	$\pm 50 \text{ ppm}/^\circ\text{C}$ $\pm 25 \text{ ppm}/^\circ\text{C}$	$\pm 15 \text{ ppm}/^\circ\text{C}$
Load Life at Maximum Temperature	1000 h 25 °C P_n MIL Vishay 200 °C 30 % of P_n Sfernice	$\pm (1 \% + 0.05 \Omega)$ Ins. resistance $\geq 1 \text{ G}\Omega$	$\pm (0.1 \% + 0.05 \Omega)$ $\pm (0.5 \% + 0.05 \Omega)$

MOMENTARY OVERLOAD
1. Momentary overload (> 2 s):

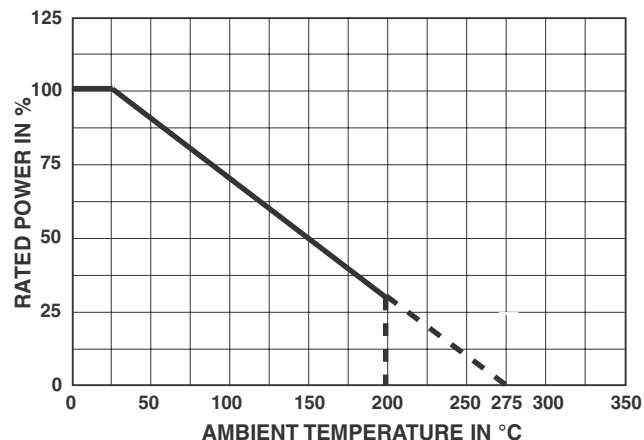
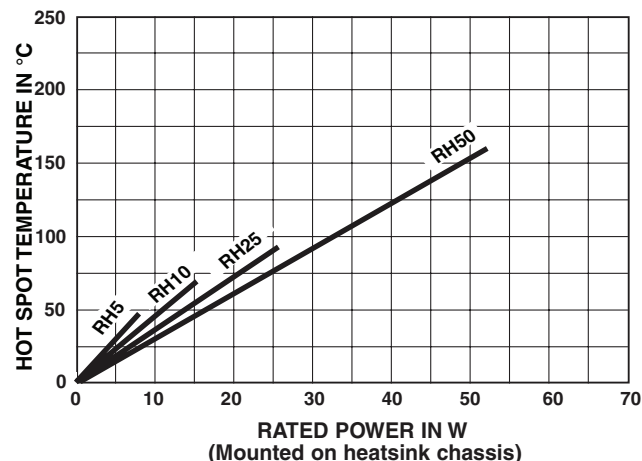
See example in table below. In all cases, it should be understood that:

- The 12 P_n overload applies only to ohmic values 0.1.
- The overload voltage shall not be higher than that used for the dielectric strength test (see Standard Electrical Specifications).

2. Short time overload (< 2 s):

For times shorter than 2 s, higher overloads can be sustained in some cases. Consult Vishay Sfernice.

POWER LOADING	DURATION
2.5 P_n	10 s
5 P_n	5 s
12 P_n	2 s

POWER RATING**TEMPERATURE RISE****MARKING**

Vishay Sfernice trademark, model, style, CECC style (if applicable) nominal resistance (in Ω), tolerance (in %), manufacturing date.

PACKAGING

Bag of 10 units

ORDERING INFORMATION

RH	05	N	18R00	J	S03
MODEL	STYLE	NON INDUCTIVE WINDING Optional	OHMIC VALUE	TOLERANCE	PACKAGING

GLOBAL PART NUMBER INFORMATION

R H 5 0		3 3 0 0	1 J	S 0 3		
GLOBAL MODEL	SIZE	OPTION	OHMIC VALUE	TOLERANCE	PACKAGING	SPECIAL
RH	05 10 25 50	N = Non inductive winding	The first four digits are significant figures and the last digit specifies the number of zeros to follow. R designates decimal point. 33001 = 33 kΩ 680R0 = 680 Ω 20301 = 20.3 kΩ 88R88 = 88.88 Ω ...	D = 0.5 % F = 1 % G = 2 % J = 5 %	Standard Packaging: S03 = Bag, 10 pieces	As applicable Ex = HDX



Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.