

## Fixed Wirewound High Power Vitreous Resistors with Terminal Collars or Bands



### FEATURES

- 10 W to 80 W at 25 °C
- NF C 93-214
- RB 13 x 70 RB 20 x 117
- High power up to 80 W at 25 °C
- High long term stability drift < 2.5 % after 5000 h
- Great mechanical strength
- Fire proof
- Environmental performance
- Thermal shock strength 0.5 % (100 % h at - 25 °C)
- Compliant to RoHS directive 2002/95/EC

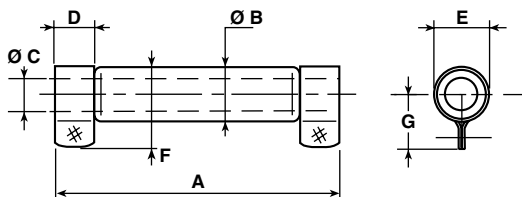


The RW wirewound power resistors are extremely well suited to professional applications, where high power and excellent endurance are required. They meet all requirements of NF C 93-214 specifications and five sizes cover the power range from 10 W to 80 W. Non inductive types are available, by using the special RWNI winding. For higher power or extremely severe conditions of use, see the RWST series.

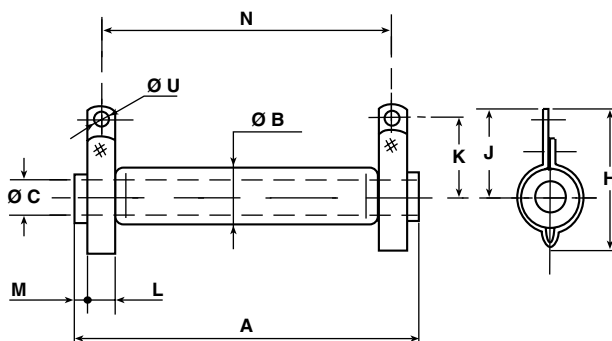
NF F 16101, 10/1988 and 16102, 04/1992: Not applicable (our parts are made of metallic and refractory materials).  
NF C 93-214. Performances according to NF C 93-214.

### DIMENSIONS in millimeters

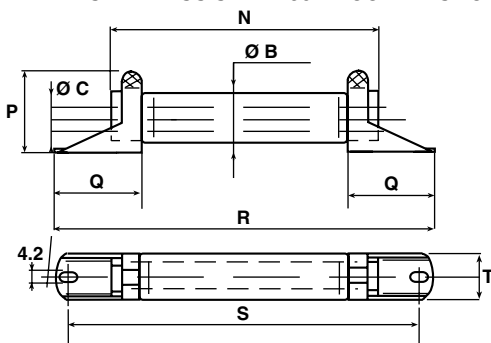
#### WELDED STAINLESS STEEL 304 L BAND "B"



#### WELDED STAINLESS STEEL 304 L COLLARS "AN"

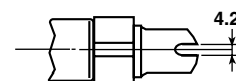


#### WELDED STAINLESS STEEL 304 L COLLARS "CR"



RW STYLE	8 x 34	10 x 50	13 x 70	16 x 94	20 x 117
CONNECTIONS	Collar AN	AN	AN	AN	AN
	Collar CR	-	CR	-	-
	Collar CS	-	-	CS	-
	Band B	-	B	B	B
A ±2	34	50	70	94	117
Ø B max.	11.5	13	16	19.5	23
Ø C min.	4.1	5	5	9	9
D +0.5 +0	-	8	10.5	12	14
E	-	11 ± 0.5	14 ± 0.5	17.5 ± 0.5	21 ± 0.7
F max.	-	21	24.5	28	33
G	-	14 ± 0.5	16 ± 0.5	18 ± 0.5	21 ± 0.7
H	28 ± 1.0	31 ± 1.0	34 ± 1.0	38 ± 1.0	42 ± 1.5
J	19.5 ± 0.5	22 ± 0.5	24 ± 0.5	25 ± 0.5	28 ± 0.7
K	16 ± 0.5	18 ± 0.5	20 ± 0.5	21 ± 0.5	24 ± 0.7
L +0.5 +0	5	6.35	0.6	0.6	0.8
M ± 1.5	1	1.5	3.5	4	6
N ± 2	27	40	56	78	98
P ± 1	-	19.5	22.5	-	-
Q ± 0.5	-	19.5	20.5	-	-
R ± 2	-	72	91	-	-
S ± 2	-	62	81	-	-
T	-	12	15	-	-
Ø U	3.2	4.2	4.2	4.2	4.2

#### WELDED STAINLESS STEEL 304L COLLARS "CS"





Fixed Wirewound High Power Vitreous Resistors  
with Terminal Collars or Bands

Vishay Sfernice

**MECHANICAL SPECIFICATIONS**

Mechanical Protection	Enamel
Resistive Element	Ni-Cr wire
Connections	B band
	AN - CR - CS collars
Average Unit Weight	10 g to 100 g

**ENVIRONMENTAL SPECIFICATIONS**

Temperature Limits	- 55 °C + 450 °C
Climatic Category	- 55 °C/+ 200 °C/56 days

**ELECTRICAL SPECIFICATIONS**

Resistance Range	1 Ω to 68 kΩ (E12 preferred series value)
Resistance Tolerances Standard	± 5 %
Power Rating	10 W to 80 W at 25 °C
Temperature Coefficient	75 ppm/°C (typical)
Dielectric Strength	1000 V <sub>RMS</sub> (AN collars)
Insulation Resistance	100 MΩ (500 V <sub>DC</sub> ) AN collars
Shelf Life	0.1 % year (typical)

**PERFORMANCE**

TESTS	CONDITIONS	REQUIREMENTS	TYPICAL VALUES AND DRIFTS
Short Time Overload	10 Pr during 5 s Voltage limited at < 5000 V current limited at 5 A	2 % or 0.05 Ω	0.5 %
Climatic Sequence	- 55 °C + 200 °C 5 cycles	3 % or 0.05 Ω Insulation resistance > 100 MΩ	0.5 %
Humidity (Steady State)	56 days 95 % relative humidity	2 % or 0.05 Ω Insulation resistance > 100 MΩ	0.5 %
Thermal Shock	Load at 100 % Pr followed by cold temp. exposure at - 55 °C	2 % or 0.05 Ω	0.5 %
Shock	Severity 50 9 shocks/each side	1 % or 0.05 Ω	0.25 %
Vibration	Severity 55B	1 % or 0.05 Ω	0.25 %
Terminal Strength	Collar AN Traction 40 N Band B Torque 60 Ncm	1 % or 0.05 Ω	0.5 %
Load Life	90'/30' cycle 1000 h at Pr 25 °C	5 %	1000 h 1.5 %
			5000 h 2.5 %

**SPECIAL FEATURES**

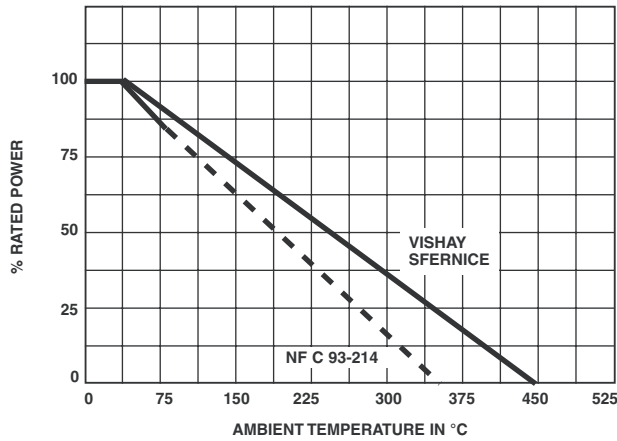
RW STYLE	8 x 34	10 x 50	13 x 70	16 x 94	20 x 117
Designation NF C 93-214	-	-	RB 13 x 70	-	RB 20 x 117
Power Rating at 25 °C	10 W	17 W	28 W	44 W	72 W
Maximum Power Rating at 25 °C	13 W	20 W	32 W	50 W	80 W
Ohmic Range (E12, E24 series)	1 Ω 10 kΩ	1 Ω 27 kΩ	2.2 Ω 56 kΩ	2.2 Ω 56 kΩ	2.7 Ω 68 kΩ
Limiting Element Voltage	300 V	450 V	650 V	900 V	1100 V
Critical Resistance	6.9 kΩ	10 kΩ	13.2 kΩ	16 kΩ	15.1 kΩ

**NON INDUCTIVE WINDING**

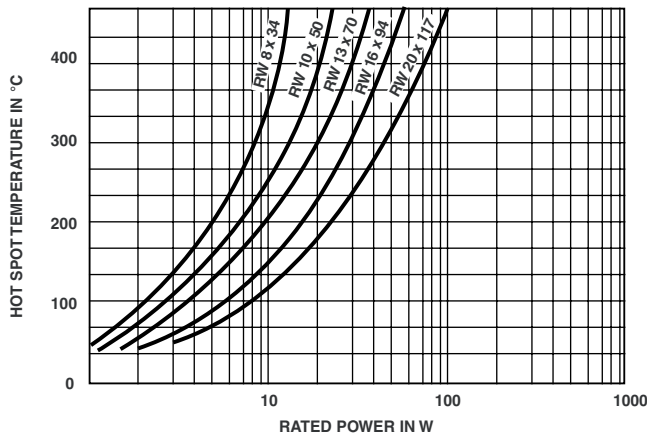
For high frequencies, low self induction resistors are available with special windings.  
RWNI designation.

MODEL AND STYLE	RWNI 8 x 34	RWNI 10 x 50	RWNI 13 x 70	RWNI 16 x 94	RWNI 20 x 117
Ohmic Range	4.7 Ω 100 Ω	4.7 Ω 220 Ω	4.7 Ω 620 Ω	10 Ω 1.2 kΩ	10 Ω 2.2 kΩ

**POWER RATING CHART**



**TEMPERATURE RISE**



**MARKING**

SFERNICE trademark, model, style, NF style (if applicable) nominal resistance (in  $\Omega$ ), tolerance (in %), manufacturing date.

ORDERING INFORMATION								
<b>RW</b>	<b>20 x 117</b>	<b>NI</b>		<b>AN</b>	<b>68 <math>\Omega</math></b>	<b><math>\pm 5\%</math></b>	<b>B020</b>	<b>e</b>
MODEL	STYLE	NON-INDUCTIVE WINDING	SPECIAL DESIGN	CONNECTIONS	OHMIC VALUE	TOLERANCE	PACKAGING	LEAD (Pb)-FREE
		Optional	Optional		Custom items are subject to extra-charge and min. order. Please see price list.			



GLOBAL PART NUMBER INFORMATION																		
R	W	1	6	X	9	4	A		2	0	3	J	B	0	0			
GLOBAL MODEL	SIZE	LEADS	OPTION	OHMIC VALUE				TOLERANCE	PACKAGING	SPECIAL								
RW	8X34 10X50 13X70 16X94 20117	A = AN B = B C = CS D = CR	N = Non inductive winding	<p>The first two digits are significant figures and the last digit specifies the number of zeros to follow. R designates decimal point.</p> <p><b>203</b> = 20 kΩ  <b>471</b> = 470 Ω  <b>48R</b> = 48.7 Ω  <b>R01</b> = 0.01 Ω</p>				J = 5.0 %	<p><b>Box:</b>            BA25            BA25NA            BO20            BO20NA            BO30            BO30NA            BO40            BO40NA            BO50            BO50NA</p>	As applicable. Example: <b>BC1</b>								



## 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.

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)