22

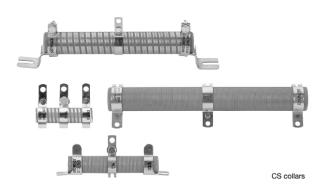
38

55

80



# Wirewound Resistor, Industrial High Power, Vitreous Tubular, Adjustable, Low Values 0.12 $\Omega$ to 560 $\Omega$



### **FEATURES**

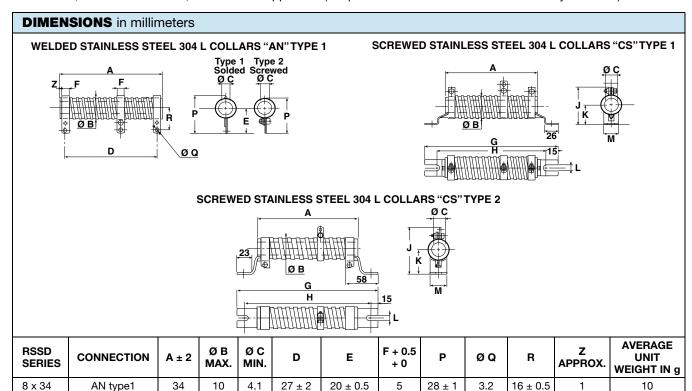
- High power rating: 16 W to 600 W at 25 °C
- Heavy overloads  $10 P_n 5 s \le 1 \%$
- Low ohmic values 0.10  $\Omega$  available
- High long term stability drift < 1.5 % after 1000 h</li>
- · Excellent withstanding of thermal shock
- Mechanical strength
- Fire proof
- Material categorization: for definitions of compliance please see <a href="https://www.vishay.com/doc?99912"><u>www.vishay.com/doc?99912</u></a>

## **LINKS TO ADDITIONAL RESOURCES**



RSSD medium and high power resistors are noted for their ability to withstand heavy transient and severe shock and vibration conditions. They complement the ohmic range of Vishay styles RW, RWST and RA in the low value area, and can be tapped by means of adjustable collars. Standard RSSD resistors have a single adjustable collar.

NF F 16101, 10/1988 and 16102, 04/1992: Not applicable (our parts are made of metallic and refractory materials).



#### Note

10 x 50

13 x 70

16 x 94

20 x 117

(1) CS connections on request

AN type1

AN type1 CS (1)

AN type1

AN type1

50

70

94

117

11.5

14.5

18

22

5

6.7

9.2

12.6

 $40 \pm 2$ 

 $56 \pm 2$ 

 $78 \pm 2$ 

 $98 \pm 2$ 

 $22 \pm 0.5$ 

 $24 \pm 0.5$ 

 $26.5 \pm 0.5$ 

 $31 \pm 0.7$ 

6.35

6.35

6.35

6.35

 $31 \pm 1$ 

 $34 \pm 1$ 

 $38 \pm 1$ 

 $42 \pm 1$ 

4.2

4.2

4.2

4.2

 $18 \pm 0.5$ 

 $20 \pm 0.5$ 

 $21 \pm 0.5$ 

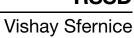
 $24 \pm 0.7$ 

1.5

3.5

4

5





DIMEN	DIMENSIONS in millimeters											
RSSD SERIES	CONNE	CTIONS	A ± 2	Ø B MAX.	Ø C MIN.	D	E	F + 0.5 + 0	G - 4 - 0	H - 4 - 0	J	
25 x 138	AN type1	cs type1	138	27	16.4	117 ± 2	33.5 ± 1	9	199	169	50 ± 1.5	
25 x 168	AN type1	cs type1	168	27	16.4	$147 \pm 2$	$33.5 \pm 1$	9	229	199	50 ± 1.5	
30 x 250	AN type1	cs type1	250	32	21.3	$227 \pm 2.5$	36 ± 1	13	317	287	60 ± 1.5	
40 x 370	AN type2	cs type2	370	43	22.3	$332 \pm 3$	57 ± 1.5	18	432	405	69 max.	
50 x 373	AN type2	cs type2	373	53	27.1	$332 \pm 3$	63 ± 1.5	18	432	405	80 max.	
RSSD SERIES	CONNECTIONS		IONS K L±0.5 M		M ± 0.5	Р	P ØQ		Z APPROX.		AVERAGE UNIT WEIGHT IN g	
SENIES									APPROX.	AN	cs	
25 x 138	AN type1	cs type1	27 ± 1	6.5	24	51 ± 1.5	5.7	28.5 ± 1	6	90	135	
25 x 168	AN type1	cs type1	27 ± 1	6.5	24	51 ± 1.5	5.7	28.5 ± 1	6	115	160	
30 x 250	AN type1	cs type1	30 ± 1	9	25	55 ± 1.5	5.7	31± 1	5	240	290	
40 070	A N I + O	40	45 ± 1	9	30	81.5 max.	9.2	45 ± 1.5	10	845	925	
40 x 370	AN type2	cs type2	45 ± 1	9	30	or.omax.	9.2	45 ± 1.5	10	045	923	

STANDARD ELECTRICAL SPECIFICATIONS							
MODEL	SIZE	$\begin{array}{c} \textbf{RESISTANCE} \\ \textbf{RANGE} \\ \Omega \end{array}$	RATED POWER  P <sub>25 °C</sub> W	TOLERANCE ± %			
RSSD 8 x 34	0834	0.12 to 10	16	5, 10 , 20			
RSSD 10 x 50	1050	0.12 to 22	25	5, 10 , 20			
RSSD 13 x 70	1370	0.12 to 43	42	5, 10 , 20			
RSSD 16 x 94	1694	0.33 to 75	70	5, 10 , 20			
RSSD 20 x 117	20117	0.22 to 100	100	5, 10 , 20			
RSSD 25 x 138	25138	0.10 to 150	140	5, 10 , 20			
RSSD 25 x 168	25168	0.12 to 220	200	5, 10 , 20			
RSSD 30 x 250	30250	0.22 to 360	280	5, 10 , 20			
RSSD 40 x 370	40370	0.47 to 470	450	5, 10 , 20			
RSSD 50 x 373	50373	0.68 to 560	600	5, 10 , 20			

MECHANICAL SPECIFICATIONS							
Mechanical Protection	Vishay Sfernice special cement						
Resistive Element	Nickel alloy wire						
Connections	AN collars CS supporting collars						
Average Unit Weight	10 g to 1350 g						

ENVIRONMENTAL SPECIFICATIONS					
Temperature Range	-55 °C, +450 °C				
Climatic Category	-55 °C / +200 °C / 56 days				

TECHNICAL SPECIFICATIONS						
Resistance Range	0.12 $\Omega$ to 560 $\Omega$ (E12 series)					
Standard Tolerance	R ≥ 10 Ω ± 5 % <sup>(1)</sup> 1 Ω ≤ R < 10 Ω ± 10 % 0.1 Ω ≤ R < 1 Ω ± 20 %					
Power Rating	14 W to 600 W at 25 °C					

# Note

(1) 10 % for RSSD 8 x 34 only

PERFORMANCE								
TESTS	CONDITIONS	REQUIREMENTS	TYPICAL VALUES AND DRIFTS					
Short Time Overload	10 P <sub>r</sub> during 5 s	2 %	1 %					
Climatic Sequence	-55 °C, +200 °C 5 cycles	3 %	1 %					
Thermal Shock	Load at 100 % P <sub>r</sub> followed by cold -55 °C / 15	2 % or 0.05 Ω	1 %					
Load Life	90 / 30 cycle 1000 h at <i>P</i> <sub>r</sub> at +25 °C	5 %	5 %					



SPECIAL FE	ATURES										
RSSD TYPE		8 x 34	10 x 50	13 x 70	16 x 94	20 x 117	25 x 138	25 x 168	30 x 250	40 x 370	50 x 373
Power Rating	Continuous	16 W	25 W	42 W	70 W	100 W	140 W	200 W	280 W	450 W	600 W
at 25 °C	Reduced	14 W	22 W	38 W	62 W	90 W	125 W	170 W	240 W	360 W	450 W
Resistance Ohmic Range (E12, E24 Series) with 1 Tapping		0.12 Ω 10 Ω	0.12 Ω 22 Ω	0.12 Ω 43 Ω	0.33 Ω 75 Ω	0.22 Ω 100 Ω	0.10 Ω 150 Ω	0.12 Ω 220 Ω	0.22 Ω 360 Ω	0.47 Ω 470 Ω	0.68 Ω 560 Ω
Maximum Number of Additional Tapping		0	1	1	1	1	1	2	2	4	4
Reduction % of Ohmic Value by Tapping		23	21	14	11	10	8	6.5	6	5.7	5.7

## **ADDITIONAL TAPPINGS**

Are supplied with their adjustable collars fastened but not set to any specific value. Please note that, on request, all tappings can be adjusted by Vishay Sfernice. For adjustment purposes we would need to be advised of the ohmic values, and tolerances of the sections in successive order in addition to their sum  $R_n$ .

The permissible maximum value for an adjustment should take into account the possible negative tolerance of R<sub>n</sub>.

Please consult Vishay Sfernice regarding the acceptable tolerance.

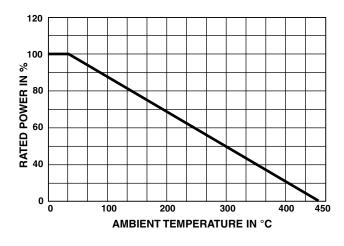
#### **RECOMMENDATIONS FOR USE**

# **Maximum Current Strength:**

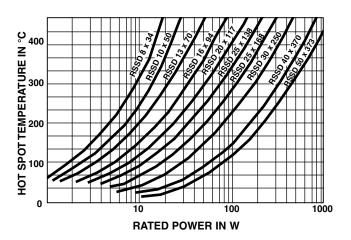
The ohmic value and the power decrease as the connections are brought together. To avoid overload, the maximum current strength that is permissible for  $R_n$  should never be exceeded:

$$I_{\text{max.}} = \sqrt{P_{\text{r}}/R_{\text{n}}}$$

# **POWER RATING**



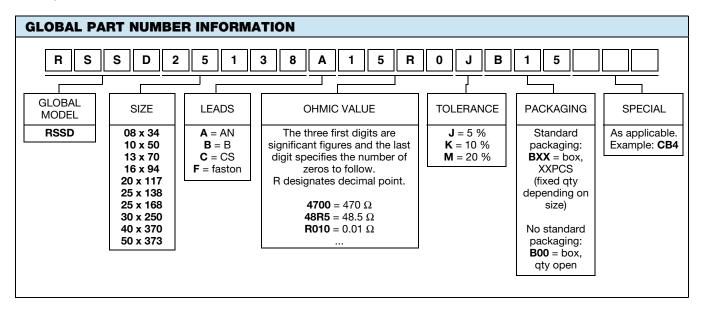
#### **TEMPERATURE RISE**



#### **MARKING**

Vishay Sfernice trademark, model, style, nominal resistance (in  $\Omega$ ), tolerance (in %), manufacturing date.

ORDER	ING INFO	ORMATION	1				
RSSD	10 × 50		AN	10U	5 %	BA25	е
MODEL	STYLE	SPECIAL DESIGN	CONNECTIONS	OHMIC VALUE	TOLERANCE	PACKAGING	LEAD (Pb)-FREE
		Method No Optional		Custom items are subject to extra-charge and min. order. Please see price list.			



RELATED DOCUMENTS					
APPLICATION NOTES					
Packaging Information	www.vishay.com/doc?50033				
Accessories	www.vishay.com/doc?50021				



# **Legal Disclaimer Notice**

Vishay

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