Wirewound Resistors, Industrial Power, Tubular, Roundwire (RD), Adjustable (RDEA, RDSA)



FEATURES

- High temperature silicone or vitreous enamel coatings
- Non-inductive options available
- All welded construction
- Wide range of available resistances
- Hardware mounting options and enclosures available
- Wirewound
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

RoHS COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING W	RESISTANCE RANGE Ω	TOLERANCE %	TERMINAL STYLE	
					STANDARD	OPTION
RDEA0012 (1)	5-28-ΩA	12	0.27 to 10.6K	10	A	H
RDEA0025 (1)	9-32-ΩA	25	0.50 to 19K	10	D	H
RDEA0030 (1)	12-32-ΩA	30	0.66 to 26K	10	D	H
RDEA0045 (1)	12-48-ΩA	45	1.21 to 49K	10	D	H
RDEA0050 (1)	9-64-ΩA	50	1.34 to 54K	10	D	H
RDEA0051 (1)	12-56-ΩA	51	1.49 to 61K	10	D	H
RDEA0061 (1)	12-64-ΩA	61	1.77 to 73K	10	D	H
RDEA0065 (1)	12-72-ΩA	65	2.04 to 84K	10	D	H
RDEA0075 (1)	9-96-ΩA	75	2.18 to 89K	10	D	H
RDEA0076 (1)	12-80-ΩA	76	2.32 to 96K	10	D	H
RDEA0080 (1)	18-64-ΩA	80	0.40 to 48K	10	F	H
RDEA0090 (1)	12-96-ΩA	90	2.87 to 119K	10	D	H
RDEA0095 (1)	18-80-ΩA	95	0.56 to 79K	10	F	H
RDEA0100 (1)	12-104-ΩA	100	3.15 to 131K	10	D	H
RDEA0120 (1)	18-96-ΩA	120	0.71 to 100K	10	F	H
RDEA0130 (1)	18-104-ΩA	130	0.78 to 111K	10	F	H
RDEA0160 (1)	18-128-ΩA	160	1.00 to 144K	10	F	H
RDEA0175 (1)	18-136-ΩA	175	1.08 to 156K	10	F	H
RDSA0220	26-136-ΩA	220	1.38 to 69K	10	G	-
RDEA0225 (1)	18-168-ΩA	225	1.38 to 200K	10	F	H
RDEA0235 (1)	18-180-ΩA	235	1.49 to 216K	10	F	H
RDEA0240 (1)	18-188-ΩA	240	1.56 to 227K	10	F	H
RDSA0275	26-168-ΩA	275	1.81 to 90K	10	G	-
RDSA0300	26-188-ΩA	300	2.07 to 104K	10	G	-
RDSA0500	40-192-ΩSA	500	3.24 to 34K	10	G	-
RDSA0750	40-240-ΩSA	750	4.22 to 44K	10	G	-
RDSA1000	40-320-ΩSA	1000	5.85 to 62K	10	G	-
RDSA1150	52-320-ΩSA	1150	7.58 to 41K	10	G	-

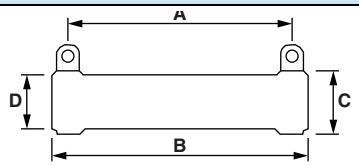
Note

(1) Vitreous enamel coating is standard (RDEA type), silicone coating is optional (RDSA type).

For technical questions, contact: vishaymilwaukeeresistor@vishay.com

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000

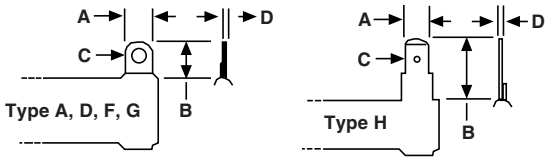
DIMENSIONS in inches (millimeters)



- For Terminal Data and Mounting Hardware, see www.vishay.com/doc?31811
- For Enclosures and Frames, see www.vishay.com/doc?31810

GLOBAL MODEL		CORE DIMENSIONS (REF.)		A DISTANCE BETWEEN TERMINAL (REF.)	WEIGHT (TYP.) g
	B LENGTH	C OUTER DIAMETER	D INNER DIAMETER		
RDEA0012	1.75 (44.45)	0.313 (7.95)	0.188 (4.775)	1.38 (34.925)	6
RDEA0025	2 (50.8)	0.563 (14.3)	0.313 (7.95)	1.50 (38.1)	20
RDEA0030	2 (50.8)	0.75 (19.05)	0.5 (12.7)	1.50 (38.1)	30
RDEA0045	3 (76.2)	0.75 (19.05)	0.5 (12.7)	2.50 (63.5)	50
RDEA0050	4 (101.6)	0.563 (14.3)	0.313 (7.95)	3.50 (88.9)	65
RDEA0051	3.5 (88.9)	0.75 (19.05)	0.5 (12.7)	3.00 (76.2)	58
RDEA0061	4 (101.6)	0.75 (19.05)	0.5 (12.7)	3.50 (88.9)	62
RDEA0065	4.5 (114.3)	0.75 (19.05)	0.5 (12.7)	4.00 (101.6)	68
RDEA0075	6 (152.4)	0.563 (14.3)	0.313 (7.95)	5.50 (139.7)	90
RDEA0076	5 (127)	0.75 (19.05)	0.5 (12.7)	4.50 (114.3)	75
RDEA0080	4 (101.6)	1.125 (28.575)	0.75 (19.05)	3.13 (79.375)	127
RDEA0090	6 (152.4)	0.75 (19.05)	0.5 (12.7)	5.50 (139.7)	95
RDEA0095	5 (127)	1.125 (28.575)	0.75 (19.05)	4.13 (104.775)	145
RDEA0100	6.5 (165.1)	0.75 (19.05)	0.5 (12.7)	6.00 (152.4)	100
RDEA0120	6 (152.4)	1.125 (28.575)	0.75 (19.05)	5.13 (130.175)	165
RDEA0130	6.5 (165.1)	1.125 (28.575)	0.75 (19.05)	5.63 (142.875)	200
RDEA0160	8 (203.2)	1.125 (28.575)	0.75 (19.05)	7.13 (193.675)	225
RDEA0175	8.5 (215.9)	1.125 (28.575)	0.75 (19.05)	7.63 (177.8)	250
RDSA0220	8.5 (215.9)	1.625 (41.275)	1.125 (28.575)	7.00 (177.8)	400
RDEA0225	10.5 (266.7)	1.125 (28.575)	0.75 (19.05)	9.63 (244.475)	270
RDEA0235	11.25 (285.75)	1.125 (28.575)	0.75 (19.05)	10.38 (263.525)	310
RDEA0240	11.75 (298.45)	1.125 (28.575)	0.75 (19.05)	10.88 (276.225)	325
RDSA0275	10.5 (266.7)	1.625 (41.275)	1.125 (28.575)	9.00 (228.6)	500
RDSA0300	11.75 (298.45)	1.625 (41.275)	1.125 (28.575)	10.25 (260.35)	510
RDSA0500	12 (304.8)	2.5 (63.5)	1.75 (44.45)	10.50 (266.7)	1000
RDSA0750	15 (381)	2.5 (63.5)	1.75 (44.45)	13.50 (342.9)	1300
RDSA1000	20 (508)	2.5 (63.5)	1.75 (44.45)	18.50 (469.9)	1625
RDSA1150	20 (508)	3.25 (82.55)	1.75 (44.45)	18.50 (469.9)	3800

TERMINAL STYLE in inches (millimeters)



DIMENSIONS	A (3/16" LUG)	D (1/4" LUG)	F (3/8" LUG)	G (1/2" LUG)	H (1/4" SQC)
Width (A)	0.1875 (4.7625)	0.25 (6.35)	0.375 (9.525)	0.5 (12.7)	0.25 (6.35)
Height (B)	0.375 (9.525)	0.5 (12.7)	0.625 (15.875)	0.9375 (23.8125)	0.625 (15.875)
Diameter (C)	0.13 (3.302)	0.17 (4.318)	0.2 (5.08)	0.26 (6.604)	0.065 (1.651)
Thickness (D)	0.02 (0.508)	0.02 (0.508)	0.035 (0.889)	0.046 (1.1684)	0.032 (0.8128)

For technical questions, contact: vishaymilwaukeeresistor@vishay.com

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000

METRIC OPTIONS AVAILABLE

Metric Hardware on Terminal Lugs

Use terminal designation “1” example: RDEA03001R000K**1**B00

Metric Mounting Hardware

Vertical mount: use special designation “VM” example: RDEA03001R000K1B**VM**

1 high bracket: use special designation “1A” example: RDEA03001R000K1B**1M**

2 high bracket: use special designation “2A” example: RDEA03001R000K1B**2M**

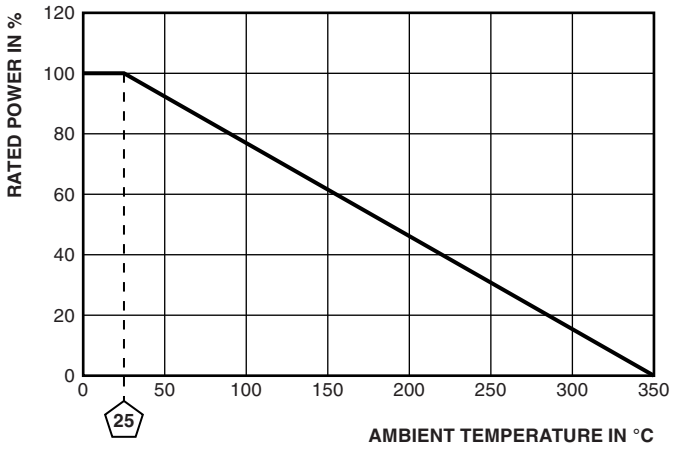
3 high bracket: use special designation “3A” example: RDEA03001R000K1B**3M**

4 high bracket: use special designation “4A” example: RDEA03001R000K1B**4M**

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Power rating	W	12 to 1150
Resistance range	Ω	0.27 to 227K
Resistance tolerance	%	10
TCR	ppm/°C	± 400, ± 180, ± 130, ± 20 (varies by wattage and resistance)
Operating temperature	°C	-55 to +350
Temperature rise	°C	325 above an ambient of 25 °C
Maximum altitude	f.a.s.l. (m.a.s.l.)	derate above 4921 f.a.s.l. (1500 m.a.s.l.)
Short-term overload (surge)		10 x rated power for 5 s
Surge windings		available
Maximum working voltage		$(P \times R)^{1/2}$
Insulation resistance	Ω	1M
Dielectric voltage	V_{RMS}	up to 1500 (upon request)
Creepage	inch (mm)	minimum 0.125 (3.175), typical (varies by wattage)
Terminal sleeves		n/a
Inductance	µH	0.2 to 10 300 (varies by wattage and resistance)
Non-inductive winding		available
Terminal strength	lb	10
Electrical or mechanical customization		available: www.vishay.com/doc?31857

DERATING CURVE



MATERIAL SPECIFICATIONS

Element	copper-nickel, nickel-chrome, iron-chrome-aluminum
Core	cordierite, steatite
Coating	special high temperature silicone or vitreous enamel
Standard terminals	nickel-iron
Part marking	value, date code, MRC

For technical questions, contact: vishaymilwaukeeresistor@vishay.com

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: RDEA00251K000KDBVT (RDEA0025-CT 1K 10 % 1/4L B)

R	D	E	A	0	0	2	5	1	K	0	0	0	K	D	B	V	T

GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE	TERMINAL	PACKAGING CODE	SPECIAL
RDEA0025 (see "Standard Electrical Specifications" table above for additional P/N's)	**R** = decimal **K** = thousand **R1500** = 0.15 Ω **1K500** = 1.5 kΩ	**J** = ± 5.0 % **K** = ± 10 %	**A** = 3/16" lug **D** = 1/4" lug **F** = 3/8" lug **G** = 1/2" lug **H** = 1/4" single quick-connect	**B** = bulk	**00** = standard **NI** = non-inductive **SW** = surge winding **CP** = push in clips (bulk) **CA** = push in clips (assembled) **VT** = vertical mount **1A** = 1 high bracket zinc plated steel **2A** = 2 high bracket zinc plated steel **3A** = 3 high bracket zinc plated steel **4A** = 4 high bracket zinc plated steel **Note** 2A, 3A, and 4A assemblies: include identical resistors only wiring to be supplied by customer reference CS series for further customization **Note** 3A and 4A limitations: brackets fit 40 W to 550 W RB resistors

For technical questions, contact: vishaymilwaukeeresistor@vishay.com

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

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 in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

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

© 2024 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED