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

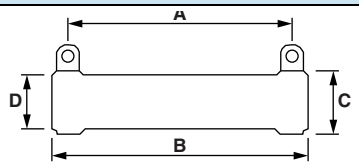
STANDARD ELECTRICAL SPECIFICATIONS

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).

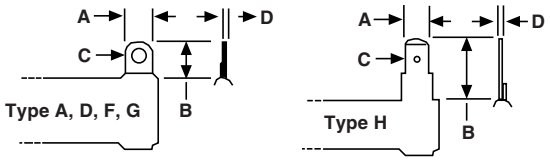
DIMENSIONS in inches (millimeters)



- 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)

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**

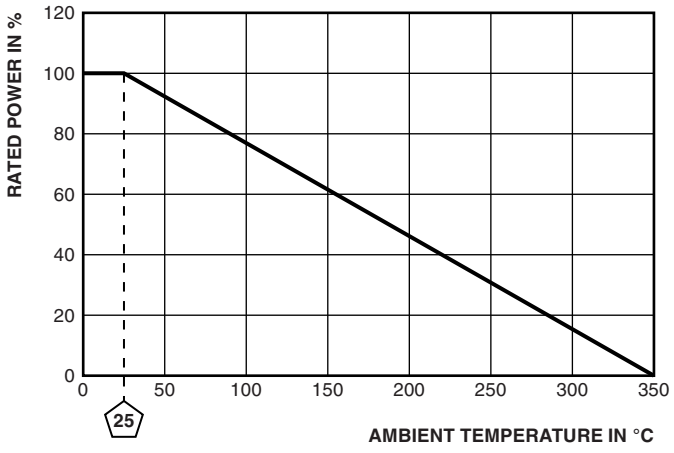
3 high bracket: use special designation “3A” example: RDEA03001R000K1B**3M**

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

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

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