Wirewound Resistors, Industrial Power, Tubular, Roundwire (RD), Fixed (RDEF, RDSF)



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
RDEF0008 (1)	5-16-Ω	8	0.82 to 13.5K	5	A	H
RDEF0012 (1)	5-28-Ω	12	0.12 to 49K	5	A	H
RDEF0015 (1)	7-24-Ω	15	0.16 to 28.7K	5	A	H
RDEF0020 (1)	7-32-Ω	20	0.13 to 53.2K	5	A	H
RDEF0025 (1)	9-32-Ω	25	0.22 to 35K	5	D	H
RDEF0030 (1)	12-32-Ω	30	0.28 to 29K	5	D	H
RDEF0045 (1)	12-48-Ω	45	0.18 to 63K	5	D	H
RDEF0050 (1)	9-64-Ω	50	0.21 to 119K	5	D	H
RDEF0051 (1)	12-56-Ω	51	0.22 to 83K	5	D	H
RDEF0061 (1)	12-64-Ω	61	0.27 to 97K	5	D	H
RDEF0065 (1)	12-72-Ω	65	0.31 to 122K	5	D	H
RDEF0075 (1)	9-96-Ω	75	0.33 to 207K	5	D	H
RDEF0076 (1)	12-80-Ω	76	0.35 to 134K	5	D	H
RDEF0080 (1)	18-64-Ω	80	0.06 to 53K	5	F	H
RDEF0090 (1)	12-96-Ω	90	0.43 to 172K	5	D	H
RDEF0095 (1)	18-80-Ω	95	0.08 to 79K	5	F	H
RDEF0100 (1)	12-104-Ω	100	0.47 to 186K	5	D	H
RDEF0120 (1)	18-96-Ω	120	0.11 to 100K	5	F	H
RDEF0130 (1)	18-104-Ω	130	0.12 to 111K	5	F	H
RDEF0160 (1)	18-128-Ω	160	0.15 to 144K	5	F	H
RDEF0175 (1)	18-136-Ω	175	0.16 to 156K	5	F	H
RDSF0220	26-136-Ω	220	0.21 to 69K	5	G	-
RDEF0225 (1)	18-168-Ω	225	0.21 to 200K	5	F	H
RDEF0235 (1)	18-180-Ω	235	0.22 to 216K	5	F	H
RDEF0240 (1)	18-188-Ω	240	0.24 to 227K	5	F	H
RDSF0275	26-168-Ω	275	0.27 to 90K	5	G	-
RDSF0300	26-188-Ω	300	0.31 to 104K	5	G	-
RDSF0500	40-192-ΩS	500	0.49 to 34K	5	G	-
RDSF0750	40-240-ΩS	750	0.63 to 44K	5	G	-
RDSF1000	40-320-ΩS	1000	0.89 to 62K	5	G	-
RDSF1150	52-320-ΩS	1150	1.14 to 41K	5	G	-

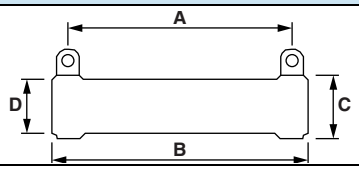
Note

(1) Vitreous enamel coating is standard (RDEF type), silicone coating is optional (RDSF type).

For technical questions, contact: vishaymilwaukeeresistor@vishay.com

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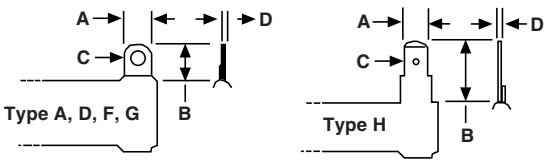
DIMENSIONS in inches (millimeters)



- 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		
RDEF0008	1 (25.4)	0.313 (7.95)	0.188 (4.775)	0.63 (15.875)	4
RDEF0012	1.75 (44.45)	0.313 (7.95)	0.188 (4.775)	1.38 (34.925)	6
RDEF0015	1.5 (38.1)	0.438 (11.125)	0.313 (7.95)	1.06 (26.9875)	8
RDEF0020	2 (50.8)	0.438 (11.125)	0.313 (7.95)	1.56 (39.6875)	15
RDEF0025	2 (50.8)	0.563 (14.3)	0.313 (7.95)	1.50 (38.1)	20
RDEF0030	2 (50.8)	0.75 (19.05)	0.5 (12.7)	1.50 (38.1)	30
RDEF0045	3 (76.2)	0.75 (19.05)	0.5 (12.7)	2.50 (63.5)	50
RDEF0050	4 (101.6)	0.563 (14.3)	0.313 (7.95)	3.50 (88.9)	65
RDEF0051	3.5 (88.9)	0.75 (19.05)	0.5 (12.7)	3.00 (76.2)	58
RDEF0061	4 (101.6)	0.75 (19.05)	0.5 (12.7)	3.50 (88.9)	62
RDEF0065	4.5 (114.3)	0.75 (19.05)	0.5 (12.7)	4.00 (101.6)	68
RDEF0075	6 (152.4)	0.563 (14.3)	0.313 (7.95)	5.50 (139.7)	90
RDEF0076	5 (127)	0.75 (19.05)	0.5 (12.7)	4.50 (114.3)	75
RDEF0080	4 (101.6)	1.125 (28.575)	0.75 (19.05)	3.13 (79.375)	127
RDEF0090	6 (152.4)	0.75 (19.05)	0.5 (12.7)	5.50 (139.7)	95
RDEF0095	5 (127)	1.125 (28.575)	0.75 (19.05)	4.13 (104.775)	145
RDEF0100	6.5 (165.1)	0.75 (19.05)	0.5 (12.7)	6.00 (152.4)	100
RDEF0120	6 (152.4)	1.125 (28.575)	0.75 (19.05)	5.13 (130.175)	165
RDEF0130	6.5 (165.1)	1.125 (28.575)	0.75 (19.05)	5.63 (142.875)	200
RDEF0160	8 (203.2)	1.125 (28.575)	0.75 (19.05)	7.13 (193.675)	225
RDEF0175	8.5 (215.9)	1.125 (28.575)	0.75 (19.05)	7.63 (177.8)	250
RDSF0220	8.5 (215.9)	1.625 (41.275)	1.125 (28.575)	7.00 (177.8)	400
RDEF0225	10.5 (266.7)	1.125 (28.575)	0.75 (19.05)	9.63 (244.475)	270
RDEF0235	11.25 (285.75)	1.125 (28.575)	0.75 (19.05)	10.38 (263.525)	310
RDEF0240	11.75 (298.45)	1.125 (28.575)	0.75 (19.05)	10.88 (276.225)	325
RDSF0275	10.5 (266.7)	1.625 (41.275)	1.125 (28.575)	9.00 (228.6)	500
RDSF0300	11.75 (298.45)	1.625 (41.275)	1.125 (28.575)	10.25 (260.35)	510
RDSF0500	12 (304.8)	2.5 (63.5)	1.75 (44.45)	10.50 (266.7)	1000
RDSF0750	15 (381)	2.5 (63.5)	1.75 (44.45)	13.50 (342.9)	1300
RDSF1000	20 (508)	2.5 (63.5)	1.75 (44.45)	18.50 (469.9)	1625
RDSF1150	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)

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METRIC OPTIONS AVAILABLE

Metric Hardware on Terminal Lugs

Use terminal designation “1” example: RDEF03001R000K**1**B00

Metric Mounting Hardware

Vertical mount: use special designation “VM” example: RDEF03001R000K1B**VM**

1 high bracket: use special designation “1A” example: RDEF03001R000K1B**1M**

2 high bracket: use special designation “2A” example: RDEF03001R000K1B**2M**

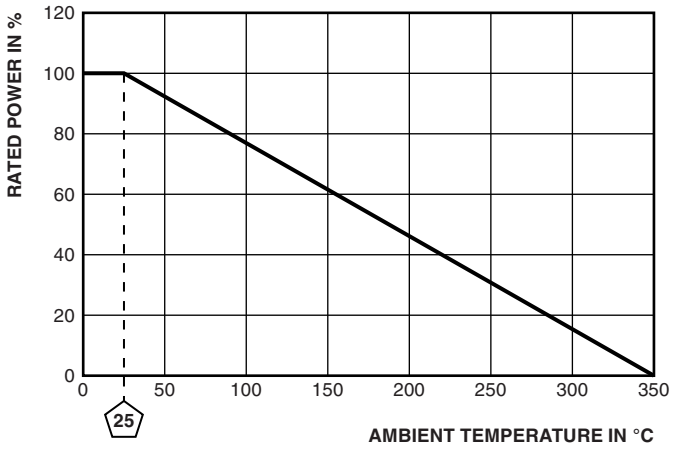
3 high bracket: use special designation “3A” example: RDEF03001R000K1B**3M**

4 high bracket: use special designation “4A” example: RDEF03001R000K1B**4M**

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Power rating	W	8 to 1150
Resistance range	Ω	0.12 to 227K
Resistance tolerance	%	5 for above 1 Ω, 10 below 1 Ω
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

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GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: RDEF00201K000JABVT (RDEF0020-VT 1K 5 % 3/16L B)

R	D	E	F	0	0	2	0	1	K	0	0	0	J	A	B	V	T

GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE	TERMINAL	PACKAGING CODE	SPECIAL
RDEF0020 (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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