RBEF, RBSF



Vishay Milwaukee

Wirewound Resistors, Industrial Power, Tubular, Ribwound (RB), Fixed (RBEF, RBSF)



FEATURES

- High temperature silicone or vitreous enamel coatings
- Excellent for pulsing applications
- All welded construction
- Designed to meet heavy-duty requirements where space is at a premium
- Hardware mounting options and enclosures available
- Wirewound
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

STANDARD ELECTRICAL SPECIFICATIONS						
GLOBAL	HISTORICAL	POWER RATING	RESISTANCE RANGE	TOLERANCE	TERMINAL STYLE	
MODEL	MODEL	w	Ω	%	STANDARD	OPTION
RBEF0040 ⁽¹⁾	9-32-ΩR	40	0.010 to 10.6	10	D	Н
RBEF0050 ⁽¹⁾	12-32-ΩR	50	0.020 to 8.2	10	F	Н
RBEF0075 ⁽¹⁾	12-48-ΩR	75	0.010 to 19.3	10	F	Н
RBEF0090 ⁽¹⁾	9-64-ΩR	90	0.015 to 28.3	10	D	Н
RBEF0100 ⁽¹⁾	12-56-ΩR	100	0.012 to 24.5	10	F	Н
RBEF0110 ⁽¹⁾	12-64-ΩR	110	0.015 to 30.6	10	F	Н
RBEF0120 ⁽¹⁾	12-72-ΩR	120	0.018 to 36.8	10	F	Н
RBEF0135 ⁽¹⁾	12-80-ΩR	135	0.021 to 42.9	10	F	Н
RBEF0150 ⁽¹⁾	18-64-ΩR	150	0.019 to 44.8	10	F	Н
RBEF0160 ⁽¹⁾	12-96-ΩR	160	0.027 to 55.0	10	F	Н
RBEF0175 ⁽¹⁾	18-72-ΩR	175	0.023 to 53.7	10	F	Н
RBEF0180 ⁽¹⁾	12-104-ΩR	180	0.030 to 61.3	10	F	Н
RBEF0220 ⁽¹⁾	18-96-ΩR	220	0.035 to 80.6	10	F	Н
RBEF0225 ⁽¹⁾	18-98-ΩR	225	0.036 to 82.8	10	F	Н
RBEF0240 ⁽¹⁾	18-104-ΩR	240	0.038 to 89.5	10	F	Н
RBEF0300 ⁽¹⁾	18-136-ΩR	300	0.054 to 125	10	F	Н
RBEF0375 ⁽¹⁾	18-168-ΩR	375	0.069 to 161	10	F	Н
RBEF0400 ⁽¹⁾	26-136-ΩR	400	0.061 to 159	10	G	-
RBEF0420 ⁽¹⁾	18-188-ΩR	420	0.079 to 184	10	F	Н
RBEF0500 ⁽¹⁾	26-168-ΩR	500	0.081 to 210	10	G	-
RBEF0550 ⁽¹⁾	26-188-ΩR	550	0.093 to 242	10	G	-
RBSF0750	40-192-ΩR	750	0.128 to 166	10	G	-
RBSF0850	-	850	0.160 to 400	10	F	G, H
RBSF1000	40-240-ΩR	1000	0.168 to 217	10	G	-
RBSF1100	-	1100	0.180 to 525	10	G	-
RBSF1500	40-320-ΩR	1500	0.234 to 303	10	G	-
RBSF1700	-	1700	0.270 to 350	10	G	-
RBSF2000	52-320-ΩR	2000	0.281 to 391	10	G	-

Note

⁽¹⁾ Vitreous enamel coating is standard (RBEF type), silicone coating is optional (RBSF type).

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ROHS COMPLIANT



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DIMENSIONS in inches (millimeters)



• For Terminal Data and Mounting Hardware, see <u>www.vishay.com/doc?31811</u>

• For Enclosures and Frames, see <u>www.vishay.com/doc?31810</u>

	C	ORE DIMENSIONS (RE	Α	WEIGHT		
GLOBAL MODEL	B LENGTH	C OUTER DIAMETER	D INNER DIAMETER	DISTANCE BETWEEN TERMINAL (REF.)	(TYP.) g	
RBEF0040	2 (50.8)	0.5625 (14.2875)	0.3125 (7.9375)	1.25 (31.75)	20	
RBEF0050	2 (50.8)	0.75 (19.05)	0.5 (12.7)	1.15 (29.21)	30	
RBEF0075	3 (76.2)	0.75 (19.05)	0.5 (12.7)	2.13 (53.975)	50	
RBEF0090	4 (101.6)	0.5625 (14.2875)	0.3125 (7.9375)	3.50 (88.9)	65	
RBEF0100	3.5 (88.9)	0.75 (19.05)	0.5 (12.7)	2.63 (66.675)	58	
RBEF0110	4 (101.6)	0.75 (19.05)	0.5 (12.7)	3.13 (79.375)	62	
RBEF0120	4.5 (114.3)	0.75 (19.05)	0.5 (12.7)	3.63 (92.075)	68	
RBEF0135	5 (127)	0.75 (19.05)	0.5 (12.7)	4.13 (104.775)	75	
RBEF0150	4 (101.6)	1.125 (28.575)	0.75 (19.05)	3.13 (79.375)	127	
RBEF0160	6 (152.4)	0.75 (19.05)	0.5 (12.7)	5.13 (130.175)	95	
RBEF0175	4.5 (114.3)	1.125 (28.575)	0.75 (19.05)	3.63 (92.075)	140	
RBEF0180	6.5 (165.1)	0.75 (19.05)	0.5 (12.7)	5.63 (142.875)	100	
RBEF0220	6 (152.4)	1.125 (28.575)	0.75 (19.05)	5.13 (130.175)	165	
RBEF0225	6.125 (155.575)	1.125 (28.575)	0.75 (19.05)	5.25 (133.35)	175	
RBEF0240	6.5 (165.1)	1.125 (28.575)	0.75 (19.05)	5.63 (142.875)	200	
RBEF0300	8.5 (215.9)	1.125 (28.575)	0.75 (19.05)	7.63 (193.675)	265	
RBEF0375	10.5 (266.7)	1.125 (28.575)	0.75 (19.05)	9.63 (244.475)	300	
RBEF0400	8.5 (215.9)	1.625 (41.275)	1.125 (28.575)	7.63 (193.675)	410	
RBEF0420	11.75 (298.45)	1.125 (28.575)	0.75 (19.05)	10.88 (276.225)	336	
RBEF0500	10.5 (266.7)	1.625 (41.275)	1.125 (28.575)	9.00 (228.6)	525	
RBEF0550	11.75 (298.45)	1.625 (41.275)	1.125 (28.575)	10.25 (260.35)	535	
RBSF0750	12 (304.8)	2.5 (63.5)	1.75 (44.45)	10.50 (266.7)	1200	
RBSF0850	25 (635)	1.125 (28.575)	0.75 (19.05)	23.75 (603.25)	715	
RBSF1000	15 (381)	2.5 (63.5)	1.75 (44.45)	13.50 (342.9)	1500	
RBSF1100	25 (635)	1.625 (41.275)	1.125 (28.58)	23 (584.2)	1140	
RBSF1500	20 (508)	2.5 (63.5)	1.75 (44.45)	18.50 (169.9)	1900	
RBSF1700	25 (635)	2.5 (63.5)	1.75 (44.45)	23 (584.2)	2450	
RBSF2000	20 (508)	3.25 (82.55)	1.75 (44.45)	18.50 (169.9)	3900	

TERMINAL STYLE in inches (millimeters)



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

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RBEF, RBSF

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Vishay Milwaukee

METRIC OPTIONS AVAILABLE

Metric Hardware on Terminal Lugs

Use terminal designation "1" example: RBEF03001R000K1B00

Metric Mounting Hardware

ISHA'

Vertical mount: use special designation "VM" example: RBEF03001R000K1BVM

1 high bracket: use special designation "1A" example: RBEF03001R000K1B1M

2 high bracket: use special designation "2A" example: RBEF03001R000K1B $\underline{2M}$

3 high bracket: use special designation "3A" example: RBEF03001R000K1B $\underline{\textbf{3M}}$

4 high bracket: use special designation "4A" example: RBEF03001R000K1B4M

TECHNICAL SPECIFICATIONS				
PARAMETER	UNIT	RESISTOR CHARACTERISTICS		
Power rating	W	40 to 200		
Resistance range	Ω	0.01 to 391		
Resistance tolerance	%	10		
TCR	ppm/°C	\pm 400, \pm 180, \pm 130, \pm 20 (varies by wattage and resistance)		
Operating temperature	°C	-55 to +415		
Temperature rise	°C	375 above an ambient of 40 °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 x 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	0.1 to 340 (varies by wattage and resistance)		
Non-inductive winding		consult factory: www.vishay.com/milwaukee/contact		
Terminal strength	lb	10		
Electrical or mechanical customization		available: www.vishay.com/doc?31856		

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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OPTIONS	EXAMPLE PHOTO	EXAMPLE: 300 W	OPTIONS	EXAMPLE PHOTO	EXAMPLE: 300 W
Standard "00" option	-	Part number ends with " <u>00</u> " example: RBEF0300xxxxxKGB <u>00</u>	Thru Bolt "VT" option		Part number ends with " ⊻T " example: RBEF0300xxxxxKGB ⊻T
1 High Bracket "1A" option		Part number ends with " <u>1A</u> " example: RBEF0300xxxxxKGB <u>1A</u>	Clips "CP" option		Part number ends with " <u>CP</u> " example: RBEF0300xxxxxKGB <u>CP</u>
2 High Bracket "2A" option		Part number ends with " <u>2A</u> " example: RBEF0300xxxxxKGB <u>2A</u>	Adjustable	The second second	Part model starts with " RBEA " example: <u>RBEA</u> 0300xxxxxKFB00
3 High Bracket "3A" option		Part number ends with " <u>3A</u> " example: RBEF0300xxxxxKGB <u>3A</u>	Enclosures		Consult factory for options: vishaymilwaukeeresistor@vishay.com
4 High Bracket "4A" option		Part number ends with " <u>4A</u> " example: RBEF0300xxxxxKGB <u>4A</u>	Electrical customizations (TCR, inductance, etc.)	()-	Consult factory for options: vishaymilwaukeeresistor@vishay.com





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Mouser Electronics

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RBEF0300R1200KFB00	RBEF03001R600KFB00	RBEF0300R3100KFB00	RBEF03002R500KFB00
RBEF0300R8000KFB00	RBEF03006R300KFB00	RBEF030016R00KFB00	RBEF0300R6300KFB00
RBEF03003R100KFB00	RBEF03001R200KFB00	RBEF0300R5000KFB00	RBEF0300R2500KFB00
RBEF03004R000KFB00	RBEF03002R000KFB00	RBEF0300R4100KFB00	RBEF030020R00KFB00
RBEF03008R000KFB00	RBEF030010R00KFB00	RBEF03001R000KFB00	RBEF0300R2000KFB00
RBEF0300R1000KFB00	RBEF03005R000KFB00	RBEF030012R00KFB00	RBEF03009R000KFB00
RBEF04003R240KGB1A	RBEF022030R00KFB00	RBEF040025R00KGB00	RBEF030025R00KFB00
RBEF02203R500KFB00	RBEF010012R00KFB00	RBEF030080R00KFBVT	RBEF010010R00KHB1A
RBEF0420R9500KFB00	RBEF010024R00KFB00	RBEF03001R200KFB2A	RBEF03007R000KFB00
RBEF03006R000KFB00			