

## 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 [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS  
COMPLIANT**

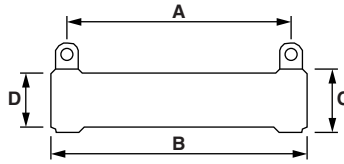
<b>STANDARD ELECTRICAL SPECIFICATIONS</b>						
GLOBAL MODEL	HISTORICAL MODEL	POWER RATING W	RESISTANCE RANGE $\Omega$	TOLERANCE %	TERMINAL STYLE	
					STANDARD	OPTION
RBEF0040 <sup>(1)</sup>	9-32- $\Omega$ R	40	0.010 to 10.6	10	D	H
RBEF0050 <sup>(1)</sup>	12-32- $\Omega$ R	50	0.020 to 8.2	10	F	H
RBEF0075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

**Note**

<sup>(1)</sup> Vitreous enamel coating is standard (RBEF type), silicone coating is optional (RBSF type).



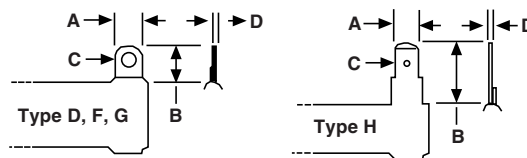
**DIMENSIONS** in inches (millimeters)



- For Terminal Data and Mounting Hardware, see [www.vishay.com/doc?31811](http://www.vishay.com/doc?31811)
- For Enclosures and Frames, see [www.vishay.com/doc?31810](http://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		
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)



**METRIC OPTIONS AVAILABLE**

**Metric Hardware on Terminal Lugs**

Use terminal designation "1" example: RBEF03001R000K1B00

**Metric Mounting Hardware**

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: RBEF03001R000K1B2M

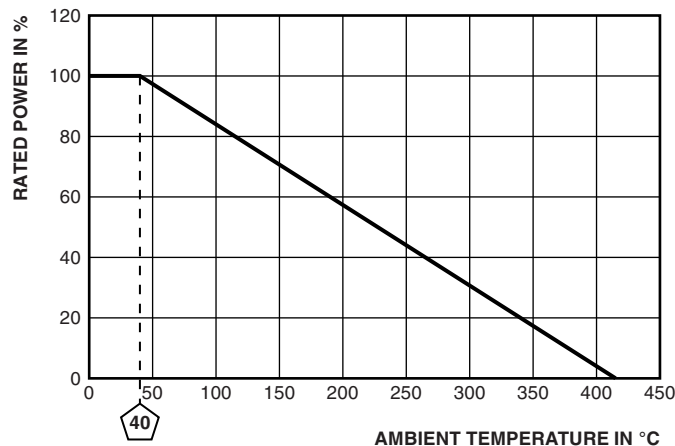
3 high bracket: use special designation "3A" example: RBEF03001R000K1B3M

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

**TECHNICAL SPECIFICATIONS**

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Power rating	W	40 to 200
Resistance range	$\Omega$	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		$(P \times R)^{1/2}$
Insulation resistance	$\Omega$	1M
Dielectric voltage	V <sub>RMS</sub>	up to 1500 (upon request)
Creepage	inch (mm)	minimum 0.125 (3.175), typical (varies by wattage)
Terminal sleeves		n/a
Inductance	$\mu$ H	0.1 to 340 (varies by wattage and resistance)
Non-inductive winding		consult factory: <a href="http://www.vishay.com/milwaukee/contact">www.vishay.com/milwaukee/contact</a>
Terminal strength	lb	10
Electrical or mechanical customization		available: <a href="http://www.vishay.com/doc?31856">www.vishay.com/doc?31856</a>

**DERATING CURVE**



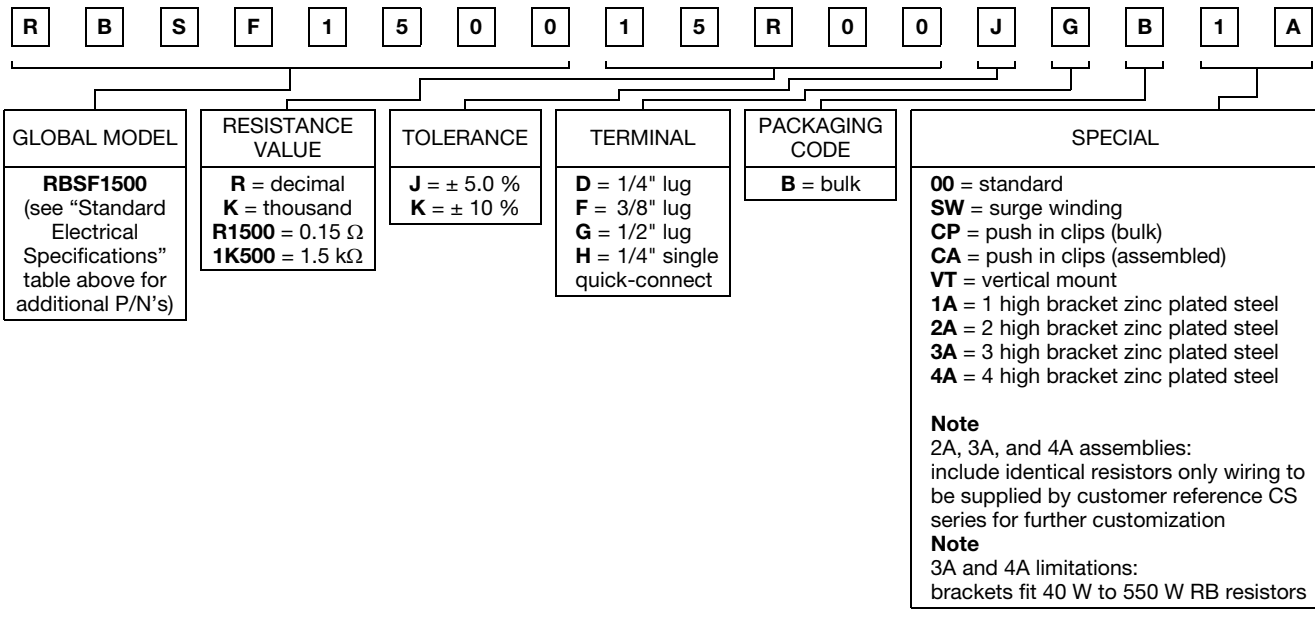
**MATERIAL SPECIFICATIONS**

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

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

**GLOBAL PART NUMBER INFORMATION**

Global Part Numbering example: RBSF150015R00JGB1A (RBSF1500-1A 15 5 % 1/2L B)





## **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.

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.

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А