

Adjustable Ribwound Resistor



FEATURES

- Resistance wire is spotwelded to the terminal bands and then “locked” onto the core with a vitreous enamel or silicone coating
- Hardware can be supplied mounted, as loose assemblies, or as individual parts. Enclosures can also be produced.
- Available as fixed and adjustable resistors (for fixed Ribwound Resistor see www.vishay.com/doc?31807)
- Wirewound
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

| GLOBAL MODEL | HISTORICAL MODEL | POWER RATING W | RESISTANCE RANGE Ω | TOLERANCE ⁽⁴⁾ % |
|----------------------------|---------------------|-------------------|------------------------------|-------------------------------|
| RBEA0090 ⁽¹⁾ | 9-64- Ω RA | 90 | 0.014 to 25.3 | 10 |
| RBEA0100 ⁽¹⁾ | 12-56- Ω RA | 100 | 0.011 to 20.7 | 10 |
| RBEA0110 ⁽¹⁾ | 12-64- Ω RA | 110 | 0.014 to 26.8 | 10 |
| RBEA0120 ⁽¹⁾ | 12-72- Ω RA | 120 | 0.017 to 32.9 | 10 |
| RBEA0135 ⁽¹⁾ | 12-80- Ω RA | 135 | 0.020 to 39 | 10 |
| RBEA0150 ⁽¹⁾ | 18-64- Ω RA | 150 | 0.018 to 39 | 10 |
| RBEA0160 ⁽¹⁾ | 12-96- Ω RA | 160 | 0.027 to 51.3 | 10 |
| RBEA0175 ⁽¹⁾ | 18-72- Ω RA | 175 | 0.022 to 48.1 | 10 |
| RBEA0180 ⁽¹⁾ | 12-104- Ω RA | 180 | 0.030 to 57.4 | 10 |
| RBEA0220 ⁽¹⁾ | 18-96- Ω RA | 220 | 0.035 to 75 | 10 |
| RBEA0225 ⁽¹⁾ | 18-98- Ω RA | 225 | 0.036 to 77.2 | 10 |
| RBEA0240 ⁽¹⁾ | 18-104- Ω RA | 240 | 0.039 to 83.9 | 10 |
| RBEA0300 ⁽¹⁾⁽³⁾ | 18-136- Ω RA | 300 | 0.055 to 120 | 10 |
| RBEA0375 ⁽¹⁾ | 18-168- Ω RA | 375 | 0.072 to 156 | 10 |
| RBEA0400 ⁽¹⁾ | 26-136- Ω RA | 400 | 0.062 to 149 | 10 |
| RBEA0420 ⁽¹⁾ | 18-188- Ω RA | 420 | 0.082 to 178 | 10 |
| RBEA0500 ⁽¹⁾⁽³⁾ | 26-168- Ω RA | 500 | 0.083 to 200 | 10 |
| RBEA0550 ⁽¹⁾ | 26-188- Ω RA | 550 | 0.097 to 232 | 10 |
| RBSA0750 ⁽²⁾ | 40-192- Ω RA | 750 | 0.130 to 158 | 10 |
| RBSA1000 ⁽²⁾⁽³⁾ | 40-240- Ω RA | 1000 | 0.176 to 209 | 10 |
| RBSA1500 ⁽²⁾⁽³⁾ | 40-320- Ω RA | 1500 | 0.248 to 294 | 10 |
| RBSA2000 ⁽²⁾ | 52-320- Ω RA | 2000 | 0.300 to 380 | 10 |

Notes

- Ratings are based on a temperature rise of 375 °C above an ambient of 40 °C.
- Operating temperature range - 55 °C to 415 °C.
- ⁽¹⁾ RBEA0090 to RBEA0550 vitreous enamel coating is standard, silicone coating is available.
- ⁽²⁾ RBSA0750 to RBSA2000 silicone coating is standard.
- ⁽³⁾ Stock wattage, see Ribwound Stock Ribs (www.vishay.com/doc?31808)
- ⁽⁴⁾ Closer tolerances available upon request.

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.) | TERMINAL STYLE |
|--------------|------------------------|---------------------|---------------------|--|-------------------|
| | B LENGTH | C OUTER DIAMETER | D INNER DIAMETER | | |
| RBEA0090 | 4 (101.6) | 0.5625 (14.2875) | 0.3125 (7.9375) | 3.50 (88.9) | D |
| RBEA0100 | 3.5 (88.9) | 0.75 (19.05) | 0.5 (12.7) | 2.63 (66.675) | F |
| RBEA0110 | 4 (101.6) | 0.75 (19.05) | 0.5 (12.7) | 3.13 (79.375) | F |
| RBEA0120 | 4.5 (114.3) | 0.75 (19.05) | 0.5 (12.7) | 3.63 (92.075) | F |
| RBEA0135 | 5 (127) | 0.75 (19.05) | 0.5 (12.7) | 4.13 (104.775) | F |
| RBEA0150 | 4 (101.6) | 1.125 (28.575) | 0.75 (19.05) | 3.13 (79.375) | F |
| RBEA0160 | 6 (152.4) | 0.75 (19.05) | 0.5 (12.7) | 5.13 (130.175) | F |
| RBEA0175 | 4.5 (114.3) | 1.125 (28.575) | 0.75 (19.05) | 3.63 (92.075) | F |
| RBEA0180 | 6.5 (165.1) | 0.75 (19.05) | 0.5 (12.7) | 5.63 (142.875) | F |
| RBEA0220 | 6 (152.4) | 1.125 (28.575) | 0.75 (19.05) | 5.13 (130.175) | F |
| RBEA0225 | 6.125 (155.575) | 1.125 (28.575) | 0.75 (19.05) | 5.25 (133.35) | F |
| RBEA0240 | 6.5 (165.1) | 1.125 (28.575) | 0.75 (19.05) | 5.63 (142.875) | F |
| RBEA0300 | 8.5 (215.9) | 1.125 (28.575) | 0.75 (19.05) | 7.63 (193.675) | F |
| RBEA0375 | 10.5 (266.7) | 1.125 (28.575) | 0.75 (19.05) | 9.63 (244.475) | F |
| RBEA0400 | 8.5 (215.9) | 1.625 (41.275) | 1.125 (28.575) | 7.63 (193.675) | G |
| RBEA0420 | 11.75 (298.45) | 1.125 (28.575) | 0.75 (19.05) | 10.88 (276.225) | F |
| RBEA0500 | 10.5 (266.7) | 1.625 (41.275) | 1.125 (28.575) | 9.00 (228.6) | G |
| RBEA0550 | 11.75 (298.45) | 1.625 (41.275) | 1.125 (28.575) | 10.25 (260.35) | G |
| RBSA0750 | 12 (304.8) | 2.5 (63.5) | 1.75 (44.45) | 10.50 (266.7) | G |
| RBSA1000 | 15 (381) | 2.5 (63.5) | 1.75 (44.45) | 13.50 (342.9) | G |
| RBSA1500 | 20 (508) | 2.5 (63.5) | 1.75 (44.45) | 18.50 (469.9) | G |
| RBSA2000 | 20 (508) | 3.25 (82.55) | 1.75 (44.45) | 18.50 (469.9) | G |

TERMINAL STYLE in inches (millimeters)


| DIMENSIONS | D (1/4" LUG) | F (5/16" LUG) | G (1/2" LUG) | H (1/4" SQ) |
|---------------|--------------|----------------|------------------|----------------|
| 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) |
| Dia. (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) |



| 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: RBEA030020R00JFB00 (RBEA0300 20 5 % 3/8L B)



| MODEL (2 digits) | COATING (1 digit) | TYPE (1 digit) | SIZE (4 digits) | VALUE (5 digits) | TOLERANCE (1 digit) | TERMINAL (1 digit) | PACKAGING (1 digit) | SPECIAL (2 digits) |
|---------------------|--|-----------------------|---|--|--|---|---|--|
| RB | E = Enamel S = Silicone | A = Adjustable | 0300 = 300 W 2000 = 2000 W | R = Decimal K = Thousand R1500 = 0.15 Ω 1K500 = 1.5 kΩ Check datasheet for available value range | D = ± 0.5 % F = ± 1.0 % G = ± 2.0 % H = ± 3.0 % J = ± 5.0 % K = ± 10 % M = ± 20 % | D = 1/4" lug E = 5/16" lug F = 3/8" lug G = 1/2" lug H = 1/4" single quick-connect J = 1/4" double quick-connect K = 1/4" lug with steel hardware (ES-707F) L = 5/16" lug with steel hardware (ES-707F) M = 3/8" lug with steel hardware (ES-707F) N = 3/8" lug with brass hardware (ES-707b) O = 1/2" lug with steel hardware (ES-707F) P = 1/2" lug with brass hardware (ES-707b) Q = 1/4" lug with steel hardware (ES-708F) R = 5/16" lug with steel hardware (ES-708F) S = 3/8" lug with steel hardware (ES-708F) T = 3/8" lug with brass hardware (ES-708b) U = 1/2" lug with steel hardware (ES-708F) V = 1/2" lug with brass hardware (ES-708b) W = Ferrule | B = Bulk See packaging codes for additional options | 00 = Standard 01 = Standard with customer part no. stamp NI = Non-inductive CT = Center tap SW = Surge winding LT = Low temperature coefficient alloy EC = End caps CP = Push in clips (bulk) CA = Push in clips (assembled) VT = Vertical mount VS = VT with customer part no. stamp ES = End slot side slot bracket 1A = 1 high bracket zinc plated steel 1S = 1A with customer part no. stamp 1B = 1 high bracket stainless steel (300 W only) 1C = Live bracket 2A = 2 high bracket zinc plated steel 2B = 2 high bracket stainless steel (300 W only) 3A = 3 high bracket zinc plated steel 3B = 3 high bracket stainless steel (300 W only) 4A = 4 high bracket zinc plated steel 4B = 4 high bracket stainless steel (300 W only) Note 2A, 2B, 3A, 3B, 4A, and 4B assemblies: include identical resistors only wiring to be supplied by customer reference CS series for further customization Note 3A, 3B, 4A, and 4B limitations: brackets fit 40 W to 550 W RB resistors |



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

Факс: 8 (812) 320-03-32

Электронная почта: ocean@oceanchips.ru

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

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