# Carbon Film Resistors, General Purpose, High Voltage

## FEATURES

- Ratings to 10 W, 40 kV
- Available with either radial lugs or axial leads
- Epoxy/enamel coated, with additional Mylar® heat shrink sleeve 0.002" (0.051 mm) thick
- ± 20 % tolerance standard, tolerances of ± 15 %, ± 10 % and ± 5 % available
- See models D and G for special purpose high voltage carbon film resistors
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free Available

e3

RoHS* Available

**Note**

* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details.

## STANDARD ELECTRICAL SPECIFICATIONS

| GLOBAL MODEL | POWER RATING $P_{25\,°C}$ W | MAXIMUM WORKING VOLTAGE (1) V | RESISTANCE RANGE (2) Ω | TOLERANCE (3) ± % | STYLE |
|---|---|---|---|---|---|
| BAEW | 0.5 | 2.5K | 50K to 500M | 5, 10, 15, 20 | 2 |
| BAKW | 1 | 5K | 100K to 500M | 5, 10, 15, 20 | 2 |
| BBF | 1 | 3.5K | 50K to 500M | 5, 10, 15, 20 | 1 |
| BBFW | 1 | 3.5K | 50K to 500M | 5, 10, 15, 20 | 2 |
| BBM | 2 | 7.5K | 50K to 500M | 5, 10, 15, 20 | 1 |
| BBMW | 2 | 7.5K | 50K to 500M | 5, 10, 15, 20 | 2 |
| BBR | 3 | 15K | 100K to 500M | 5, 10, 15, 20 | 1 |
| BBRW | 3 | 15K | 100K to 500M | 5, 10, 15, 20 | 2 |
| BBV | 5 | 30K | 200K to 500M | 5, 10, 15, 20 | 1 |
| BFQ | 4 | 15K | 100K to 500M | 5, 10, 15, 20 | 1 |
| BFT | 6 | 25K | 200K to 500M | 5, 10, 15, 20 | 1 |
| BFW | 10 | 40K | 400K to 500M | 5, 10, 15, 20 | 1 |
| TAFW | 1 | 5K | 1M to 500M | 5, 10, 15, 20 | 3 |
| TAKW | 1.5 | 7.5K | 1M to 500M | 5, 10, 15, 20 | 3 |

**Notes**

(1) Continuous working voltage shall be $\sqrt{P \times R}$ or maximum working voltage, whichever is less.

(2) All resistance values are calibrated at 100 $V_{DC}$-calibration at other voltages available on request. Contact factory for availability of values outside the listed range.

(3) ± 20 % standard, ± 5 %, ± 10 %, and ± 15 % are available.

## GLOBAL PART NUMBER INFORMATION

**New Global Part Numbering: BAEW2M50LF08 (preferred part numbering format)**

| B | A | E | W | 2 | M | 5 | 0 | L | F | 0 | 8 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| GLOBAL MODEL | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING | SPECIAL |
|---|---|---|---|---|
| (3 or 4 digits) (see Standard Electrical Specifications table) | **K** = kΩ<br>**M** = MΩ<br>**50K0** = 50 kΩ<br>**1M00** = 1 MΩ<br>**500M** = 500 MΩ | **J** = ± 5 %<br>**K** = ± 10 %<br>**L** = ± 15 %<br>**M** = ± 20 % | **E08** = Lead (Pb)-free, foam (B series only)<br>**E22** = Lead (Pb)-free, bulk (TAFW, TAKW only)<br>**F08** = Tin/lead, foam (B series only)<br>**B22** = Tin/lead, bulk (TAFW, TAKW only) | Blank = Standard (Dash Number) (up to 3 digits) From **1 to 999** as applicable |

**Historical Part Number example: BAEW 2M50 15 % (will continue to be accepted)**

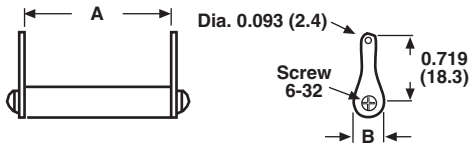
| BAEW | 2M50 | 15 % | F08 |
|---|---|---|---|
| HISTORICAL MODEL | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING |

**Note**

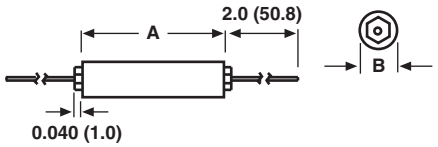
- For additional information on packaging, refer to the Through Hole Resistor Packaging document (www.vishay.com/doc?31544).

## DIMENSIONS in inches (millimeters)

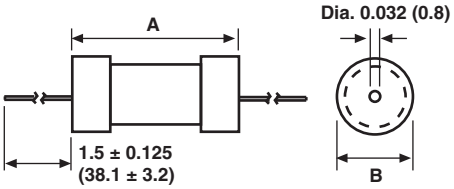
Style 1




Style 2




Style 3

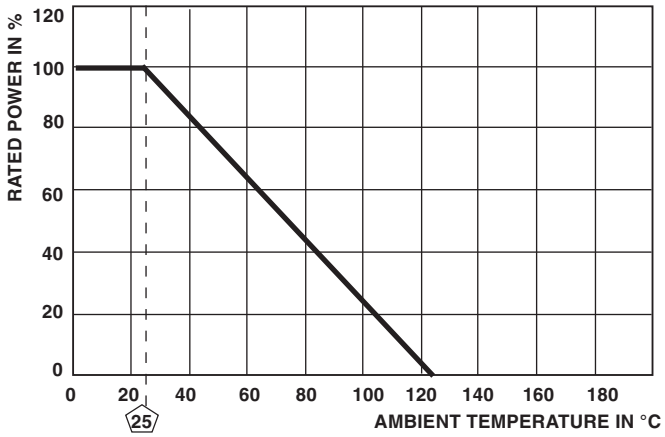



| GLOBAL MODEL | STYLE | A | B |
|---|---|---|---|
| BAEW | 2 | 0.75 (19.05) | 0.250 (6.35) |
| BAKW | 2 | 1.50 (38.10) | 0.250 (6.35) |
| BBF | 1 | 1.00 (25.40) | 0.313 (7.95) |
| BBFW | 2 | 1.00 (25.40) | 0.313 (7.95) |
| BBM | 1 | 1.75 (44.45) | 0.313 (7.95) |
| BBMW | 2 | 1.75 (44.45) | 0.313 (7.95) |
| BBR | 1 | 3.00 (76.20) | 0.313 (7.95) |
| BBRW | 2 | 3.00 (76.20) | 0.313 (7.95) |
| BBV | 1 | 5.50 (139.70) | 0.313 (7.95) |
| BFQ | 1 | 2.50 (63.50) | 0.563 (14.30) |
| BFT | 1 | 4.00 (101.60) | 0.563 (14.30) |
| BFW | 1 | 6.50 (165.10) | 0.563 (14.30) |
| TAFW | 3 | 1.05 ± 0.05 (26.70 ± 1.30) | 0.275 ± 0.020 (7.00 ± 0.50) |
| TAKW | 3 | 1.55 ± 0.05 (39.40 ± 1.30) | 0.275 ± 0.020 (7.00 ± 0.50) |

**Note**

- Models B axial leads are #20 AWG tinned copper. All other dimensional tolerances for styles 1 and 2, unless otherwise specified are ± 0.016" [0.406 mm] or ± 1 %, whichever is greater.

## DERATING




## MARKING

- DALE
- Model
- Value
- Tolerance
- Date code

# 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.

# Material Category Policy

**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.**

**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**

**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.**

# X-ON Electronics

Largest Supplier of Electrical and Electronic Components

***Click to view similar products for*** Carbon Film Resistors - Through Hole ***category:***

***Click to view products by*** Vishay ***manufacturer:***

Other Similar products are found below :

RCFQ-100-5TA RCFQ-100K-5TA RCFQ-10-5TA RCFQ-11-5TA RCFQ-120-5TA RCFQ-12-5TA RCFQ-150K-5TA RCFQ-15K-5TA RCFQ-160-5TA RCFQ-160K-5TA RCFQ-180-5TA RCFQ-18-5TA RCFQ-18K-5TA RCFQ-220-5TA RCFQ-240K-5TA RCFQ-24-5TA RCFQ-270K-5TA RCFQ-27-5TA RCFQ-330K-5TA RCFQ-33K-5TA RCFQ-360-5TA RCFQ-360K-5TA RCFQ-36-5TA RCFQ-390K-5TA RCFQ-430K-5TA RCFQ-43-5TA RCFQ-47-5TA RCFQ-620-5TA RCFQ-62-5TA RCFQ-680-5TA RCFQ-680K-5TA RCFQ-750-5TA RCFQ-91-5TA RCFQ-91K-5TA 150-04720 OM1625 OMT200L ON2725E LCA0207001004J2200 299-1K/REEL 23ESA473MLA50N CF1/4-8.2M-5% CFB1/2C101J CFB1/2C102J CFR16J1K0 CFR50J8K2 293-22/REEL RCFQ-110-5TA RCFQ-110K-5TA RCFQ-11K-5TA