

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



## 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 $P_{25\text{ }^\circ\text{C}}$ W	MAXIMUM WORKING VOLTAGE <sup>(1)</sup> V	RESISTANCE RANGE <sup>(2)</sup> Ω	TOLERANCE <sup>(3)</sup> ± %	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

- <sup>(1)</sup> Continuous working voltage shall be  $\sqrt{P \times R}$  or maximum working voltage, whichever is less.
- <sup>(2)</sup> All resistance values are calibrated at 100 V<sub>DC</sub>-calibration at other voltages available on request. Contact factory for availability of values outside the listed range.
- <sup>(3)</sup> ± 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 (3 or 4 digits) (see Standard Electrical Specifications table)	RESISTANCE VALUE <b>K</b> = kΩ <b>M</b> = MΩ <b>50K0</b> = 50 kΩ <b>1M00</b> = 1 MΩ <b>500M</b> = 500 MΩ	TOLERANCE CODE <b>J</b> = ± 5 % <b>K</b> = ± 10 % <b>L</b> = ± 15 % <b>M</b> = ± 20 %	PACKAGING <b>E08</b> = Lead (Pb)-free, foam (B series only) <b>E22</b> = Lead (Pb)-free, bulk (TAFW, TAKW only) <b>F08</b> = Tin/lead, foam (B series only) <b>B22</b> = Tin/lead, bulk (TAFW, TAKW only)	SPECIAL Blank = Standard (Dash Number) (up to 3 digits) From <b>1 to 999</b> as applicable
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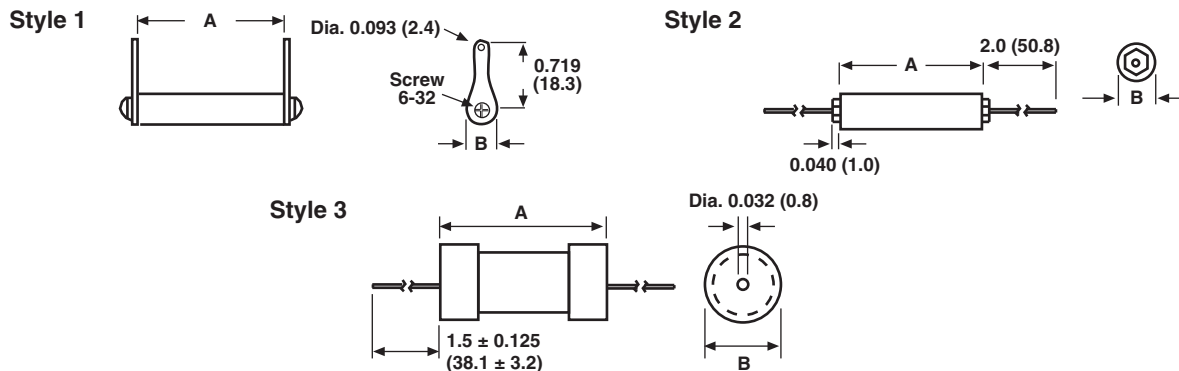
Historical Part Number example: **BAEW 2M50 15 %** (will continue to be accepted)

<b>BAEW</b>	<b>2M50</b>	<b>15 %</b>	<b>F08</b>
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](http://www.vishay.com/doc?31544)).

**DIMENSIONS** in inches (millimeters)

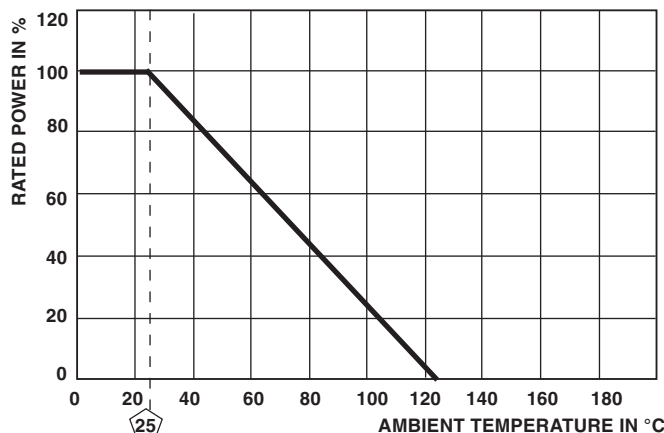


GLOBAL MODEL	STYLE	A	B
BAEW	2	0.75 (19.05)	0.250 (6.35)
BAKW	2	1.50 (38.10)	0.250 (6.35)
BBF	1	1.00 (25.40)	0.313 (7.95)
BBFW	2	1.00 (25.40)	0.313 (7.95)
BBM	1	1.75 (44.45)	0.313 (7.95)
BBMW	2	1.75 (44.45)	0.313 (7.95)
BBR	1	3.00 (76.20)	0.313 (7.95)
BBRW	2	3.00 (76.20)	0.313 (7.95)
BBV	1	5.50 (139.70)	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
<ul style="list-style-type: none"> <li>- DALE</li> <li>- Model</li> <li>- Value</li> <li>- Tolerance</li> <li>- Date code</li> </ul>



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