



# Carbon Film (Metal Alloy) Resistors, Special Purpose, High Voltage



## MATERIAL SPECIFICATIONS

**Element:** metal alloy

**Core:** alkaline earth porcelain

## FEATURES

- HVW and MVW are uncoated; HVX (blue flameproof coating) available on request
- High voltage (up to 7.5 kV)
- Semi-precision:  $\pm 5\%$ ,  $\pm 10\%$ ,  $\pm 20\%$
- Axial leads: HVW, HVX = tinned copper  
MVW = copper clad steel
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**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 | HISTORICAL MODEL | POWER RATING<br>$P_{70^{\circ}\text{C}}$<br>W | MAXIMUM WORKING VOLTAGE <sup>(2)</sup><br>V | RESISTANCE RANGE <sup>(2)</sup><br>$\Omega$ | TOLERANCE<br>$\pm\%$ |
|--------------|------------------|-----------------------------------------------|---------------------------------------------|---------------------------------------------|----------------------|
| HVW1/2       | HVW-1/2          | 1.0                                           | 3.5K                                        | 1K to 25M                                   | 5, 10, 20            |
| HVX1/2       | HVX-1/2          | 1.0                                           | 3.5K                                        | 1K to 25M                                   | 5, 10, 20            |
| MVW1/2       | MVW-1/2          | 1.0                                           | 3.5K                                        | 1K to 25M                                   | 5, 10, 20            |
| HVW3/4       | HVW-3/4          | 1.5                                           | 7.5K                                        | 1K to 50M                                   | 5, 10, 20            |
| HVX3/4       | HVX-3/4          | 1.5                                           | 7.5K                                        | 1K to 50M                                   | 5, 10, 20            |
| MVW3/4       | MVW-3/4          | 1.5                                           | 7.5K                                        | 1K to 50M                                   | 5, 10, 20            |

### Notes

- (1) All resistance values are calibrated at 100 V<sub>DC</sub>. Calibration at other voltages upon request  
 (2) Continuous working voltage shall be  $\sqrt{P \times R}$  or maximum working voltage, whichever is less

## GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: HVW1/226K40KLB (preferred part numbering format)

H V W 1 / 2 2 6 K 4 0 K L B

| GLOBAL MODEL<br>(see Standard Electrical Specifications table) | RESISTANCE VALUE<br>K = k $\Omega$<br>M = M $\Omega$<br>1K000 = 1.0 k $\Omega$<br>47K00 = 47 k $\Omega$<br>50M = 50 M $\Omega$ | TOLERANCE CODE<br>J = $\pm 5\%$<br>K = $\pm 10\%$<br>M = $\pm 20\%$ | PACKAGING CODE <sup>(1)(2)</sup><br>EL = lead (Pb)-free, lacer<br>EK = lead (Pb)-free, bulk<br>EE = lead (Pb)-free, reel<br>LB = tin/lead, lacer<br>BJ = tin/lead, bulk<br>RC = tin/lead, reel | SPECIAL<br>Blank = standard (dash number) (up to 3 digits) from 1 to 999 as applicable |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|

Historical Part Number Example: HVW-1/2 26.4K 10% (will continue to be accepted)

|                  |                  |                |           |
|------------------|------------------|----------------|-----------|
| HVW-1/2          | 26.4K            | 10%            | L05       |
| HISTORICAL MODEL | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING |

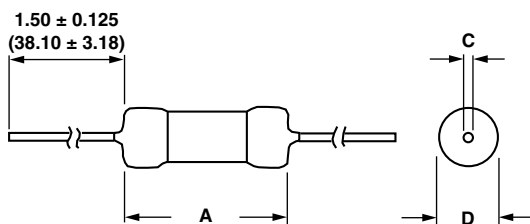
### Notes

- (1) MVW products do not contain lead. Use tin/lead packaging codes to specify these lead free MVW products. Use lead (Pb)-free packaging codes to specify lead (Pb)-free HVW and HVX products  
 (2) Some packaging codes are model specific  
 • For additional information on packaging, refer to the Through-Hole Resistor Packaging document ([www.vishay.com/doc?31544](http://www.vishay.com/doc?31544))

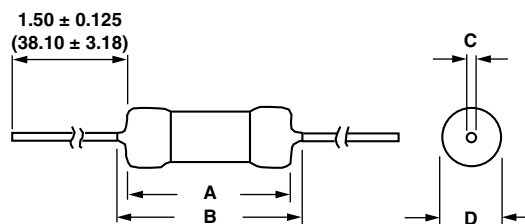


**DIMENSIONS** in inches (millimeters)

**HVW/MVW**  
(Uncoated)

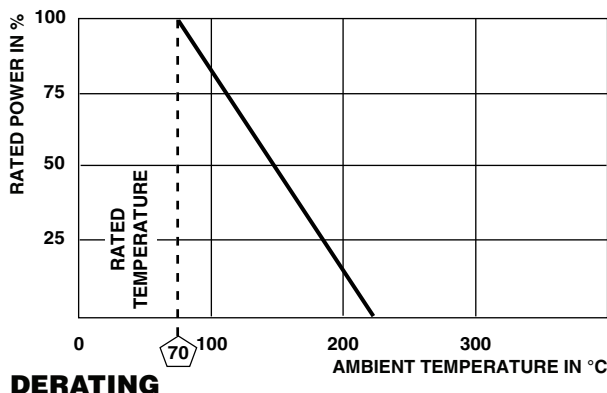


**HVX**  
(Silicone coated)



| DIMENSIONS HVW/MVW |                                 |                                |                 |
|--------------------|---------------------------------|--------------------------------|-----------------|
| GLOBAL MODEL       | A                               | C                              | D (Max.)        |
| HVW1/2             | 0.545 ± 0.015<br>(13.84 ± 0.38) | 0.032 ± 0.002<br>(0.81 ± 0.05) | 0.155<br>(3.94) |
| MVW1/2             | 0.545 ± 0.015<br>(13.84 ± 0.38) | 0.032 ± 0.002<br>(0.81 ± 0.05) | 0.155<br>(3.94) |
| HVW3/4             | 0.895 ± 0.010<br>(22.73 ± 0.25) | 0.032 ± 0.002<br>(0.81 ± 0.05) | 0.155<br>(3.94) |
| MVW3/4             | 0.895 ± 0.010<br>(22.73 ± 0.25) | 0.032 ± 0.002<br>(0.81 ± 0.05) | 0.155<br>(3.94) |

| DIMENSIONS HVX |                  |                  |                                |                 |
|----------------|------------------|------------------|--------------------------------|-----------------|
| GLOBAL MODEL   | A (Max.)         | B (Max.)         | C                              | D (Max.)        |
| HVX1/2         | 0.651<br>(16.54) | 0.680<br>(17.27) | 0.032 ± 0.002<br>(0.81 ± 0.05) | 0.180<br>(4.57) |
| HVX3/4         | 0.988<br>(25.10) | 1.062<br>(26.97) | 0.032 ± 0.002<br>(0.81 ± 0.05) | 0.180<br>(4.57) |



**Note**

- For operation in oil or inert atmosphere derating, consult factory

| PACKAGING                      |                |                   |                |
|--------------------------------|----------------|-------------------|----------------|
| GLOBAL MODEL                   | PACKAGING TYPE | PACKAGING CODE    |                |
|                                |                | LEAD (Pb)-BEARING | LEAD (Pb)-FREE |
| MVW1/2, MVW3/4                 | BULK           | n/a               | BJ             |
|                                | TAPE/REEL      | n/a               | RC             |
|                                | LACER          | n/a               | LB             |
| HVW1/2, HVW3/4, HVX1/2, HVX3/4 | BULK           | BJ                | EK             |
|                                | TAPE/REEL      | RC                | EE             |
|                                | LACER          | LB                | EL             |



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