



## KVV Series Datasheet

Power Resistors | Radial | Ceramic case  
Metal Oxide Film Element

### ORDERING CODE - Example

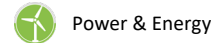
New SAP Part Nr.:

|            |                |          |                                   |                 |              |            |           |
|------------|----------------|----------|-----------------------------------|-----------------|--------------|------------|-----------|
| <b>KVV</b> | <b>500</b>     | <b>J</b> | <b>M</b>                          | <b>-</b>        | <b>RD-</b>   | <b>82K</b> | <b>Y0</b> |
| Serie      | * Power rating | Tol.     | Pack-Code                         | TCR             | Forming type | R Value    | Special   |
|            |                | J = ±5%  | M = Bulk with Metal Oxide Element | - Base on spec. | RD- = Radial |            |           |

Historical VTM Part Nr.:

|                   |          |           |            |
|-------------------|----------|-----------|------------|
| <b>KVV306 - 5</b> | <b>5</b> | <b>B</b>  | <b>82K</b> |
| Type              | Tol.     | Pack-Code | R Value    |

### APPLICATIONS



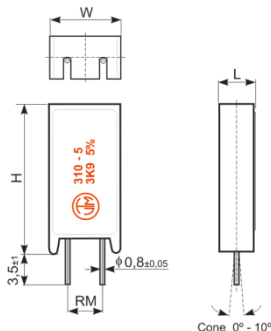
### FEATURES

Heat and flame resistant, Insulated  
High resistance value  
RoHs & REACH Compliant

### ELECTRICAL SPECIFICATIONS

| Type   |   | KVV200                      | KVV300     | KVV500     | KVV700     | KVV10S      | KVV10A      |
|--|---|-----------------------------|------------|------------|------------|-------------|-------------|
| Historical Part Number   |   | KVV302 - 5                  | KVV304 - 5 | KVV306 - 5 | KVV308 - 5 | KVV309 - 5  | KVV310 - 5  |
| Nominal Power Rating   | *P <sub>40</sub><br>P <sub>70</sub> [W] | 2,3<br>2,0                  | 3,0<br>2,6 | 5,0<br>4,4 | 7,0<br>6,1 | 10WS<br>8,7 | 10,0<br>8,7 |
| Resistance Range   | [Ω] Min.<br>Max.                        | 39R<br>1M                   | 75R<br>1M  | 150R<br>1M | 360R<br>1M | 300R<br>1M  | 560R<br>1M  |
| E-Series (preferred)   |   | (Other values upon request) |            |            |            |             |             |
| Tolerances   | ±[%]                                    | E24 (Other upon request)    |            |            |            |             |             |
| Temperature Coefficient  | ±[10 <sup>-6</sup> K <sup>-1</sup> ]    | J = 5% (Other upon request) |            |            |            |             |             |
| Working Temperature Range                                      | [°C]                                    | 300                         |            |            |            |             |             |
| Thermal Resistance   | [KW <sup>-1</sup> ]                     | -55 ... +275                |            |            |            |             |             |
| Insulation Resistance IEC60115-1 clause 4.6                    | [MΩ]                                    | 102 68 41 30 20 20          |            |            |            |             |             |
| Max. Working Voltage   | [V] <sub>RMS</sub>                      | > 10 <sup>4</sup>           |            |            |            |             |             |
| Dielectric Withstanding Voltage IEC60115-1 clause 4.7 (1[min]) | [V] <sub>RMS</sub>                      | 250                         | 350        | 350        | 500        | 500         | 500         |
|  |   | 500                         | 700        | 700        | 1000       | 1000        | 1000        |

### DIMENSIONS [mm]



| New P/Nr. Type | Historical P/N: | H ±1,5 | W ±1,0 | L ±1,0 | RM <sup>+2,0</sup> <sub>-1,0</sub> |
|----------------|-----------------|--------|--------|--------|------------------------------------|
| KVV200         | KVV302 - 5      | 20,0   | 11,0   | 7,0    | 5,0                                |
| KVV300         | KVV304 - 5      | 25,0   | 12,0   | 8,0    | 5,0                                |
| KVV500         | KVV306 - 5      | 25,0   | 13,0   | 9,0    | 5,0                                |
| KVV700         | KVV308 - 5      | 39,0   | 13,0   | 9,0    | 5,0                                |
| KVV10S         | KVV309 - 5      | 35,0   | 16,0   | 12,0   | 7,5                                |
| KVV10A         | KVV310 - 5      | 51,0   | 13,0   | 9,0    | 5,0                                |

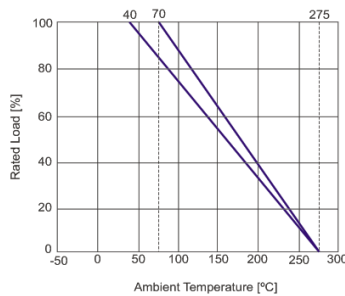
# KWV Series Datasheet

## PERFORMANCE DATA

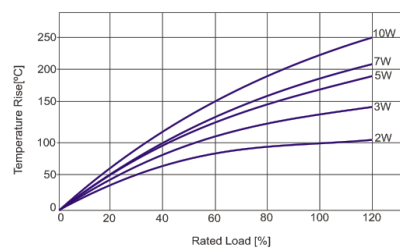
|  |      |                                     |               |               |               |               |               |
|--|------|-------------------------------------|---------------|---------------|---------------|---------------|---------------|
| Type   |      | <b>KWV200</b>                       | <b>KWV300</b> | <b>KWV500</b> | <b>KWV700</b> | <b>KWV10S</b> | <b>KWV10A</b> |
| Historical Part Number   |      | KWV302 – 5                          | KWV304 – 5    | KWV306 – 5    | KWV308 – 5    | KWV309 – 5    | KWV310 – 5    |
| Derating Linear  | [°C] | 70...275 (0W)                       |               |               |               |               |               |
| Climatic Category  |      | 55/155/21                           |               |               |               |               |               |
| Endurance<br><i>IEC60115-1 clause 4.25</i><br><i>(<math>P_{70}</math> @ 70[°C], 1000[h])</i>                       | ±[%] | 5,0                                 |               |               |               |               |               |
| Damp Heat, Steady State<br><i>IEC60115-1 clause 4.24</i><br><i>(40[°C], 93[% r.h.], 56[d])</i>                     | ±[%] | 5,0                                 |               |               |               |               |               |
| Climatic Sequence<br><i>IEC60115-1 clause 4.23</i>   | ±[%] | 5,0                                 |               |               |               |               |               |
| Resistance to Soldering Heat<br><i>IEC60115-1 clause 4.18</i><br><i>(260<sup>±5</sup>[°C], 10<sup>±1</sup>[s])</i> | ±[%] | 1,0                                 |               |               |               |               |               |
| Terminal Strength  | ±[%] | 1,0                                 |               |               |               |               |               |
| Solderability<br><i>IEC60068-2-20</i><br><i>(235<sup>±5</sup>[°C] 3<sup>±0,5</sup>[s])</i>                         |      | Solder bath method (> 95% coverage) |               |               |               |               |               |
| Marking<br><i>IEC60062</i>   |      | Printed in clear                    |               |               |               |               |               |

## DERATING CURVE & TEMPERATURE RISE

Derating Curve



Temperature Rise



## PACKAGING

The standard packaging for KWV in radial type is bulk, dimensions below.



| New P/Nr. Type | Historical P/N: | Pieces | Pack Code                         | Forming Type |
|----------------|-----------------|--------|-----------------------------------|--------------|
| <b>KWV200</b>  | KWV302 – 5      | 1600   | M = Bulk with Metal Oxide element | RD- = Radial |
| <b>KWV300</b>  | KWV304 – 5      | 1000   |                                   |              |
| <b>KWV500</b>  | KWV306 – 5      | 1000   |                                   |              |
| <b>KWV700</b>  | KWV308 – 5      | 700    |                                   |              |
| <b>KWV10S</b>  | KWV309 – 5      | 500    |                                   |              |
| <b>KWV10A</b>  | KWV310 – 5      | 500    |                                   |              |