

# Type D69

## 14mm Varistor

### Radial Leaded



www.optifuse.com

(800) 621-0326

#### 14mm Varistor Parts list/Specifications

(14mm Nom. Disk size)

| Optifuse<br>Style<br>Number | Recognitions<br>To<br>Safety<br>Agency<br>Standards |   |   |   |   |   | Maximum Ratings    |      |                      |                   |                                   |      | Electrical Characteristics       |      |                                            |      |                |                  | Mechanical Dimensions |                 |
|-----------------------------|-----------------------------------------------------|---|---|---|---|---|--------------------|------|----------------------|-------------------|-----------------------------------|------|----------------------------------|------|--------------------------------------------|------|----------------|------------------|-----------------------|-----------------|
|                             |                                                     |   |   |   |   |   | Continuous         |      | Transient            |                   |                                   |      | Varistor<br>Voltage<br>@ 1 mA DC |      | Max                                        |      | Typical<br>Cap |                  |                       |                 |
|                             |                                                     |   |   |   |   |   | Applied<br>Voltage |      | Energy               |                   | Peak<br>Current<br>8 X 20<br>µsec |      |                                  |      | Clamping<br>Voltage<br>(@ Test<br>Current) |      |                |                  |                       |                 |
|                             |                                                     |   |   |   |   |   |                    |      | 10 x<br>1000<br>µsec | 8 x<br>20<br>µsec | 1                                 | 2    |                                  |      | Vmin                                       | Vmax |                | (8 x 20<br>usec) |                       | 1 V ms<br>@1kHz |
|                             |                                                     |   |   |   |   |   | (A)                | (B)  | (C)                  | (D)               | (E)                               | (F)  | (AC)                             | (DC) | (J)                                        | (J)  | (A)            | (A)              | (V)                   | (V)             |
|                             | D6921ZOV110RA04                                     | X |   |   |   | X |                    | 11   | 14                   | 5.2               | N/A                               | 2000 | 1000                             | 16   | 20                                         | 36   | 10             | 18000            | 0.072 [1.83]          | 0.161 [4.09]    |
| D6921ZOV140RA04             | X                                                   |   |   |   | X |   | 14                 | 18   | 6.3                  | N/A               | 2000                              | 1000 | 20                               | 24   | 43                                         | 10   | 15000          | 0.081 [2.06]     | 0.165 [4.19]          |                 |
| D6921ZOV170RA05             | X                                                   |   |   |   | X |   | 17                 | 22   | 7.8                  | N/A               | 2000                              | 1000 | 24                               | 30   | 53                                         | 10   | 10000          | 0.092 [2.34]     | 0.170 [4.32]          |                 |
| D6921ZOV200RA06             | X                                                   |   |   |   | X |   | 20                 | 26   | 9.5                  | N/A               | 2000                              | 1000 | 30                               | 36   | 65                                         | 10   | 14447          | 0.065 [1.65]     | 0.176 [4.47]          |                 |
| D6921ZOV250RA07             | X                                                   |   |   |   | X |   | 25                 | 31   | 11                   | N/A               | 2000                              | 1000 | 35                               | 43   | 77                                         | 10   | 12225          | 0.071 [1.80]     | 0.182 [4.62]          |                 |
| D6921ZOV300RA09             | X                                                   |   |   |   | X |   | 30                 | 38   | 14                   | N/A               | 2000                              | 1000 | 42                               | 52   | 93                                         | 10   | 10144          | 0.079 [2.00]     | 0.190 [4.83]          |                 |
| D6921ZOV350RA10             | X                                                   |   |   |   | X |   | 35                 | 45   | 16                   | N/A               | 2000                              | 1000 | 50                               | 62   | 110                                        | 10   | 8514           | 0.088 [2.24]     | 0.199 [5.05]          |                 |
| D6921ZOV400RA12             | X                                                   |   |   |   | X |   | 40                 | 56   | 20                   | N/A               | 2000                              | 1000 | 61                               | 75   | 135                                        | 10   | 3285           | 0.066 [1.68]     | 0.211 [5.36]          |                 |
| D6921ZOV500RA06             | X                                                   |   |   |   | X |   | 50                 | 66   | 28                   | N/A               | 6000                              | 5000 | 74                               | 90   | 147                                        | 50   | 2829           | 0.055 [1.40]     | 0.174 [4.42]          |                 |
| D6921ZOV600RA06             | X                                                   |   |   |   | X |   | 60                 | 81   | 36                   | N/A               | 6000                              | 5000 | 90                               | 110  | 175                                        | 50   | 2319           | 0.060 [1.52]     | 0.178 [4.52]          |                 |
| D6921ZOV750RA06             | X                                                   |   |   |   | X |   | 75                 | 102  | 44                   | N/A               | 6000                              | 5000 | 108                              | 132  | 210                                        | 50   | 1933           | 0.065 [1.65]     | 0.184 [4.67]          |                 |
| D6921ZOV950RA06             | X                                                   |   |   |   | X |   | 95                 | 127  | 53                   | N/A               | 6000                              | 5000 | 135                              | 165  | 255                                        | 50   | 1019           | 0.059 [1.50]     | 0.191 [4.85]          |                 |
| D6921ZOV121RA09             | X                                                   | X | X |   | X |   | 120                | 160  | 52                   | N/A               | 6000                              | 5000 | 170                              | 207  | 320                                        | 50   | 1019           | 0.066 [1.68]     | 0.201 [5.11]          |                 |
| D6921ZOV131RA09             | X                                                   | X | X | X | X | X | 130                | 175  | 70                   | 70                | 6500                              | 5000 | 184                              | 224  | 340                                        | 50   | 890            | 0.068 [1.73]     | 0.204 [5.18]          |                 |
| D6921ZOV141RA09             | X                                                   | X | X | X | X | X | 140                | 180  | 78                   | 78                | 6500                              | 5000 | 198                              | 242  | 360                                        | 50   | 825            | 0.072 [1.83]     | 0.208 [5.28]          |                 |
| D6921ZOV151RA09             | X                                                   | X | X | X | X | X | 150                | 200  | 84                   | 84                | 6500                              | 5000 | 212                              | 259  | 395                                        | 50   | 756            | 0.076 [1.93]     | 0.212 [5.38]          |                 |
| D6921ZOV181RA09             | X                                                   | X | X | X | X | X | 180                | 230  | 100                  | 100               | 6000                              | 5000 | 255                              | 311  | 465                                        | 50   | 648            | 0.081 [2.06]     | 0.223 [5.66]          |                 |
| D69ZOV211RA65               | X                                                   | X | X | X | X | X | 210                | 270  | 120                  | 120               | 6000                              | 4500 | 297                              | 363  | 545                                        | 50   | 550            | 0.091 [2.31]     | 0.239 [6.07]          |                 |
| D69ZOV231RA70               | X                                                   | X | X | X | X | X | 230                | 300  | 135                  | 135               | 6000                              | 4500 | 326                              | 397  | 595                                        | 50   | 504            | 0.097 [2.46]     | 0.242 [6.15]          |                 |
| D69ZOV251RA72               | X                                                   | X | X | X | X | X | 250                | 330  | 145                  | 145               | 6000                              | 4500 | 354                              | 432  | 650                                        | 50   | 465            | 0.103 [2.62]     | 0.249 [6.32]          |                 |
| D69ZOV271RA75               | X                                                   | X | X | X | X | X | 270                | 360  | 160                  | 160               | 6000                              | 4500 | 382                              | 466  | 710                                        | 50   | 432            | 0.110 [2.79]     | 0.257 [6.53]          |                 |
| D69ZOV301RA80               | X                                                   | X | X | X | X | X | 300                | 390  | 175                  | 175               | 6000                              | 4500 | 425                              | 518  | 790                                        | 50   | 386            | 0.117 [2.97]     | 0.268 [6.81]          |                 |
| D69ZOV321RA90               | X                                                   | X | X | X | X | X | 320                | 420  | 190                  | 190               | 6000                              | 4500 | 453                              | 553  | 850                                        | 50   | 363            | 0.153 [3.89]     | 0.276 [7.01]          |                 |
| D69ZOV361RA85               | X                                                   | X | X | X | X | X | 360                | 470  | 205                  | 205               | 6000                              | 4500 | 522                              | 638  | 960                                        | 50   | 313            | 0.202 [5.13]     | 0.281 [7.14]          |                 |
| D69ZOV391RA85               | X                                                   |   | X | X | X | X | 390                | 505  | 215                  | 215               | 6000                              | 4500 | 552                              | 674  | 1025                                       | 50   | 297            | 0.167 [4.24]     | 0.291 [7.37]          |                 |
| D69ZOV421RA90               | X                                                   | X | X | X | X | X | 420                | 560  | 225                  | 225               | 6000                              | 4500 | 594                              | 725  | 1120                                       | 50   | 275            | 0.177 [4.50]     | 0.313 [7.95]          |                 |
| D69ZOV461RA100              | X                                                   | X | X | X | X | X | 460                | 615  | 230                  | 230               | 6000                              | 4500 | 651                              | 795  | 1240                                       | 50   | 251            | 0.189 [4.80]     | 0.322 [8.18]          |                 |
| D69ZOV481RA105              | X                                                   | X | X | X | X | X | 480                | 640  | 235                  | 235               | 6000                              | 4500 | 679                              | 829  | 1300                                       | 50   | 242            | 0.194 [4.93]     | 0.336 [8.53]          |                 |
| D69ZOV511RA110              | X                                                   | X | X | X | X | X | 510                | 675  | 240                  | 240               | 6000                              | 4500 | 722                              | 881  | 1350                                       | 50   | 227            | 0.201 [5.11]     | 0.347 [8.81]          |                 |
| D69ZOV551RA115              | X                                                   | X | X | X | X | X | 550                | 700  | 255                  | 255               | 6000                              | 4500 | 778                              | 950  | 1400                                       | 50   | 211            | 0.216 [5.49]     | 0.362 [9.19]          |                 |
| D69ZOV581RA120              | X                                                   | X | X | X |   | X | 580                | 735  | 265                  | 265               | 6000                              | 4500 | 821                              | 1002 | 1500                                       | 50   | 199            | 0.224 [5.69]     | 0.373 [9.47]          |                 |
| D69ZOV621RA130              | X                                                   | X | X | X |   | X | 620                | 800  | 290                  | 290               | 6000                              | 4500 | 877                              | 1071 | 1650                                       | 50   | 186            | 0.231 [5.87]     | 0.388 [9.86]          |                 |
| D69ZOV681RA150              | X                                                   | X | X | X |   | X | 680                | 860  | 310                  | 310               | 6000                              | 4500 | 962                              | 1175 | 1800                                       | 50   | 170            | 0.247 [6.27]     | 0.411 [10.44]         |                 |
| D69ZOV751RA165              | X                                                   |   | X | X |   | X | 750                | 900  | 350                  | 350               | 6000                              | 4500 | 1062                             | 1300 | 2100                                       | 50   | 151            | 0.247 [6.27]     | 0.411 [10.44]         |                 |
| D69ZOV102RA220              | X                                                   | X | X | X |   | X | 1000               | 1200 | 510                  | 510               | 6000                              | 4500 | 1414                             | 1728 | 2700                                       | 50   | 115            | 0.364 [9.25]     | 0.531 [13.49]         |                 |

#### Notes:

- Maximum transient rating specified in this table are valid
- A = UL1449 File E86730 – Transient Surge Suppression
- B = UL1414 File E38785 – Across – The Line Applications
- C = CSA C22.2 File LR33468
- D = VDE/CECC 42000/42201 & IEC 1051
- E = UL497B – File E180012
- F = SEV – 96.7 70250.01

Note: All specifications subject to change without notice.

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## 14mm Varistor

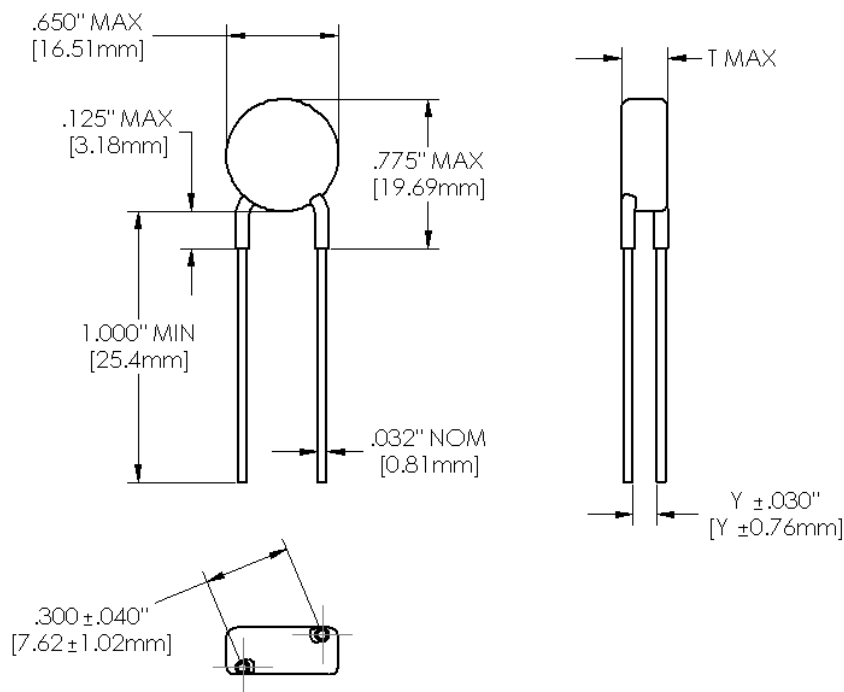
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#### Mechanical Dimensions: Inches [mm]



#### Thermal Specifications:

|                                           |          |
|-------------------------------------------|----------|
| Minimum Operating Temperature:            | -40° C   |
| Maximum Operating Temperature:            | 85° C    |
| Varistor Voltage Temperature Coefficient: | -0.05° C |
| Minimum Storage Temperature:              | -50° C   |
| Maximum Storage Temperature:              | 125° C   |
| Current/Energy Derating Above 85° C:      | -2.5° C  |

#### Warning:



-Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.  
-Varistors are intended for occasional overcurrent protection. Application for repeated overcurrent condition and/or prolonged trip are not anticipated.  
-Avoid contact of Varistors with chemical solvent. Prolonged contact will damage the device performance.

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