



Micro Commercial Components



Micro Commercial Components  
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# 1N4729AW THRU 1N4761AW

1.0 Watt

Zener Diode

3.6 to 75 Volts

## Features

- Silicon planar power zener diodes
- Low profile surface-mount package
- Lead Free Finish/Rohs Compliant ("P" Suffix designates Rohs Compliant. See ordering information)
- Moisture Sensitivity: Level 1
- Halogen free available upon request by adding suffix "-HF"

## Maximum Ratings

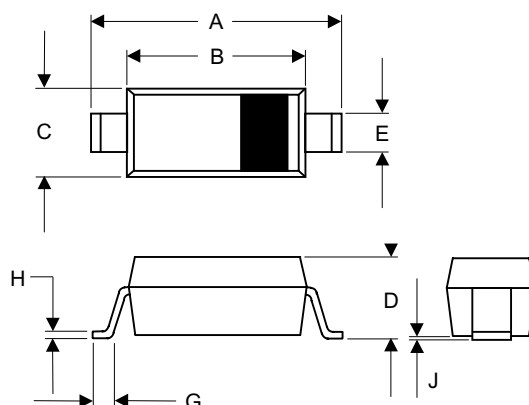
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

## Electrical Characteristics @ 25°C Unless Otherwise Specified

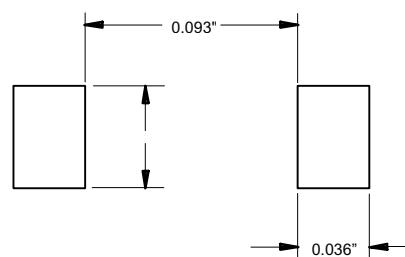
|                           |            |         |                        |
|---------------------------|------------|---------|------------------------|
| DC Power Dissipation      | $P_d$      | 1.0W    | $T_A=25^\circ\text{C}$ |
| Forward Voltage Drop      | $V_F$      | 1.2V    |                        |
| Thermal Resistance        | $R_{thJA}$ | 100K/W  | Note 1                 |
| Power Derating from 100°C | $P_{tot}$  | 10mW/°C |                        |

**Note:** (1) Valid provided that electrodes at a distance of 10mm from case are kept at ambient temperature.

## SOD123



| DIMENSIONS |        |       |       |       |      |
|------------|--------|-------|-------|-------|------|
| DIM        | INCHES |       | MM    |       | NOTE |
|            | MIN    | MAX   | MIN   | MAX   |      |
| A          | .140   | .152  | 3.55  | 3.85  |      |
| B          | .100   | .112  | 2.55  | 2.85  |      |
| C          | .055   | .071  | 1.40  | 1.80  |      |
| D          | -----  | .053  | ----- | 1.35  |      |
| E          | .012   | .031  | 0.30  | .78   |      |
| G          | .006   | ----- | 0.15  | ----- |      |
| H          | -----  | .01   | ----- | .25   |      |
| J          | -----  | .006  | ----- | .15   |      |



# 1N4729AW thru 1N4761AW

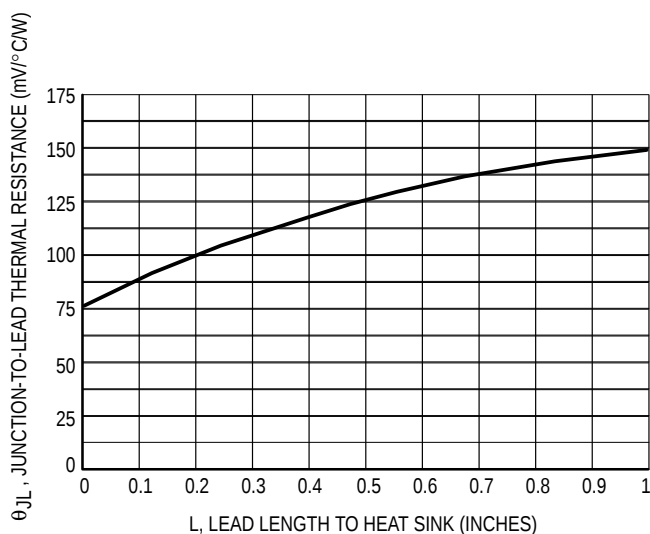
## Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted). Maximum V<sub>F</sub> = 1.2V at I<sub>F</sub> = 200mA

| MCC<br>Part Number | Zener<br>Voltage                 | Test<br>Current | Maximum Dynamic Impedance         |                                   |                 | Maximum Reverse<br>Leakage Current |                | Surge<br>Current | Maximum<br>Regulator<br>Current | Device<br>Marking |
|--------------------|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|------------------------------------|----------------|------------------|---------------------------------|-------------------|
|                    | V <sub>Z</sub> @ I <sub>ZT</sub> | I <sub>ZT</sub> | Z <sub>ZT</sub> @ I <sub>ZT</sub> | Z <sub>ZK</sub> @ I <sub>ZK</sub> | I <sub>ZK</sub> | I <sub>R</sub> @ V <sub>R</sub>    | V <sub>R</sub> | I <sub>R</sub>   | I <sub>ZM</sub>                 |                   |
|                    | Volts                            | mA              | OHMS                              | OHMS                              | mA              | uA                                 | Volts          | mA               | mA                              |                   |
| 1N4729AW           | 3.6                              | 69              | 10                                | 400                               | 1               | 100                                | 1              | 1260             | 252                             | 729               |
| 1N4730AW           | 3.9                              | 64              | 9                                 | 400                               | 1               | 50                                 | 1              | 1190             | 234                             | 730               |
| 1N4731AW           | 4.3                              | 58              | 9                                 | 400                               | 1               | 10                                 | 1              | 1070             | 217                             | 731               |
| 1N4732AW           | 4.7                              | 53              | 8                                 | 500                               | 1               | 10                                 | 1              | 970              | 193                             | 732               |
| 1N4733AW           | 5.1                              | 49              | 7                                 | 550                               | 1               | 10                                 | 1              | 890              | 178                             | 733               |
| 1N4734AW           | 5.6                              | 45              | 5                                 | 600                               | 1               | 10                                 | 2              | 810              | 162                             | 734               |
| 1N4735AW           | 6.2                              | 41              | 2                                 | 700                               | 1               | 10                                 | 3              | 730              | 146                             | 735               |
| 1N4736AW           | 6.8                              | 37              | 3.5                               | 700                               | 1               | 10                                 | 4              | 660              | 133                             | 736               |
| 1N4737AW           | 7.5                              | 34              | 4                                 | 700                               | 0.5             | 10                                 | 5              | 605              | 121                             | 737               |
| 1N4738AW           | 8.2                              | 31              | 4.5                               | 700                               | 0.5             | 10                                 | 6              | 550              | 110                             | 738               |
| 1N4739AW           | 9.1                              | 28              | 5                                 | 700                               | 0.5             | 10                                 | 7              | 500              | 100                             | 739               |
| 1N4740AW           | 10                               | 25              | 7                                 | 700                               | 0.25            | 10                                 | 7.6            | 454              | 91                              | 740               |
| 1N4741AW           | 11                               | 23              | 8                                 | 700                               | 0.25            | 5                                  | 8.4            | 414              | 83                              | 741               |
| 1N4742AW           | 12                               | 21              | 9                                 | 700                               | 0.25            | 5                                  | 9.1            | 380              | 76                              | 742               |
| 1N4743AW           | 13                               | 19              | 10                                | 700                               | 0.25            | 5                                  | 9.9            | 344              | 69                              | 743               |
| 1N4744AW           | 15                               | 17              | 14                                | 700                               | 0.25            | 5                                  | 11.4           | 304              | 61                              | 744               |
| 1N4745AW           | 16                               | 15.5            | 16                                | 700                               | 0.25            | 5                                  | 12.2           | 285              | 57                              | 745               |
| 1N4746AW           | 18                               | 14              | 20                                | 750                               | 0.25            | 5                                  | 13.7           | 250              | 50                              | 746               |
| 1N4747AW           | 20                               | 12.5            | 22                                | 750                               | 0.25            | 5                                  | 15.2           | 225              | 45                              | 747               |
| 1N4748AW           | 22                               | 11.5            | 23                                | 750                               | 0.25            | 5                                  | 16.7           | 205              | 41                              | 748               |
| 1N4749AW           | 24                               | 10.5            | 25                                | 750                               | 0.25            | 5                                  | 18.2           | 190              | 38                              | 749               |
| 1N4750AW           | 27                               | 9.5             | 35                                | 750                               | 0.25            | 5                                  | 20.6           | 170              | 34                              | 750               |
| 1N4751AW           | 30                               | 8.5             | 40                                | 1000                              | 0.25            | 5                                  | 22.8           | 150              | 30                              | 751               |
| 1N4752AW           | 33                               | 7.5             | 45                                | 1000                              | 0.25            | 5                                  | 25.1           | 135              | 27                              | 752               |
| 1N4753AW           | 36                               | 7               | 50                                | 1000                              | 0.25            | 5                                  | 27.4           | 125              | 25                              | 753               |
| 1N4754AW           | 39                               | 6.5             | 60                                | 1000                              | 0.25            | 5                                  | 29.7           | 115              | 23                              | 754               |
| 1N4755AW           | 43                               | 6               | 70                                | 1500                              | 0.25            | 5                                  | 32.7           | 110              | 22                              | 755               |
| 1N4756AW           | 47                               | 5.5             | 80                                | 1500                              | 0.25            | 5                                  | 35.8           | 95               | 19                              | 756               |
| 1N4757AW           | 51                               | 5               | 95                                | 1500                              | 0.25            | 5                                  | 38.8           | 90               | 18                              | 757               |
| 1N4758AW           | 56                               | 4.5             | 110                               | 2000                              | 0.25            | 5                                  | 42.6           | 80               | 16                              | 758               |
| 1N4759AW           | 62                               | 4               | 125                               | 2000                              | 0.25            | 5                                  | 47.1           | 70               | 14                              | 759               |
| 1N4760AW           | 68                               | 3.7             | 150                               | 2000                              | 0.25            | 5                                  | 51.7           | 65               | 13                              | 760               |
| 1N4761AW           | 75                               | 3.3             | 175                               | 2000                              | 0.25            | 5                                  | 56             | 60               | 12                              | 761               |

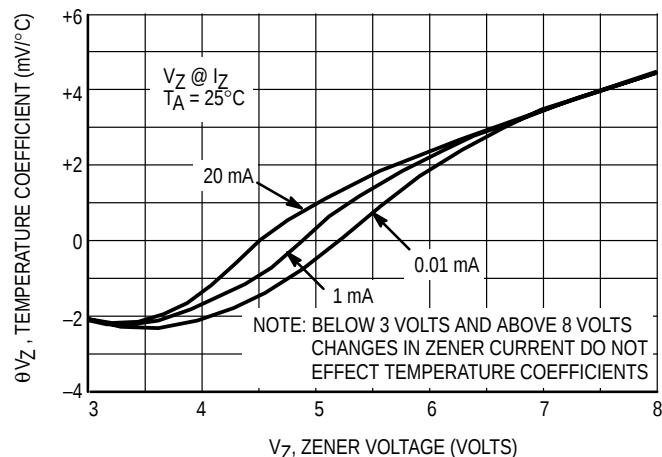
**Note** 1: V<sub>Z</sub>: tolerance +/-5%

- The Zener impedance is derived from the 60 Hz ac voltage, which results when an ac current having an rms value equal to 10% of the DC Zener current(I<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed on I<sub>ZT</sub> or I<sub>ZK</sub>. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and eliminate unstable units.
- The reverse surge current is measured at 25°C ambient using a 1/2 square wave or equivalent sine wave pulse 1/120 second duration superimposed on I<sub>ZT</sub>.
- Voltage measurements to be performed 90 seconds after application of DC current.
- RoHs Compliant already and Pb-free sticker on reel , box & carton indicated RoHs compliant .

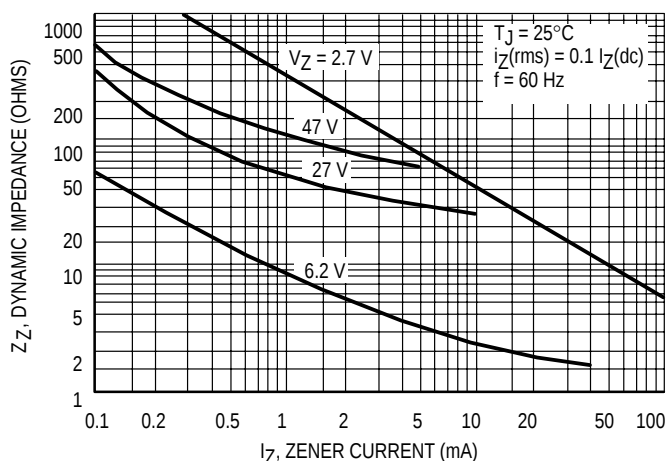
# 1N4729AW thru 1N4761AW



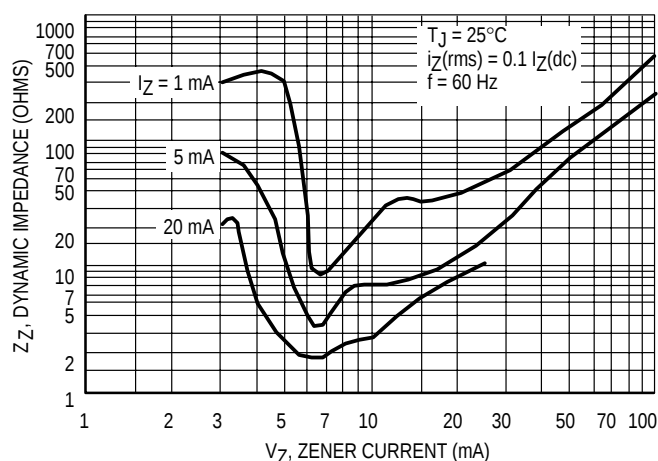
**Figure 1. Typical Thermal Resistance versus Lead Length**



**Figure 2. Effect of Zener Current**



**Figure 3. Effect of Zener Current on Zener Impedance**



**Figure 4. Effect of Zener Voltage on Zener Impedance**



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**Ordering Information :**

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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