



## 稳压（齐纳）二极管 Zener Diodes

## ■特征 Features

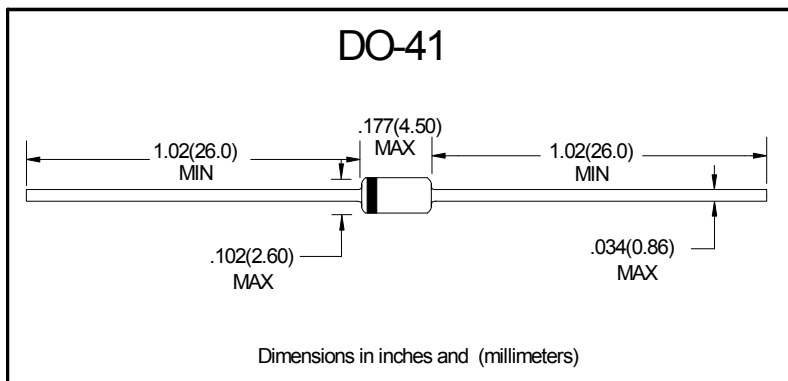
- $P_{\text{tot}}$  1.0W
- $V_z$  3.3V-100V

## ■用途 Applications

- 稳压电压用 Stabilizing Voltage

## ■外形尺寸和印记

## Outline Dimensions and Mark



## ■极限值（绝对最大额定值）

## Limiting Values (Absolute Maximum Rating)

| 参数名称<br>Item                         | 符号<br>Symbol     | 单位<br>Unit       | 条件<br>Conditions                     | 最大值<br>Max        |
|--------------------------------------|------------------|------------------|--------------------------------------|-------------------|
| 损耗功率<br>Power dissipation            | $P_{\text{tot}}$ | W                | $L=4\text{mm}, T_L=25^\circ\text{C}$ | 1.0 <sup>1)</sup> |
| 齐纳电流<br>Zener current                | $I_z$            | mA               |                                      | $P_V / V_z$       |
| 最大结温<br>Maximum junction temperature | $T_j$            | $^\circ\text{C}$ |                                      | 175               |
| 存储温度范围<br>Storage temperature range  | $T_{\text{stg}}$ | $^\circ\text{C}$ |                                      | -65 to +175       |

■电特性（ $T_a=25^\circ\text{C}$  除非另有规定）Electrical Characteristics ( $T_a=25^\circ\text{C}$  Unless otherwise specified)

| 参数名称<br>Item                  | 符号<br>Symbol    | 单位<br>Unit                | 条件<br>Conditions                                                                                       | 最大值<br>Max |
|-------------------------------|-----------------|---------------------------|--------------------------------------------------------------------------------------------------------|------------|
| 典型热阻(1)<br>Thermal resistance | $R_{\theta JA}$ | $^\circ\text{C}/\text{W}$ | 结到环境, $L=4\text{mm}$ , $T_L=\text{常温}$<br>junction to ambient air, $L=4\text{mm}, T_L=\text{constant}$ | 110        |
| 正向电压<br>Forward voltage       | $V_F$           | V                         | $I_F=200\text{mA}$                                                                                     | 1.2        |

## 备注: Notes:

<sup>1)</sup> 距离管体4毫米引线处的温度设定为环境温度

Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature.

## ■ 电性参数 (T<sub>A</sub>=25℃ 除非另有规定)

### Electrical Characteristics (T<sub>A</sub>=25℃ unless otherwise noted)

| 产品型号<br>Part<br>Number | 额定齐纳电压<br>Nominal Zener<br>voltage <sup>1)</sup> | 测试电流<br>Test<br>current | 最大动态电阻<br>Maximum dynamic impedance |                                    |                 | 最大反向漏电流<br>Maximum reverse leakage current |                             | 浪涌电流<br>Surge current <sup>3)</sup>   | 最大调整电流<br>Maximum<br>regulator current <sup>2)</sup> |
|------------------------|--------------------------------------------------|-------------------------|-------------------------------------|------------------------------------|-----------------|--------------------------------------------|-----------------------------|---------------------------------------|------------------------------------------------------|
|                        | V <sub>Z</sub> at I <sub>ZT</sub>                | I <sub>ZT</sub>         | Z <sub>ZT</sub> at I <sub>ZT</sub>  | Z <sub>ZK</sub> at I <sub>ZK</sub> | I <sub>ZK</sub> | I <sub>R</sub>                             | Test voltage V <sub>R</sub> | at T <sub>A</sub> =25℃ I <sub>R</sub> | I <sub>ZM</sub>                                      |
|                        | V                                                | mA                      | Ω                                   | Ω                                  | mA              | μA                                         | V                           | mA                                    | mA                                                   |
| 1N4728A                | 3.3                                              | 76                      | 10                                  | 400                                | 1               | 100                                        | 1                           | 1380                                  | 276                                                  |
| 1N4729A                | 3.6                                              | 69                      | 10                                  | 400                                | 1               | 100                                        | 1                           | 1260                                  | 252                                                  |
| 1N4730A                | 3.9                                              | 64                      | 9                                   | 400                                | 1               | 50                                         | 1                           | 1190                                  | 234                                                  |
| 1N4731A                | 4.3                                              | 58                      | 9                                   | 400                                | 1               | 10                                         | 1                           | 1070                                  | 217                                                  |
| 1N4732A                | 4.7                                              | 53                      | 8                                   | 500                                | 1               | 10                                         | 1                           | 970                                   | 193                                                  |
| 1N4733A                | 5.1                                              | 49                      | 7                                   | 550                                | 1               | 10                                         | 1                           | 890                                   | 178                                                  |
| 1N4734A                | 5.6                                              | 45                      | 5                                   | 600                                | 1               | 10                                         | 2                           | 810                                   | 162                                                  |
| 1N4735A                | 6.2                                              | 41                      | 2                                   | 700                                | 1               | 10                                         | 3                           | 730                                   | 146                                                  |
| 1N4736A                | 6.8                                              | 37                      | 3.5                                 | 700                                | 1               | 10                                         | 4                           | 660                                   | 133                                                  |
| 1N4737A                | 7.5                                              | 34                      | 4                                   | 700                                | 0.5             | 10                                         | 5                           | 605                                   | 121                                                  |
| 1N4738A                | 8.2                                              | 31                      | 4.5                                 | 700                                | 0.5             | 10                                         | 6                           | 550                                   | 110                                                  |
| 1N4739A                | 9.1                                              | 28                      | 5                                   | 700                                | 0.5             | 10                                         | 7                           | 500                                   | 100                                                  |
| 1N4740A                | 10                                               | 25                      | 7                                   | 700                                | 0.25            | 10                                         | 7.6                         | 454                                   | 91                                                   |
| 1N4741A                | 11                                               | 23                      | 8                                   | 700                                | 0.25            | 5                                          | 8.4                         | 414                                   | 83                                                   |
| 1N4742A                | 12                                               | 21                      | 9                                   | 700                                | 0.25            | 5                                          | 9.1                         | 380                                   | 76                                                   |
| 1N4743A                | 13                                               | 19                      | 10                                  | 700                                | 0.25            | 5                                          | 9.9                         | 344                                   | 69                                                   |
| 1N4744A                | 15                                               | 17                      | 14                                  | 700                                | 0.25            | 5                                          | 11.4                        | 304                                   | 61                                                   |
| 1N4745A                | 16                                               | 15.5                    | 16                                  | 700                                | 0.25            | 5                                          | 12.2                        | 285                                   | 57                                                   |
| 1N4746A                | 18                                               | 14                      | 20                                  | 750                                | 0.25            | 5                                          | 13.7                        | 250                                   | 50                                                   |
| 1N4747A                | 20                                               | 12.5                    | 22                                  | 750                                | 0.25            | 5                                          | 15.2                        | 225                                   | 45                                                   |
| 1N4748A                | 22                                               | 11.5                    | 23                                  | 750                                | 0.25            | 5                                          | 16.7                        | 205                                   | 41                                                   |
| 1N4749A                | 24                                               | 10.5                    | 25                                  | 750                                | 0.25            | 5                                          | 18.2                        | 190                                   | 38                                                   |
| 1N4750A                | 27                                               | 9.5                     | 35                                  | 750                                | 0.25            | 5                                          | 20.6                        | 170                                   | 34                                                   |
| 1N4751A                | 30                                               | 8.5                     | 40                                  | 1000                               | 0.25            | 5                                          | 22.8                        | 150                                   | 30                                                   |
| 1N4752A                | 33                                               | 7.5                     | 45                                  | 1000                               | 0.25            | 5                                          | 25.1                        | 135                                   | 27                                                   |
| 1N4753A                | 36                                               | 7                       | 50                                  | 1000                               | 0.25            | 5                                          | 27.4                        | 125                                   | 25                                                   |
| 1N4754A                | 39                                               | 6.5                     | 60                                  | 1000                               | 0.25            | 5                                          | 29.7                        | 115                                   | 23                                                   |
| 1N4755A                | 43                                               | 6                       | 70                                  | 1500                               | 0.25            | 5                                          | 32.7                        | 110                                   | 22                                                   |
| 1N4756A                | 47                                               | 5.5                     | 80                                  | 1500                               | 0.25            | 5                                          | 35.8                        | 95                                    | 19                                                   |
| 1N4757A                | 51                                               | 5                       | 95                                  | 1500                               | 0.25            | 5                                          | 38.8                        | 90                                    | 18                                                   |
| 1N4758A                | 56                                               | 4.5                     | 110                                 | 2000                               | 0.25            | 5                                          | 42.6                        | 80                                    | 16                                                   |
| 1N4759A                | 62                                               | 4                       | 125                                 | 2000                               | 0.25            | 5                                          | 47.1                        | 70                                    | 14                                                   |
| 1N4760A                | 68                                               | 3.7                     | 150                                 | 2000                               | 0.25            | 5                                          | 51.7                        | 65                                    | 13                                                   |
| 1N4761A                | 75                                               | 3.3                     | 175                                 | 2000                               | 0.25            | 5                                          | 56                          | 60                                    | 12                                                   |
| 1N4762A                | 82                                               | 3.0                     | 200                                 | 3000                               | 0.25            | 5                                          | 62.2                        | 55                                    | 11                                                   |
| 1N4763A                | 91                                               | 2.8                     | 250                                 | 3000                               | 0.25            | 5                                          | 69.2                        | 50                                    | 10                                                   |
| 1N4764A                | 100                                              | 2.5                     | 350                                 | 3000                               | 0.25            | 5                                          | 76.0                        | 45                                    | 9                                                    |

### 备注: Notes:

<sup>1)</sup> 基于直流测试热平衡的同时保持引线的温度在30℃+1℃, 距离二极管本体距离为9.5毫米 (3/8")

Based on dc-measurement at thermal equilibrium while maintaining the lead temperature (TL) at 30℃+1℃, 9.5 mm (3/8") from the diode body

<sup>2)</sup> 距离管脚4毫米引线处的温度设定为环境温度

Valid provided that electrodes at a distance of 4 mm from case are kept at ambient temperature

<sup>3)</sup> t<sub>p</sub> = 10 ms

<sup>4)</sup> 型号后面"A"标识电压±5%精度

A means standard V<sub>Z</sub> tolerance is ±5%



## 1N47 SERIES

### ■特性曲线（典型） Characteristics(Typical)

图1：可接受功率损耗与环境温度关系

FIG1: Admissible Power Dissipation vs. Ambient Temperat

