

**SEMICONDUCTOR**

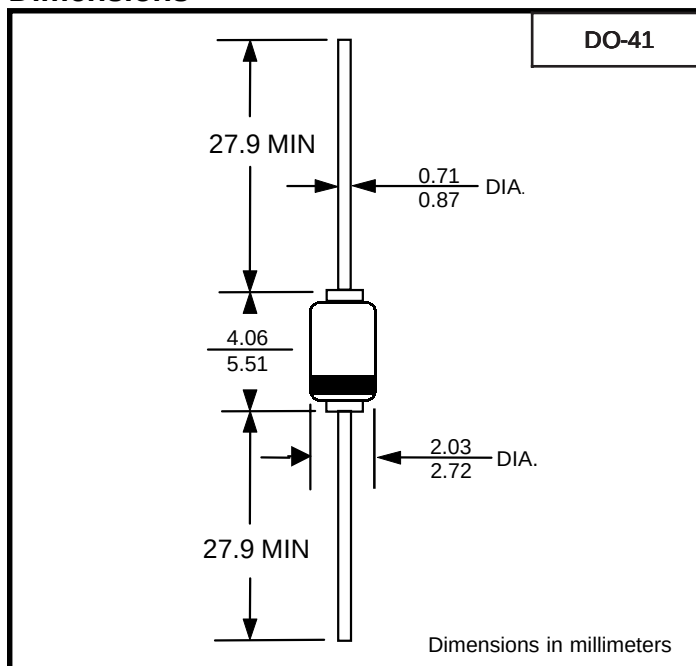
TECHNICAL SPECIFICATION

**1N4728A  
THRU  
1N4757A****1W 5% DO-41 ZENER DIODE****Absolute Maximum Ratings (Ta=25°C)**

| Items                           | Symbol           | Ratings    | Unit  |
|---------------------------------|------------------|------------|-------|
| Power Dissipation               | $P_{TOT}$        | 1.0        | W     |
| Power Derating<br>(above 50 °C) |                  | 6.67       | mW/°C |
| Forward Voltage<br>@If = 200 mA | Vf               | 1.5        | V     |
| Vz Tolerance                    |                  | 5          | %     |
| Junction Temp.                  | T <sub>J</sub>   | -65 to 175 | °C    |
| Storage Temp.                   | T <sub>STG</sub> | -65 to 175 | °C    |

**Mechanical Data**

| Items       | Materials                  |
|-------------|----------------------------|
| Package     | DO-41                      |
| Case        | Hermetically sealed glass  |
| Lead/Finish | Double stud/Solder Plating |
| Chip        | Glass Passivated           |

**Dimensions****Electrical Characteristics (Ta=25°C)**

| TYPE    | ZENER VOLTAGE |          | MAX ZENER IMPEDANCE |          | MAX ZENER IMPEDANCE |          | MAXIMUM REVERSE CURRENT |         | TEMP. COEFF.   |
|---------|---------------|----------|---------------------|----------|---------------------|----------|-------------------------|---------|----------------|
|         | Vz(V)         | @Izt(mA) | Rz (ohms)           | @Izt(mA) | Rz (ohms)           | @Izt(mA) | @VR (V)                 | IR (uA) | dvz<br>(%/ °C) |
| 1N4728A | 3.3           | 76       | 10.0                | 76       | 400                 | 1.0      | 1.0                     | 100     | -0.06          |
| 1N4729A | 3.6           | 69       | 10.0                | 69       | 400                 | 1.0      | 1.0                     | 100     | -0.06          |
| 1N4730A | 3.9           | 64       | 9.0                 | 64       | 400                 | 1.0      | 1.0                     | 50      | -0.05          |
| 1N4731A | 4.3           | 58       | 9.0                 | 58       | 400                 | 1.0      | 1.0                     | 10      | -0.03          |
| 1N4732A | 4.7           | 53       | 8.0                 | 53       | 500                 | 1.0      | 1.0                     | 10      | -0.01          |
| 1N4733A | 5.1           | 49       | 7.0                 | 49       | 550                 | 1.0      | 1.0                     | 10      | 0.01           |
| 1N4734A | 5.6           | 45       | 5.0                 | 45       | 600                 | 1.0      | 2.0                     | 10      | 0.03           |
| 1N4735A | 6.2           | 41       | 2.0                 | 41       | 700                 | 1.0      | 3.0                     | 10      | 0.04           |
| 1N4736A | 6.8           | 37       | 3.5                 | 37       | 700                 | 1.0      | 4.0                     | 10      | 0.05           |
| 1N4737A | 7.5           | 34       | 4.0                 | 34       | 700                 | 0.5      | 5.0                     | 10      | 0.05           |
| 1N4738A | 8.2           | 31       | 4.5                 | 31       | 700                 | 0.5      | 6.0                     | 10      | 0.06           |
| 1N4739A | 9.1           | 28       | 5.0                 | 28       | 700                 | 0.5      | 7.0                     | 10      | 0.06           |
| 1N4740A | 10.0          | 25       | 7.0                 | 25       | 700                 | 0.25     | 7.6                     | 10      | 0.07           |

## Electrical Characteristics (Ta=25°C)

| TYPE    | ZENER VOLTAGE |          | MAX ZENER IMPEDANCE |          | MAX ZENER IMPEDANCE<br>Izt = 0.25mA | MAXIMUM REVERSE CURRENT |         | TEMP. COEFF.   |
|---------|---------------|----------|---------------------|----------|-------------------------------------|-------------------------|---------|----------------|
|         | Vz(V)         | @Izt(mA) | Rz (ohms)           | @Izt(mA) | Rz (ohms)                           | @VR (V)                 | IR (uA) | dvz<br>(%/ °C) |
| 1N4741A | 11            | 23       | 8                   | 23       | 700                                 | 8.4                     | 5.0     | 0.07           |
| 1N4742A | 12            | 21       | 9                   | 21       | 700                                 | 9.1                     | 5.0     | 0.07           |
| 1N4743A | 13            | 19       | 10                  | 19       | 700                                 | 9.9                     | 5.0     | 0.07           |
| 1N4744A | 15            | 17       | 14                  | 17       | 700                                 | 11.4                    | 5.0     | 0.08           |
| 1N4745A | 16            | 15.5     | 16                  | 15.5     | 700                                 | 12.2                    | 5.0     | 0.08           |
| 1N4746A | 18            | 14       | 20                  | 14       | 750                                 | 13.7                    | 5.0     | 0.08           |
| 1N4747A | 20            | 12.5     | 22                  | 12.5     | 750                                 | 15.2                    | 5.0     | 0.08           |
| 1N4748A | 22            | 11.5     | 23                  | 11.5     | 750                                 | 16.7                    | 5.0     | 0.08           |
| 1N4749A | 24            | 10.5     | 25                  | 10.5     | 750                                 | 18.2                    | 5.0     | 0.08           |
| 1N4750A | 27            | 9.5      | 35                  | 9.5      | 750                                 | 20.6                    | 5.0     | 0.09           |
| 1N4751A | 30            | 8.5      | 40                  | 8.5      | 1000                                | 22.6                    | 5.0     | 0.09           |
| 1N4752A | 33            | 7.5      | 45                  | 7.5      | 1000                                | 25.1                    | 5.0     | 0.09           |
| 1N4753A | 36            | 7.0      | 50                  | 7.0      | 1000                                | 27.4                    | 5.0     | 0.09           |
| 1N4754A | 39            | 6.5      | 60                  | 6.5      | 1000                                | 29.7                    | 5.0     | 0.09           |
| 1N4755A | 43            | 6.0      | 70                  | 6.0      | 1500                                | 32.7                    | 5.0     | 0.09           |
| 1N4756A | 47            | 5.5      | 80                  | 5.5      | 1500                                | 35.8                    | 5.0     | 0.09           |
| 1N4757A | 51            | 5.0      | 95                  | 5.0      | 1500                                | 38.8                    | 5.0     | 0.09           |

### Notes:

1. Rectangular waveform (tp= 10 ms)