



# Zeners

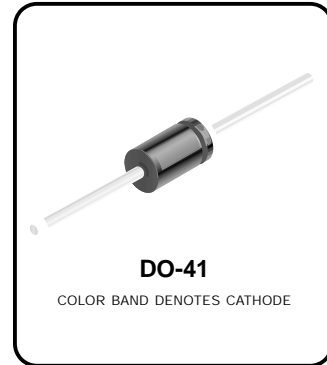
## 1N4728A - 1N4752A

### Absolute Maximum Ratings\*

T<sub>A</sub> = 25°C unless otherwise noted

| Symbol           | Parameter                                         | Value       | Units |
|------------------|---------------------------------------------------|-------------|-------|
| P <sub>D</sub>   | Power Dissipation<br>Derate above 50°C            | 1.0         | W     |
|                  |                                                   | 6.67        | mW/°C |
| T <sub>STG</sub> | Storage Temperature Range                         | -65 to +200 | °C    |
| T <sub>J</sub>   | Operating Junction Temperature                    | + 200       | °C    |
| R <sub>θJL</sub> | Thermal resistance Junction to Lead               | 53.5        | °C/W  |
| R <sub>θJA</sub> | Thermal resistance Junction to Ambient            | 100         | °C/W  |
|                  | Lead Temperature (1/16" from case for 10 seconds) | + 230       | °C    |
|                  | Surge Power**                                     | 10          | W     |

Tolerance: A = 5%



\*These ratings are limiting values above which the serviceability of the diode may be impaired.

\*\*Non-recurrent square wave PW = 8.3 ms, TA = 55 degrees C.

#### NOTES:

- 1) These ratings are based on a maximum junction temperature of 200 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

### Electrical Characteristics

T<sub>A</sub> = 25°C unless otherwise noted

| Device  | V <sub>Z</sub><br>(V) | Z <sub>Z</sub><br>(Ω) | @ I <sub>ZT</sub><br>(mA) | Z <sub>ZK</sub><br>(Ω) | @ I <sub>ZK</sub><br>(mA) | V <sub>R</sub><br>(V) | @ I <sub>R</sub><br>(μA) | I <sub>SURGE</sub><br>(mA) | I <sub>ZM</sub><br>(mA) |
|---------|-----------------------|-----------------------|---------------------------|------------------------|---------------------------|-----------------------|--------------------------|----------------------------|-------------------------|
| 1N4728A | 3.3                   | 10                    | 76                        | 400                    | 1.0                       | 1.0                   | 100                      | 1380                       | 276                     |
| 1N4729A | 3.6                   | 10                    | 69                        | 400                    | 1.0                       | 1.0                   | 100                      | 1260                       | 252                     |
| 1N4730A | 3.9                   | 9.0                   | 64                        | 400                    | 1.0                       | 1.0                   | 50                       | 1190                       | 234                     |
| 1N4731A | 4.3                   | 9.0                   | 58                        | 400                    | 1.0                       | 1.0                   | 10                       | 1070                       | 217                     |
| 1N4732A | 4.7                   | 8.0                   | 53                        | 500                    | 1.0                       | 1.0                   | 10                       | 970                        | 193                     |
| 1N4733A | 5.1                   | 7.0                   | 49                        | 550                    | 1.0                       | 1.0                   | 10                       | 890                        | 178                     |
| 1N4734A | 5.6                   | 5.0                   | 45                        | 600                    | 1.0                       | 2.0                   | 10                       | 810                        | 162                     |
| 1N4735A | 6.2                   | 2.0                   | 41                        | 700                    | 1.0                       | 3.0                   | 10                       | 730                        | 146                     |
| 1N4736A | 6.8                   | 3.5                   | 37                        | 700                    | 1.0                       | 4.0                   | 10                       | 660                        | 133                     |
| 1N4737A | 7.5                   | 4.0                   | 34                        | 700                    | 0.5                       | 5.0                   | 10                       | 605                        | 121                     |
| 1N4738A | 8.2                   | 4.5                   | 31                        | 700                    | 0.5                       | 6.0                   | 10                       | 550                        | 110                     |
| 1N4739A | 9.1                   | 5.0                   | 28                        | 700                    | 0.5                       | 7.0                   | 10                       | 500                        | 100                     |
| 1N4740A | 10                    | 7.0                   | 25                        | 700                    | 0.25                      | 7.6                   | 10                       | 454                        | 91                      |
| 1N4741A | 11                    | 8.0                   | 23                        | 700                    | 0.25                      | 8.4                   | 5.0                      | 414                        | 83                      |
| 1N4742A | 12                    | 9.0                   | 21                        | 700                    | 0.25                      | 9.1                   | 5.0                      | 380                        | 76                      |
| 1N4743A | 13                    | 10                    | 19                        | 700                    | 0.25                      | 9.9                   | 5.0                      | 344                        | 69                      |
| 1N4744A | 15                    | 14                    | 17                        | 700                    | 0.25                      | 11.4                  | 5.0                      | 304                        | 61                      |
| 1N4745A | 16                    | 16                    | 15.5                      | 700                    | 0.25                      | 12.2                  | 5.0                      | 285                        | 57                      |
| 1N4746A | 18                    | 20                    | 14                        | 750                    | 0.25                      | 13.7                  | 5.0                      | 250                        | 50                      |
| 1N4747A | 20                    | 22                    | 12.5                      | 750                    | 0.25                      | 15.2                  | 5.0                      | 225                        | 45                      |
| 1N4748A | 22                    | 23                    | 11.5                      | 750                    | 0.25                      | 16.7                  | 5.0                      | 205                        | 41                      |
| 1N4749A | 24                    | 25                    | 10.5                      | 750                    | 0.25                      | 18.2                  | 5.0                      | 190                        | 38                      |
| 1N4750A | 27                    | 35                    | 9.5                       | 750                    | 0.25                      | 20.6                  | 5.0                      | 170                        | 34                      |
| 1N4751A | 30                    | 40                    | 8.5                       | 1000                   | 0.25                      | 22.8                  | 5.0                      | 150                        | 30                      |
| 1N4752A | 33                    | 45                    | 7.5                       | 1000                   | 0.25                      | 25.1                  | 5.0                      | 135                        | 27                      |

V<sub>F</sub> Forward Voltage = 1.2 V Maximum @ I<sub>F</sub> = 200 mA for all 1N4700 series

Zeners (1N4728A - 1N4752A)

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