

1N4728A - 1N4764A

Zeners



DO-41 Glass case
COLOR BAND DENOTES CATHODE

Absolute Maximum Ratings * $T_a = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|----------------|---|-------------|----------------------|
| P_D | Power Dissipation @ $T_L \leq 50^\circ\text{C}$, Lead Length = 3/8" | 1.0 | W |
| | Derate above 50°C | 6.67 | mW/ $^\circ\text{C}$ |
| T_J, T_{STG} | Operating and Storage Temperature Range | -65 to +200 | $^\circ\text{C}$ |

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

Electrical Characteristics $T_a = 25^\circ\text{C}$ unless otherwise noted

| Device | V_Z (V) @ I_Z (Note 1) | | | Test Current I_Z (mA) | Max. Zener Impedance | | | Leakage Current | |
|---------|----------------------------|------|-------|----------------------------|-------------------------------|-------------------------------------|------------------|----------------------------|--------------|
| | Min. | Typ. | Max. | | Z_Z @ I_Z (Ω) | Z_{ZK} @ I_{ZK} (Ω) | I_{ZK} (mA) | I_R (μA) | V_R (V) |
| 1N4728A | 3.315 | 3.3 | 3.465 | 76 | 10 | 400 | 1 | 100 | 1 |
| 1N4729A | 3.42 | 3.6 | 3.78 | 69 | 10 | 400 | 1 | 100 | 1 |
| 1N4730A | 3.705 | 3.9 | 4.095 | 64 | 9 | 400 | 1 | 50 | 1 |
| 1N4731A | 4.085 | 4.3 | 4.515 | 58 | 9 | 400 | 1 | 10 | 1 |
| 1N4732A | 4.465 | 4.7 | 4.935 | 53 | 8 | 500 | 1 | 10 | 1 |
| 1N4733A | 4.845 | 5.1 | 5.355 | 49 | 7 | 550 | 1 | 10 | 1 |
| 1N4734A | 5.32 | 5.6 | 5.88 | 45 | 5 | 600 | 1 | 10 | 2 |
| 1N4735A | 5.89 | 6.2 | 6.51 | 41 | 2 | 700 | 1 | 10 | 3 |
| 1N4736A | 6.46 | 6.8 | 7.14 | 37 | 3.5 | 700 | 1 | 10 | 4 |
| 1N4737A | 7.125 | 7.5 | 7.875 | 34 | 4 | 700 | 0.5 | 10 | 5 |
| 1N4738A | 7.79 | 8.2 | 8.61 | 31 | 4.5 | 700 | 0.5 | 10 | 6 |
| 1N4739A | 8.645 | 9.1 | 9.555 | 28 | 5 | 700 | 0.5 | 10 | 7 |
| 1N4740A | 9.5 | 10 | 10.5 | 25 | 7 | 700 | 0.25 | 10 | 7.6 |
| 1N4741A | 10.45 | 11 | 11.55 | 23 | 8 | 700 | 0.25 | 5 | 8.4 |
| 1N4742A | 11.4 | 12 | 12.6 | 21 | 9 | 700 | 0.25 | 5 | 9.1 |
| 1N4743A | 12.35 | 13 | 13.65 | 19 | 10 | 700 | 0.25 | 5 | 9.9 |
| 1N4744A | 14.25 | 15 | 15.75 | 17 | 14 | 700 | 0.25 | 5 | 11.4 |
| 1N4745A | 15.2 | 16 | 16.8 | 15.5 | 16 | 700 | 0.25 | 5 | 12.2 |
| 1N4746A | 17.1 | 18 | 18.9 | 14 | 20 | 750 | 0.25 | 5 | 13.7 |
| 1N4747A | 19 | 20 | 21 | 12.5 | 22 | 750 | 0.25 | 5 | 15.2 |

Electrical Characteristics T_C = 25°C unless otherwise noted

| Device | V _Z (V) @ I _Z (Note 1) | | | Test Current I _Z (mA) | Max. Zener Impedance | | | Leakage Current | |
|---------|--|------|-------|-------------------------------------|--|--|-------------------------|------------------------|-----------------------|
| | Min. | Typ. | Max. | | Z _Z @ I _Z (Ω) | Z _{ZK} @ I _{ZK} (Ω) | I _{ZK} (mA) | I _R (μA) | V _R (V) |
| 1N4748A | 20.9 | 22 | 23.1 | 11.5 | 23 | 750 | 0.25 | 5 | 16.7 |
| 1N4749A | 22.8 | 24 | 25.2 | 10.5 | 25 | 750 | 0.25 | 5 | 18.2 |
| 1N4750A | 25.65 | 27 | 28.35 | 9.5 | 35 | 750 | 0.25 | 5 | 20.6 |
| 1N4751A | 28.5 | 30 | 31.5 | 8.5 | 40 | 1000 | 0.25 | 5 | 22.8 |
| 1N4752A | 31.35 | 33 | 34.65 | 7.5 | 45 | 1000 | 0.25 | 5 | 25.1 |
| 1N4753A | 34.2 | 36 | 37.8 | 7 | 50 | 1000 | 0.25 | 5 | 27.4 |
| 1N4754A | 37.05 | 39 | 40.95 | 6.5 | 60 | 1000 | 0.25 | 5 | 29.7 |
| 1N4755A | 40.85 | 43 | 45.15 | 6 | 70 | 1500 | 0.25 | 5 | 32.7 |
| 1N4756A | 44.65 | 47 | 49.35 | 5.5 | 80 | 1500 | 0.25 | 5 | 35.8 |
| 1N4757A | 48.45 | 51 | 53.55 | 5 | 95 | 1500 | 0.25 | 5 | 38.8 |
| 1N4758A | 53.2 | 56 | 58.8 | 4.5 | 110 | 2000 | 0.25 | 5 | 42.6 |
| 1N4759A | 58.9 | 62 | 65.1 | 4 | 125 | 2000 | 0.25 | 5 | 47.1 |
| 1N4760A | 64.6 | 68 | 71.4 | 3.7 | 150 | 2000 | 0.25 | 5 | 51.7 |
| 1N4761A | 71.25 | 75 | 78.75 | 3.3 | 175 | 2000 | 0.25 | 5 | 56 |
| 1N4762A | 77.9 | 82 | 86.1 | 3 | 200 | 3000 | 0.25 | 5 | 62.2 |
| 1N4763A | 86.45 | 91 | 95.55 | 2.8 | 250 | 3000 | 0.25 | 5 | 69.2 |
| 1N4764A | 95 | 100 | 105 | 2.5 | 350 | 3000 | 0.25 | 5 | 76 |

Notes:

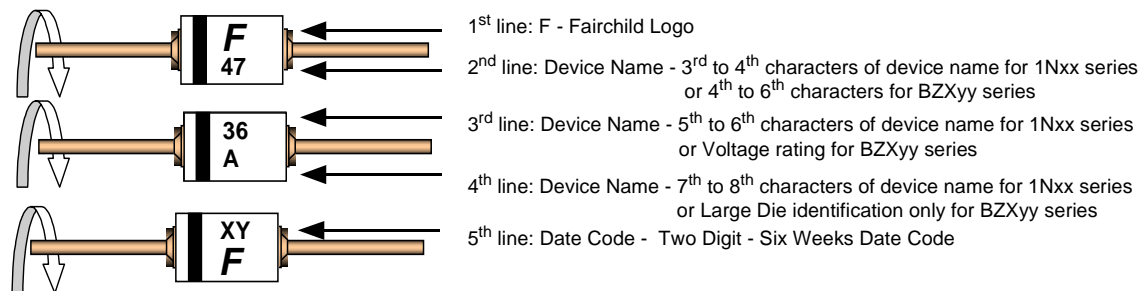
1. Zener Voltage (V_Z)

The zener voltage is measured with the device junction in the thermal equilibrium at the lead temperature (T_L) at 30°C ± 1°C and 3/8" lead length.

Top Mark Information

| Device | Line 1 | Line 2 | Line 3 | Line 4 | Line 5 |
|---------|--------|--------|--------|--------|--------|
| 1N4728A | LOGO | 47 | 28 | A | XY |
| 1N4729A | LOGO | 47 | 29 | A | XY |
| 1N4730A | LOGO | 47 | 30 | A | XY |
| 1N4731A | LOGO | 47 | 31 | A | XY |
| 1N4732A | LOGO | 47 | 32 | A | XY |
| 1N4733A | LOGO | 47 | 33 | A | XY |
| 1N4734A | LOGO | 47 | 34 | A | XY |
| 1N4735A | LOGO | 47 | 35 | A | XY |
| 1N4736A | LOGO | 47 | 36 | A | XY |
| 1N4737A | LOGO | 47 | 37 | A | XY |
| 1N4738A | LOGO | 47 | 38 | A | XY |
| 1N4739A | LOGO | 47 | 39 | A | XY |
| 1N4740A | LOGO | 47 | 40 | A | XY |
| 1N4741A | LOGO | 47 | 41 | A | XY |
| 1N4742A | LOGO | 47 | 42 | A | XY |
| 1N4743A | LOGO | 47 | 43 | A | XY |
| 1N4744A | LOGO | 47 | 44 | A | XY |
| 1N4745A | LOGO | 47 | 45 | A | XY |
| 1N4746A | LOGO | 47 | 46 | A | XY |
| 1N4747A | LOGO | 47 | 47 | A | XY |
| 1N4748A | LOGO | 47 | 48 | A | XY |
| 1N4749A | LOGO | 47 | 49 | A | XY |
| 1N4750A | LOGO | 47 | 50 | A | XY |
| 1N4751A | LOGO | 47 | 51 | A | XY |
| 1N4752A | LOGO | 47 | 52 | A | XY |
| 1N4753A | LOGO | 47 | 53 | A | XY |
| 1N4754A | LOGO | 47 | 54 | A | XY |
| 1N4755A | LOGO | 47 | 55 | A | XY |
| 1N4756A | LOGO | 47 | 56 | A | XY |
| 1N4757A | LOGO | 47 | 57 | A | XY |
| 1N4758A | LOGO | 47 | 58 | A | XY |
| 1N4759A | LOGO | 47 | 59 | A | XY |
| 1N4760A | LOGO | 47 | 60 | A | XY |
| 1N4761A | LOGO | 47 | 61 | A | XY |
| 1N4762A | LOGO | 47 | 62 | A | XY |
| 1N4763A | LOGO | 47 | 63 | A | XY |
| 1N4764A | LOGO | 47 | 64 | A | XY |

Top Mark Information (Continued)



General Requirements:

- 1.0 Cathod Band
- 2.0 First Line: F - Fairchild Logo
- 3.0 Second Line: Device name - For 1Nxx series: 3rd to 4th characters of the device name.
For BZxx series: 4th to 6th characters of the device name.
- 4.0 Third Line: Device name - For 1Nxx series: 5th to 6th characters of the device name.
For BZXyy series: Voltage rating
- 5.0 Third Line: Device name - For 1Nxx series: 7th to 8th characters of the device name.
(the 8th character is the large die identification)
For BZXyy series: Large Die Identification character
- 6.0 Fourth Line: Date Code - Two Digit - Six Weeks Date Code
Where: X represents the last digit of the calendar year
Y represents the Six weeks numeric code
- 7.0 Devices shall be marked as required in the device specification (PID or FSC Test Spec).
- 8.0 Maximum no. of marking lines: 5
- 9.0 Maximum no. of digits per line: 3
- 10.0 FSC logo must be 20 % taller than the alphanumeric marking and should occupy the 2 characters of the specified line.
- 11.0 Marking Font: Arial (Except FSC Logo)
- 12.0 First character of each marking line must be aligned vertically

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| | | | | |
|--------------------------------------|---------------------|------------------------|------------------------------|------------------------|
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| ActiveArray™ | FASTr™ | ISOPLANAR™ | Power247™ | Stealth™ |
| Bottomless™ | FPS™ | LittleFET™ | PowerEdge™ | SuperFET™ |
| CoolFET™ | FRFET™ | MICROCOUPLER™ | PowerSaver™ | SuperSOT™-3 |
| CROSSVOLT™ | GlobalOptoisolator™ | MicroFET™ | PowerTrench [®] | SuperSOT™-6 |
| DOVE™ | GTO™ | MicroPak™ | QFET [®] | SuperSOT™-8 |
| EcoSPARK™ | HiSeC™ | MICROWIRE™ | QS™ | SyncFET™ |
| E ² CMOST™ | I ² C™ | MSX™ | QT Optoelectronics™ | TinyLogic [®] |
| EnSigna™ | i-Lo™ | MSXPro™ | Quiet Series™ | TINYOPTO™ |
| FACT™ | ImpliedDisconnect™ | OCX™ | RapidConfigure™ | TruTranslation™ |
| FACT Quiet Series™ | | OCXPro™ | RapidConnect™ | UHC™ |
| Across the board. Around the world.™ | | OPTOLOGIC [®] | μSerDes™ | UltraFET [®] |
| The Power Franchise [®] | | OPTOPLANAR™ | SILENT SWITCHER [®] | UniFET™ |
| Programmable Active Droop™ | | PACMAN™ | SMART START™ | VCX™ |

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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Definition of Terms

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|--------------------------|------------------------|---|
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