



1N4728A SERIES

SILICON ZENER DIODE

VOLTAGE 3.3 to 68 Volt **POWER** 1 Watt

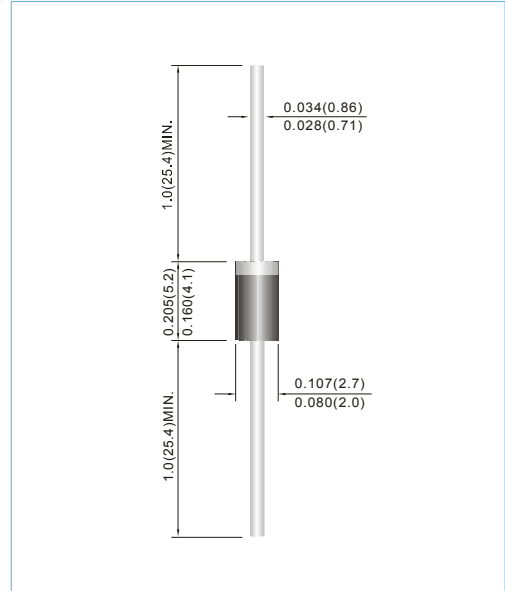
DO-41 Unit : inch(mm)

FEATURES

- Low inductance
- High temperature soldering : 260°C /10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Lead free in compliance with EU RoHS 2.0

MECHANICAL DATA

- Case: Molded plastic DO-41
- Epoxy: UL 94V-O rate flame retardant
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band denotes cathode end
- Weight: 0.012 ounce, 0.3 gram
- Packing information
 - B - 1K per Bulk box
 - T/R - 5K per 13" paper Reel
 - T/B - 3K per horiz. tape & Ammo box



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbol | Value | Units |
|-----------------------------------|------------------|--------------|-------|
| Power Dissipation at Tamb = 25 °C | P _{TOT} | 1* | W |
| Junction Temperature | T _J | -55 to + 150 | °C |
| Storage Temperature Range | T _{STG} | -55 to + 150 | °C |

*Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.



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| Part Number | Nominal Zener Voltage | | | Maximum Zener Impedance | | | | Maximum Leakage Current | | Marking Code |
|----------------|----------------------------------|--------|--------|-----------------------------------|------|-----------------------------------|------|---------------------------------|------|--------------|
| | V _Z @ I _{ZT} | | | Z _{ZT} @ I _{ZT} | | Z _{ZK} @ I _{ZK} | | I _R @ V _R | | |
| | Nom. V | Min. V | Max. V | Ω | mA | Ω | mA | uA | V | |
| 1.0 Watt ZENER | | | | | | | | | | |
| 1N4728A | 3.3 | 3.1 | 3.5 | 10 | 76 | 400 | 1 | 100 | 1 | 1N4728A |
| 1N4730A | 3.9 | 3.7 | 4.1 | 9 | 64 | 400 | 1 | 50 | 1 | 1N4730A |
| 1N4731A | 4.3 | 4.1 | 4.5 | 9 | 58 | 400 | 1 | 10 | 1 | 1N4731A |
| 1N4732A | 4.7 | 4.5 | 4.9 | 8 | 53 | 500 | 1 | 10 | 1 | 1N4732A |
| 1N4733A | 5.1 | 4.8 | 5.4 | 7 | 49 | 550 | 1 | 10 | 1 | 1N4733A |
| 1N4734A | 5.6 | 5.3 | 5.9 | 5 | 45 | 600 | 1 | 10 | 2 | 1N4734A |
| 1N4735A | 6.2 | 5.9 | 6.5 | 2 | 41 | 700 | 1 | 10 | 3 | 1N4735A |
| 1N4736A | 6.8 | 6.46 | 7.14 | 3.5 | 37 | 700 | 1 | 5 | 4 | 1N4736A |
| 1N4737A | 7.5 | 7.13 | 7.88 | 4 | 34 | 700 | 0.5 | 5 | 5 | 1N4737A |
| 1N4738A | 8.2 | 7.79 | 8.61 | 4.5 | 31 | 700 | 0.5 | 5 | 6 | 1N4738A |
| 1N4739A | 9.1 | 8.65 | 9.56 | 5 | 28 | 700 | 0.5 | 0.5 | 7 | 1N4739A |
| 1N4740A | 10 | 9.5 | 10.5 | 7 | 25 | 700 | 0.25 | 0.5 | 7.6 | 1N4740A |
| 1N4741A | 11 | 10.45 | 11.55 | 8 | 23 | 700 | 0.25 | 0.1 | 8.4 | 1N4741A |
| 1N4742A | 12 | 11.4 | 12.6 | 9 | 21 | 700 | 0.25 | 0.1 | 9.1 | 1N4742A |
| 1N4743A | 13 | 12.35 | 13.65 | 10 | 19 | 700 | 0.25 | 0.1 | 9.9 | 1N4743A |
| 1N4744A | 15 | 14.25 | 15.75 | 14 | 17 | 700 | 0.25 | 0.1 | 11.4 | 1N4744A |
| 1N4745A | 16 | 15.2 | 16.8 | 16 | 15.5 | 700 | 0.25 | 0.1 | 12.2 | 1N4745A |
| 1N4746A | 18 | 17.1 | 18.9 | 20 | 14 | 750 | 0.25 | 0.1 | 13.7 | 1N4746A |
| 1N4747A | 20 | 19 | 21 | 22 | 12.5 | 750 | 0.25 | 0.1 | 15.2 | 1N4747A |
| 1N4748A | 22 | 20.9 | 23.1 | 23 | 11.5 | 750 | 0.25 | 0.1 | 16.7 | 1N4748A |
| 1N4749A | 24 | 22.8 | 25.2 | 25 | 10.5 | 750 | 0.25 | 0.1 | 18.2 | 1N4749A |
| 1N4750A | 27 | 25.65 | 28.35 | 35 | 9.5 | 750 | 0.25 | 0.1 | 20.6 | 1N4750A |
| 1N4751A | 30 | 28.5 | 31.5 | 40 | 8.5 | 1000 | 0.25 | 0.1 | 22.8 | 1N4751A |
| 1N4752A | 33 | 31.35 | 34.65 | 45 | 7.5 | 1000 | 0.25 | 0.1 | 25.1 | 1N4752A |
| 1N4753A | 36 | 34.2 | 37.8 | 50 | 7 | 1000 | 0.25 | 0.1 | 27.4 | 1N4753A |
| 1N4754A | 39 | 37.05 | 40.95 | 60 | 6.5 | 1000 | 0.25 | 0.1 | 29.7 | 1N4754A |
| 1N4755A | 43 | 40.85 | 45.15 | 70 | 6 | 1500 | 0.25 | 0.1 | 32.7 | 1N4755A |
| 1N4756A | 47 | 44.65 | 49.35 | 80 | 5.5 | 1500 | 0.25 | 0.1 | 35.8 | 1N4756A |
| 1N4757A | 51 | 48.45 | 53.55 | 95 | 5 | 1500 | 0.25 | 0.1 | 38.8 | 1N4757A |
| 1N4758A | 56 | 53.2 | 58.8 | 110 | 4.5 | 2000 | 0.25 | 5 | 42.6 | 1N4758A |
| 1N4759A | 62 | 58.9 | 65.1 | 125 | 4 | 2000 | 0.25 | 5 | 47.1 | 1N4759A |
| 1N4760A | 68 | 64.6 | 71.4 | 150 | 3.7 | 2000 | 0.25 | 5 | 51.7 | 1N4760A |



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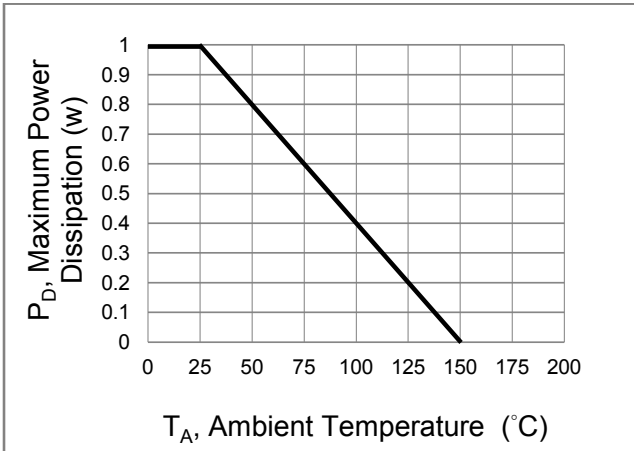


Fig.1 Steady-State Power Derating Curve

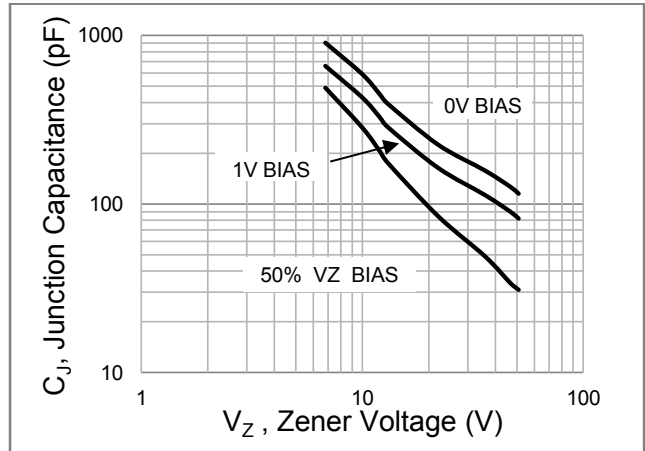


Fig.2 Typical Junction Capacitance

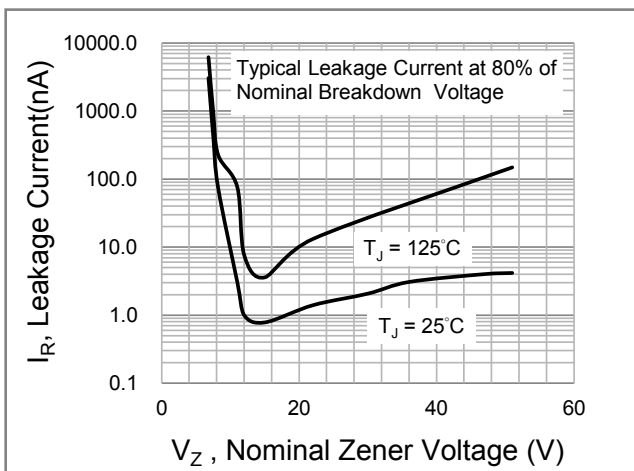


Fig.3 Typical Leakage Characteristics

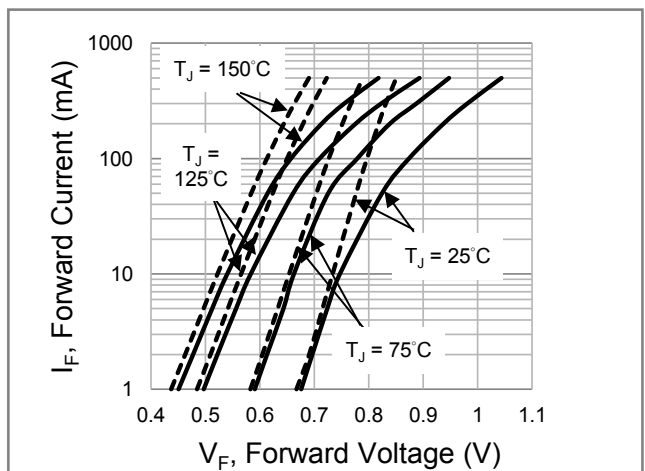


Fig.4 Typical Forward Characteristics

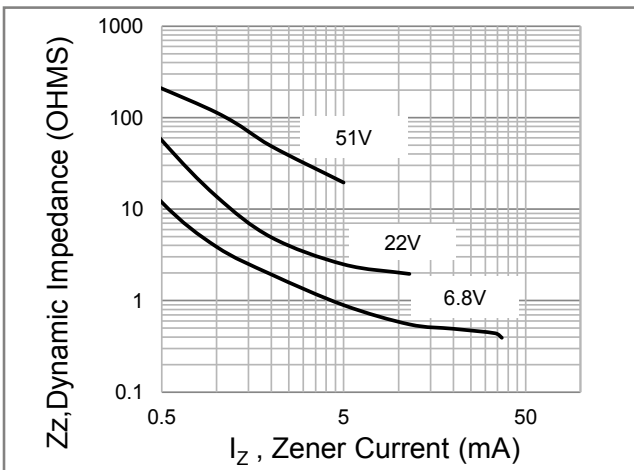


Fig.5 Typical Effect Of Zener Current On Zener Impedance

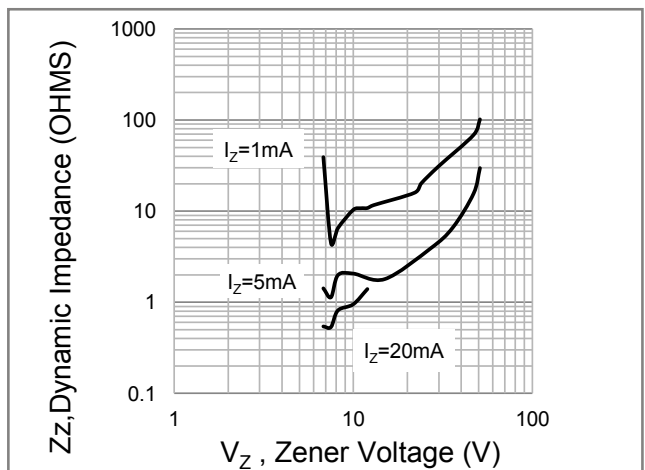


Fig.6 Typical Effect Of Zener Voltage On Zener Impedance



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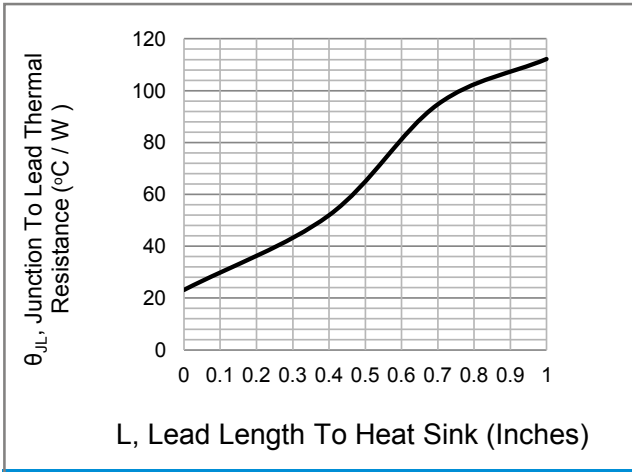


Fig.7 Thermal Resistance Versus Lead Length

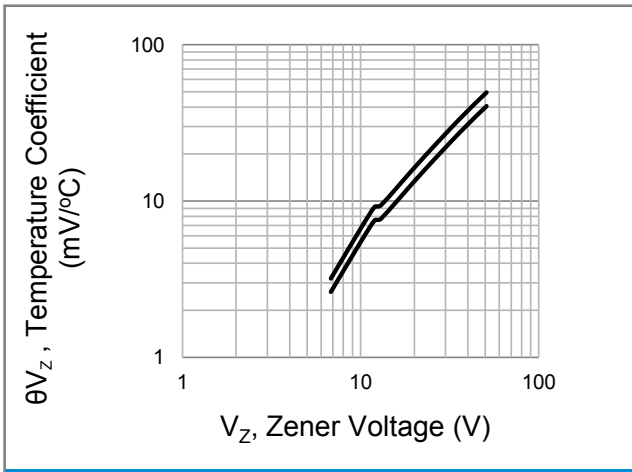


Fig.8 Temperature Coefficient (+25 $^{\circ}\text{C}$ To +150 $^{\circ}\text{C}$ Temperature Range ; 90% Of The Units Are In The Ranges Indicated)



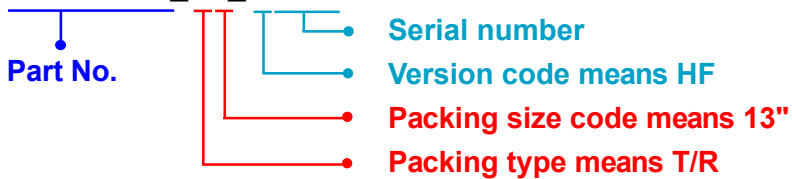
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Part No_packing code_Version

1N4728A_AY_10001
1N4728A_B0_00001
1N4728A_B0_10001
1N4728A_R2_00001
1N4728A_R2_10001

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | HF | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS | 1 | serial number |
| Bulk Packing (B/P) | B | 13" | 2 | | | |
| Tube Packing (T/P) | T | 26mm | X | | | |
| Tape and Reel (Right Oriented) (TRR) | S | 52mm | Y | | | |
| Tape and Reel (Left Oriented) (TRL) | L | PANASERT T/B CATHODE UP (PBCU) | U | | | |
| FORMING | F | PANASERT T/B CATHODE DOWN (PBCD) | D | | | |