



1N4736A SERIES

SILICON ZENER DIODE

VOLTAGE 6.8 to 51 Volts **POWER** 1.0 Watts

DO-41 Unit : inch(mm)

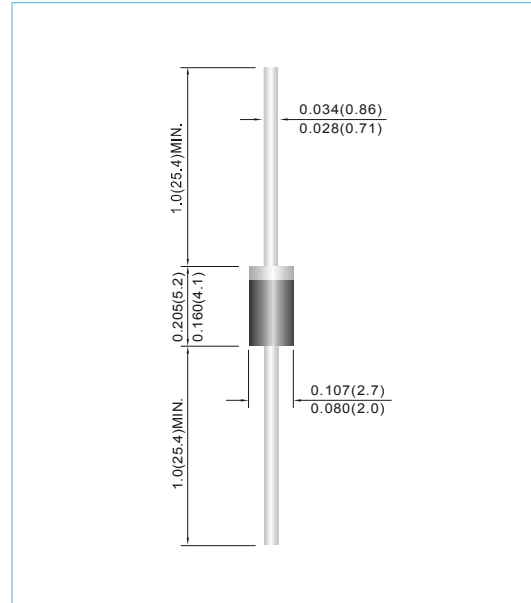
FEATURES

- Low profile package
- Built-in strain relief
- Low inductance
- High temperature soldering : 260°C /10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- In compliance with EU RoHS 2002/95/EC directives

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 positive end
- Mounting position:Any
- Weight: 0.012 ounce, 0.3 gram
- Packing information

- B - 1K per Bulk box
- T/R - 5K per 13" paper Reel
- T/B - 2.5K per horiz. tape & Ammo box



Datasheet.Directory

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 | DO-41 |
| 1.0 Watt ZENER | | | | | | | | | | |
| 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 |



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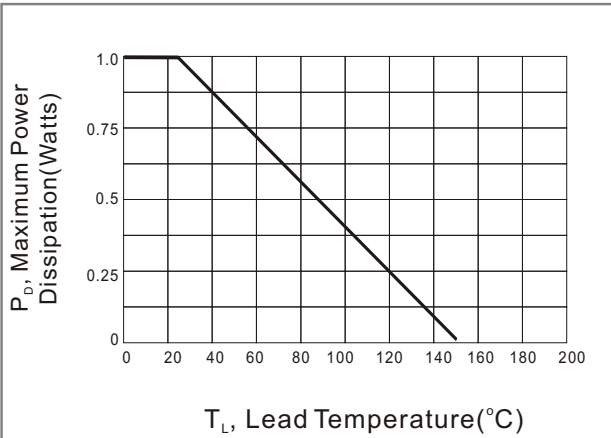


Fig.1 Steady-State Power Derating Curve

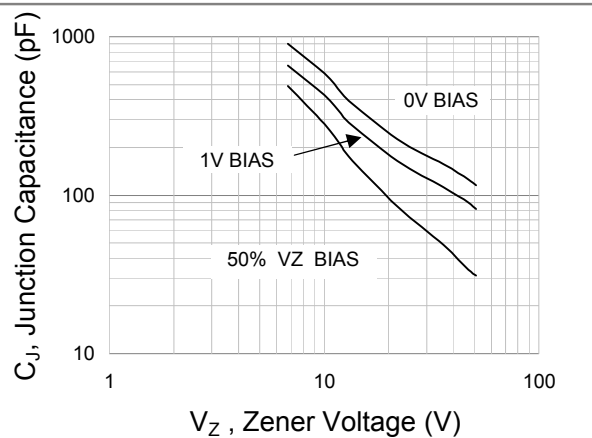


Fig.2 Typical Junction Capacitance

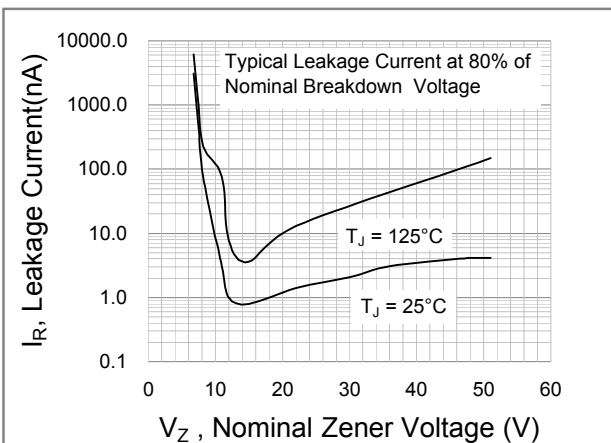


Fig.3 Typical Leakage Characteristics

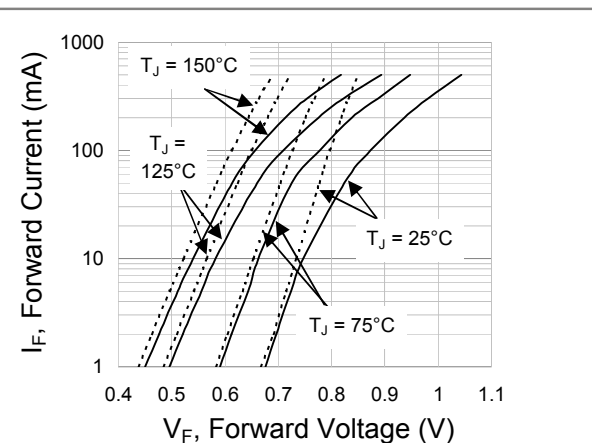


Fig.4 Typical Forward Characteristics

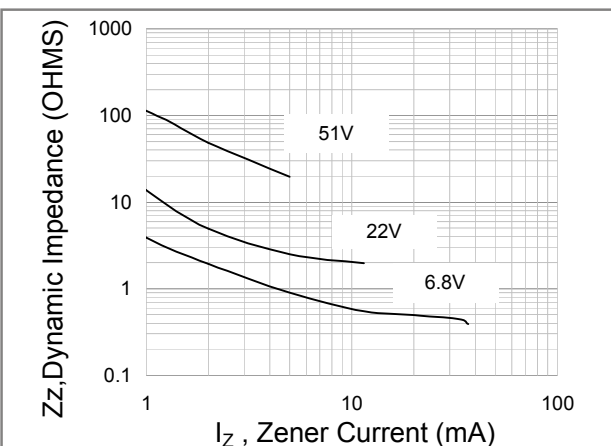


Fig.5 Typical Effect Of Zener Current On Zener Impedance

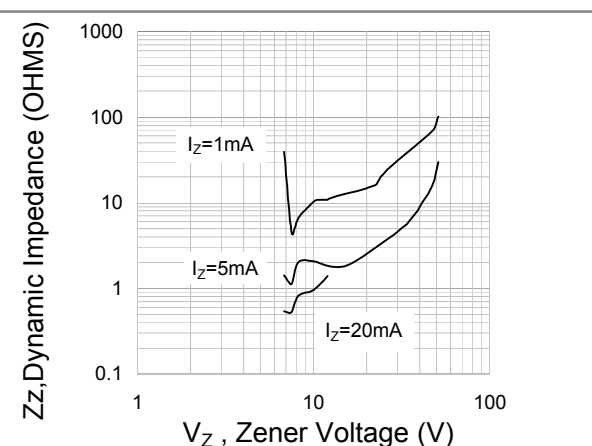


Fig.6 Typical Effect Of Zener Voltage On Zener Impedance



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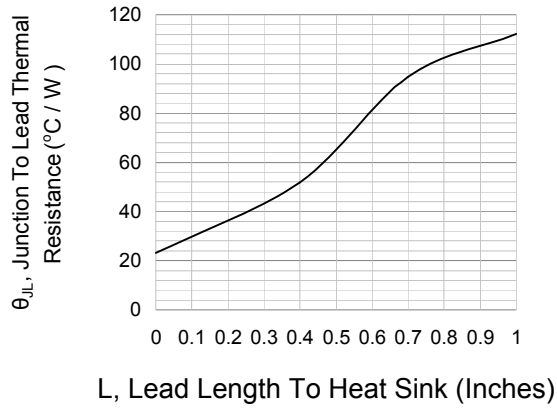


Fig.7 Thermal Resistance Versus Lead Length

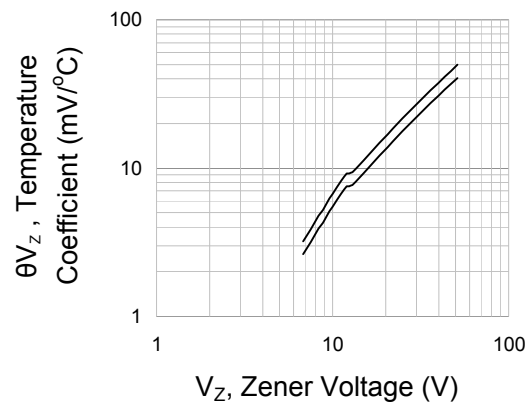


Fig.8 Temperature Coefficient (+25 $^{\circ}\text{C}$ To +150 $^{\circ}\text{C}$ Temperature Range ; 90% Of The Units Are In The Ranges Indicated)