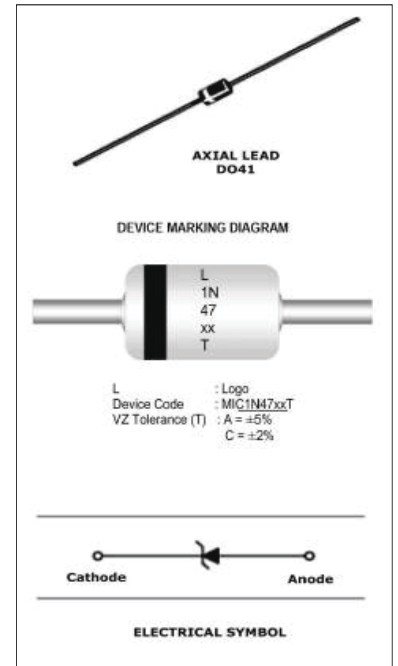


HERMETICALLY SEALED GLASS ZENER VOLTAGE REGULATORS

FEATURES:

- Zener Voltage Range 3 to 75 Volts
- Through-Hole Device Type Mounting
- DO-41 Glass Package (JEDEC)
- Hermetically Sealed Glass
- Compression Bonded Construction
- All external surfaces are Corrosion Resistant And Leads Are Readily Solderable
- RoHS Compliant
- Solder Hot Dip Tin (Sn) Terminal Finish Cathode Indicated By Polarity Band



ABSOLUTE MAXIMUM RATINGS TA=25 °C unless otherwise noted

| Parameter | Value | Units |
|--|-------------|--------|
| Storage Temperature Range | -65 to +200 | °C |
| Maximum Junction Operating Temperature | +200 | °C |
| Total Device Dissipation | 1.0 | Watt |
| Thermal Resistance Junction to Lead | 53.5 | °C / W |
| Thermal Resistance Junction to Ambient | 100 | Watt |

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

ELECTRICAL CHARACTERISTICS TA=25 °C unless otherwise noted

| Type | Zener Voltage ³⁾ | | Dynamic Resistance ¹⁾ | | | Reverse Current | | Maximum Surge Current ⁴⁾ | Maximum Regulator Current ²⁾ |
|---------|-----------------------------|--------------------|----------------------------------|-----------------|--------------------|-----------------|-------------------|-------------------------------------|---|
| | V _{Znom} | at I _{ZT} | Z _{ZT} | Z _{ZK} | at I _{ZK} | I _R | at V _R | at T _a = 25 °C | |
| | (V) | (mA) | Max. (Ω) | Max. (Ω) | (mA) | Max. (μA) | (V) | I _{ZSM} (mA) | I _{ZM} (mA) |
| 1N4727A | 3 | 83 | 10 | 400 | 1 | 150 | 1 | 1375 | 275 |
| 1N4728A | 3.3 | 76 | 10 | 400 | 1 | 150 | 1 | 1375 | 275 |
| 1N4729A | 3.6 | 69 | 10 | 400 | 1 | 100 | 1 | 1260 | 252 |
| 1N4730A | 3.9 | 64 | 9 | 400 | 1 | 100 | 1 | 1190 | 234 |
| 1N4731A | 4.3 | 58 | 9 | 400 | 1 | 50 | 1 | 1070 | 217 |
| 1N4732A | 4.7 | 53 | 8 | 500 | 1 | 10 | 1 | 970 | 193 |
| 1N4733A | 5.1 | 49 | 7 | 550 | 1 | 10 | 1 | 890 | 178 |
| 1N4734A | 5.6 | 45 | 5 | 600 | 1 | 10 | 2 | 810 | 162 |
| 1N4735A | 6.2 | 41 | 2 | 700 | 1 | 10 | 3 | 730 | 146 |
| 1N4736A | 6.8 | 37 | 3.5 | 700 | 1 | 10 | 4 | 660 | 133 |
| 1N4737A | 7.5 | 34 | 4 | 700 | 0.5 | 10 | 5 | 605 | 121 |
| 1N4738A | 8.2 | 31 | 4.5 | 700 | 0.5 | 10 | 6 | 550 | 110 |
| 1N4739A | 9.1 | 28 | 5 | 700 | 0.5 | 10 | 7 | 500 | 100 |
| 1N4740A | 10 | 25 | 7 | 700 | 0.25 | 10 | 7.6 | 454 | 91 |

HERMETICALLY SEALED GLASS ZENER VOLTAGE REGULATORS
ELECTRICAL CHARACTERISTICS TA=25 °C unless otherwise noted

| Type | Zener Voltage ³⁾ | | Dynamic Resistance ¹⁾ | | | Reverse Current | | Maximum Surge Current ⁴⁾ | Maximum Regulator Current ²⁾ |
|---------|-----------------------------|--------------------|----------------------------------|-----------------|--------------------|-----------------|-------------------|-------------------------------------|---|
| | V _{Znom} | at I _{ZT} | Z _{ZT} | Z _{ZK} | at I _{ZK} | I _R | at V _R | at T _a = 25 °C | |
| | (V) | (mA) | Max. (Ω) | Max. (Ω) | (mA) | Max. (μA) | (V) | I _{ZSM} (mA) | I _{ZM} (mA) |
| 1N4741A | 11 | 23 | 8 | 700 | 0.25 | 5 | 8.4 | 414 | 83 |
| 1N4742A | 12 | 21 | 9 | 700 | 0.25 | 5 | 9.1 | 380 | 76 |
| 1N4743A | 13 | 19 | 10 | 700 | 0.25 | 5 | 9.9 | 344 | 69 |
| 1N4744A | 15 | 17 | 14 | 700 | 0.25 | 5 | 11.4 | 304 | 61 |
| 1N4745A | 16 | 15.5 | 16 | 700 | 0.25 | 5 | 12.2 | 285 | 57 |
| 1N4746A | 18 | 14 | 20 | 750 | 0.25 | 5 | 13.7 | 250 | 50 |
| 1N4747A | 20 | 12.5 | 22 | 750 | 0.25 | 5 | 15.2 | 225 | 45 |
| 1N4748A | 22 | 11.5 | 23 | 750 | 0.25 | 5 | 16.7 | 205 | 41 |
| 1N4749A | 24 | 10.5 | 25 | 750 | 0.25 | 5 | 18.2 | 190 | 38 |
| 1N4750A | 27 | 9.5 | 35 | 750 | 0.25 | 5 | 20.6 | 170 | 34 |
| 1N4751A | 30 | 8.5 | 40 | 1000 | 0.25 | 5 | 22.8 | 150 | 30 |
| 1N4752A | 33 | 7.5 | 45 | 1000 | 0.25 | 5 | 25.1 | 135 | 27 |
| 1N4753A | 36 | 7 | 50 | 1000 | 0.25 | 5 | 27.4 | 125 | 25 |
| 1N4754A | 39 | 6.5 | 60 | 1000 | 0.25 | 5 | 29.7 | 115 | 23 |
| 1N4755A | 43 | 6 | 70 | 1500 | 0.25 | 5 | 32.7 | 110 | 22 |
| 1N4756A | 47 | 5.5 | 80 | 1500 | 0.25 | 5 | 35.8 | 95 | 19 |
| 1N4757A | 51 | 5 | 95 | 1500 | 0.25 | 5 | 38.8 | 90 | 18 |
| 1N4758A | 56 | 4.5 | 110 | 2000 | 0.25 | 5 | 42.6 | 80 | 16 |
| 1N4759A | 62 | 4 | 125 | 2000 | 0.25 | 5 | 47.1 | 70 | 14 |
| 1N4760A | 68 | 3.7 | 150 | 2000 | 0.25 | 5 | 51.7 | 65 | 13 |
| 1N4761A | 75 | 3.3 | 175 | 2000 | 0.25 | 5 | 56 | 60 | 12 |

Notes:
1. TOLERANCE AND TYPE NUMBER DESIGNATION (V_Z)

The type numbers listed have a standard tolerance on the nominal zener voltage +5%. Device tolerance of +2% is indicated by a "C" instead of an "A"

2. SPECIALS AVAILABLE INCLUDE

Nominal zener voltages between the voltages shown and tighter voltage. for detailed information on price, availability and delivery, contact us.

3. ZENER VOLTAGE (V_Z) MEASUREMENT

The zener voltage (V_Z) is tested under pulse condition. The measured V_Z is guaranteed to be within specification with device junction in thermal equilibrium.

4. ZENER IMPEDANCE (Z_Z) DERIVATION

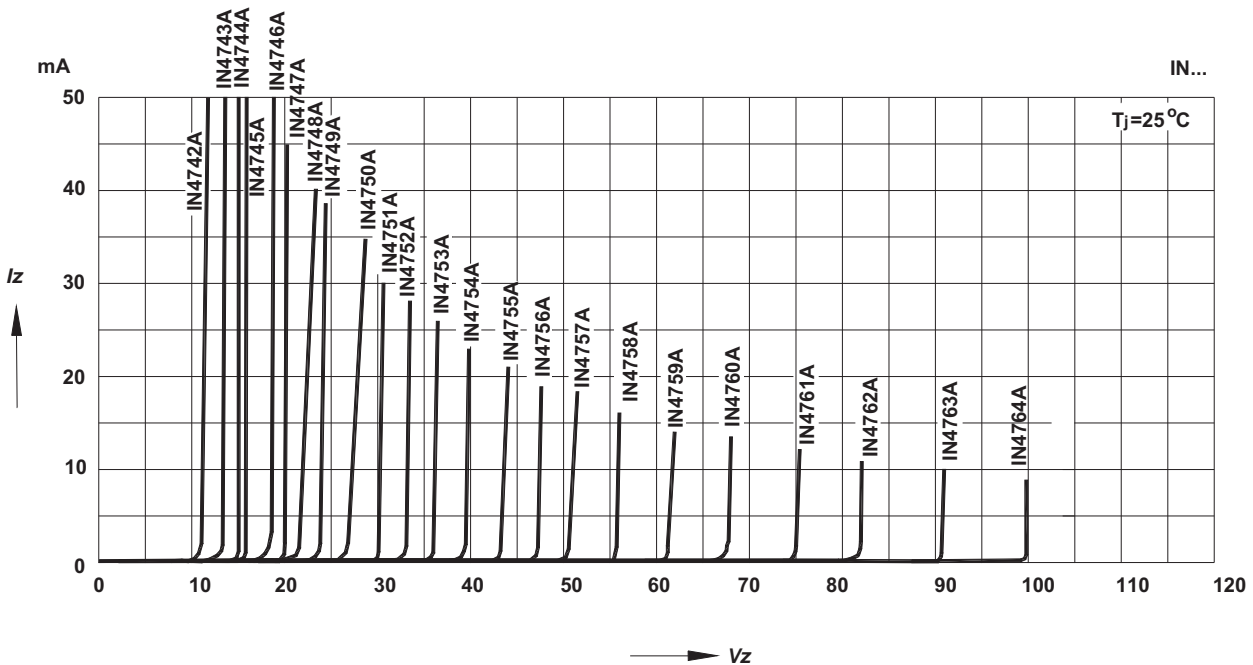
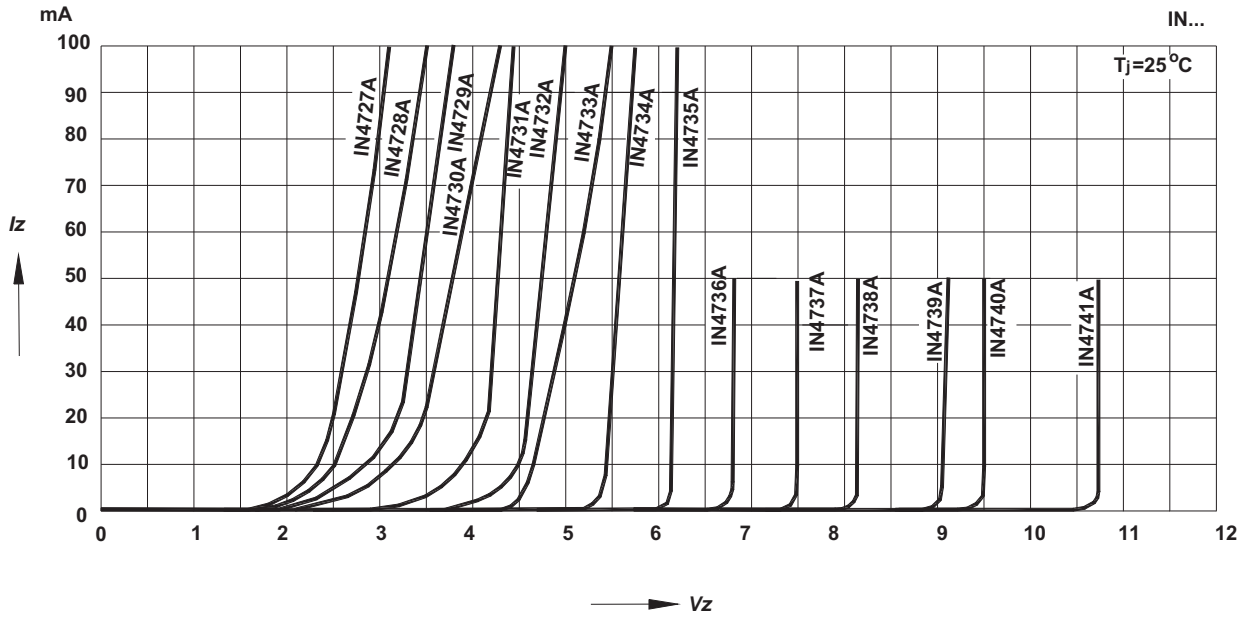
The zener impedance is derived from the 60 cycle AC voltage, which results when an AC current having an RMS value equal to 10% of the DC zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}.

HERMETICALLY SEALED GLASS ZENER VOLTAGE REGULATORS

Typical Characteristics

Breakdown characteristics

$T_j = \text{constant (pulsed)}$



HERMETICALLY SEALED GLASS ZENER VOLTAGE REGULATORS

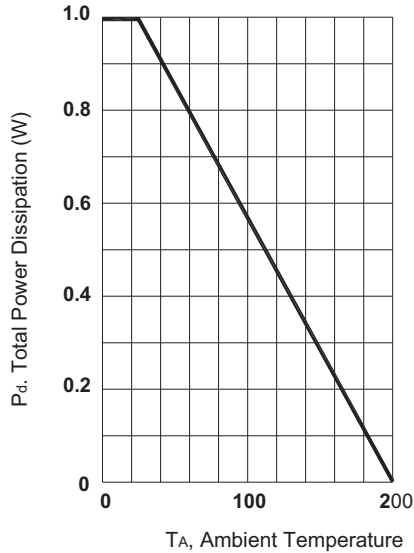


Fig. 1 Power Dissipation vs Ambient Temperature

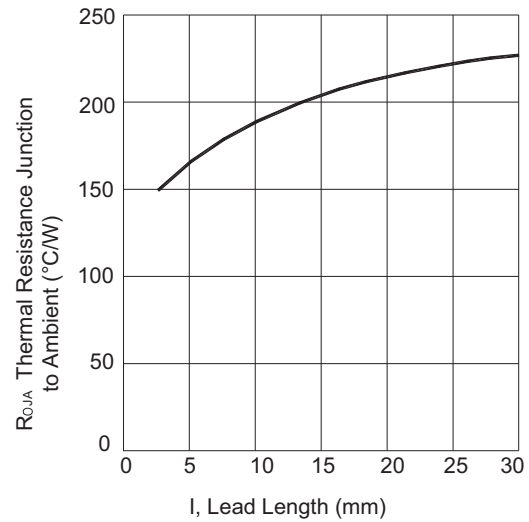


Fig. 2 Typical Thermal Resistance vs. Lead Length

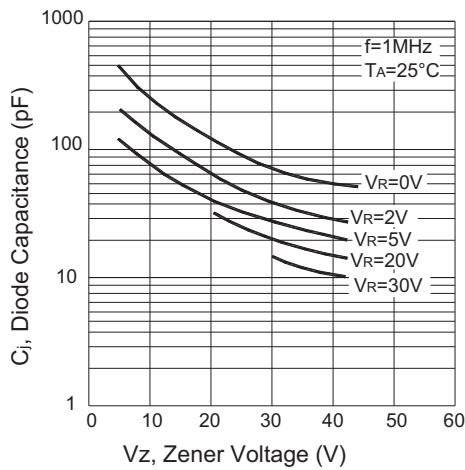


Fig. 3 Junction Capacitance vs Zener Voltage

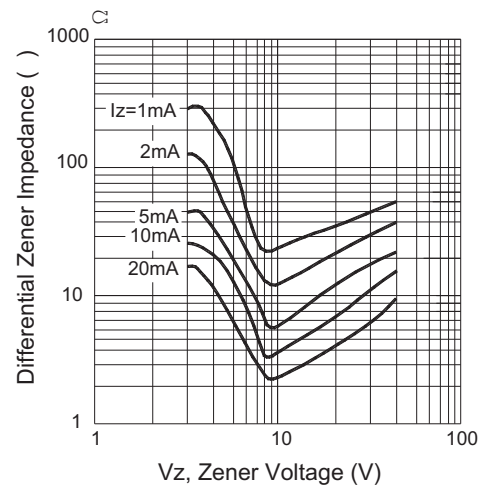
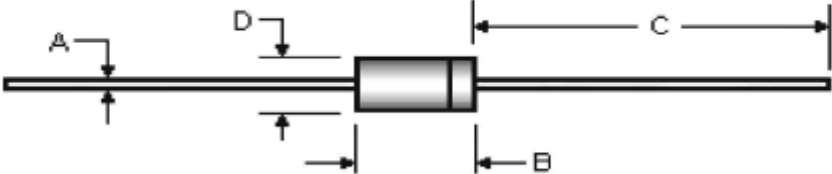


Fig. 4 Typical Zener Impedance vs. Zener Voltage

HERMETICALLY SEALED GLASS ZENER VOLTAGE REGULATORS

PACKAGE OUTLINE

DO-41

| Package | Case Outline | | | |
|----------|--|------|--------|-------|
| DO-41 |  | | | |
| DO-41 | DO-41 | | | |
| DIM | Millimeters | | Inches | |
| | Min | Max | Min | Max |
| A | 0.72 | 0.86 | 0.028 | 0.034 |
| B | 4.07 | 5.20 | 0.160 | 0.205 |
| C | 25.40 | --- | 1.000 | --- |
| D | 2.04 | 2.71 | 0.080 | 0.107 |

Notes:

1. All dimensions are within JEDEC standard.
2. DO41 polarity denoted by cathode band.

Disclaimer

All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.