

1N746A-1 thru 1N759A-1 & 1N4370A-1 thru 1N4372A-1



Silicon Zener Diode Series

Rev. V2

Features

- Available in JAN, JANTX, and JANTXV per MIL-PRF-19500/127
- Double Plug Construction
- Metallurgically Bonded
- Axial-leaded Glass DO-35 Style Package
- Also Available in a Hermetically sealed MELF DO-213AA package



Electrical Specifications: $T_A = +25^\circ\text{C}$ (unless otherwise specified)

| JEDEC Type # ¹ | Nominal Zener Voltage $V_Z @ I_{ZT}$ | Zener Test Current ² I_{ZT} | Maximum Zener Impedance ³ $Z_{ZT} @ I_{ZT}$ | Maximum Reverse Current $I_R @ V_R$ | | Maximum Zener Current |
|---------------------------|--------------------------------------|--|--|-------------------------------------|-----|-----------------------|
| | V | mA | Ω | μA | V | mA |
| 1N746A-1 | 3.3 | 20 | 24 | 5 | 1.0 | 120 |
| 1N747A-1 | 3.6 | 20 | 22 | 3 | 1.0 | 110 |
| 1N748A-1 | 3.9 | 20 | 20 | 2 | 1.0 | 100 |
| 1N749A-1 | 4.3 | 20 | 18 | 2 | 1.0 | 90 |
| 1N750A-1 | 4.7 | 20 | 15 | 5 | 1.5 | 85 |
| 1N751A-1 | 5.1 | 20 | 14 | 5 | 2.0 | 75 |
| 1N752A-1 | 5.6 | 20 | 8 | 5 | 2.5 | 70 |
| 1N753A-1 | 6.2 | 20 | 3 | 5 | 3.5 | 65 |
| 1N754A-1 | 6.8 | 20 | 3 | 2 | 4.0 | 60 |
| 1N755A-1 | 7.5 | 20 | 4 | 2 | 5.0 | 55 |
| 1N756A-1 | 8.2 | 20 | 5 | 1 | 6.0 | 50 |
| 1N757A-1 | 9.1 | 20 | 6 | 1 | 7.0 | 45 |
| 1N758A-1 | 10.0 | 20 | 7 | 1 | 8.0 | 40 |
| 1N759A-1 | 12.0 | 20 | 10 | 1 | 9.0 | 35 |
| 1N4370A-1 | 2.4 | 20 | 30 | 100 | 1.0 | 155 |
| 1N4371A-1 | 2.7 | 20 | 30 | 60 | 1.0 | 140 |
| 1N4372A-1 | 3.0 | 20 | 29 | 30 | 1.0 | 125 |

1. Zener voltage tolerance on "A" suffix is +5%. No Suffix denotes +10% tolerance, "C" suffix denotes +2% tolerance and "D" suffix denotes +1% tolerance.
2. Zener voltage is measured with the device junction in thermal equilibrium at an ambient temperature of $25^\circ\text{C} + 3^\circ\text{C}$.
3. Zener impedance is derived by superimposing on I_{ZT} A 60Hz rms a.c. current equal to 10% of I_{ZT}

1N746A-1 thru 1N759A-1 & 1N4370A-1 thru 1N4372A-1



Silicon Zener Diode Series

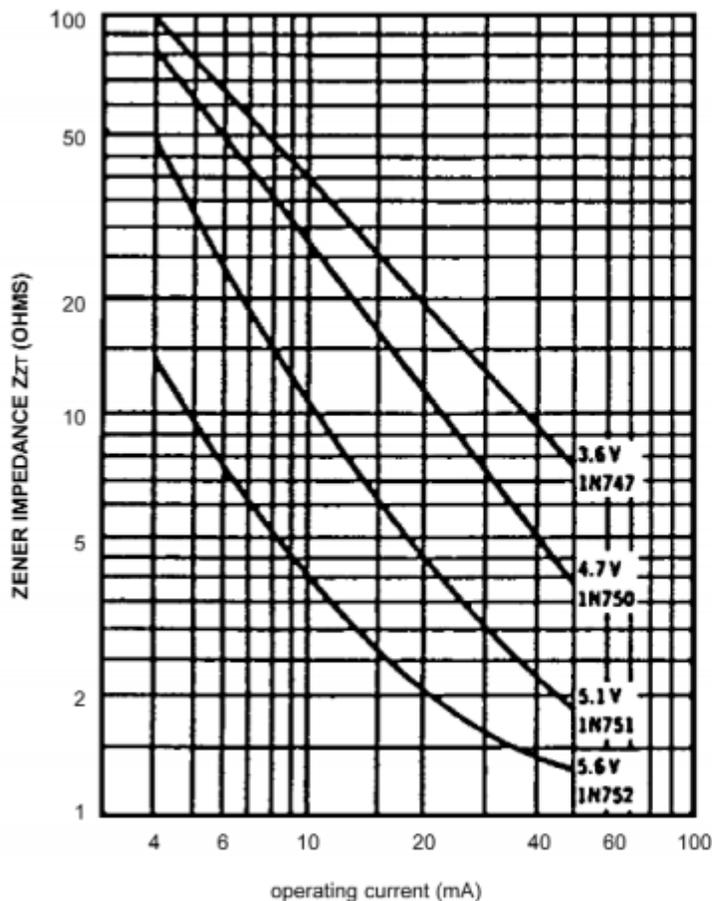
Rev. V2

Absolute Maximum Ratings

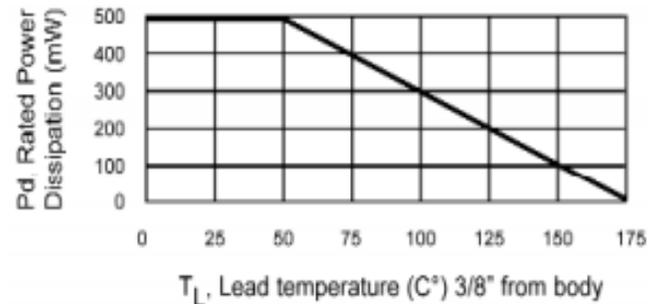
| Parameter | Absolute Maximum |
|---------------------------------|-------------------------|
| Forward Voltage | 1.1 V @ 200 mA |
| DC Power Dissipation | 500 mW @ +50°C |
| Power Derating | 4 mW/°C above +50°C |
| Thermal Resistance | 250°C/W @ L = 0.375 in. |
| Thermal Impedance | 25°C/W |
| Operating & Storage Temperature | -65°C to +175°C |

Typical Performance Curves

Zener Impedance vs. Operating Current



Power Derating Curve



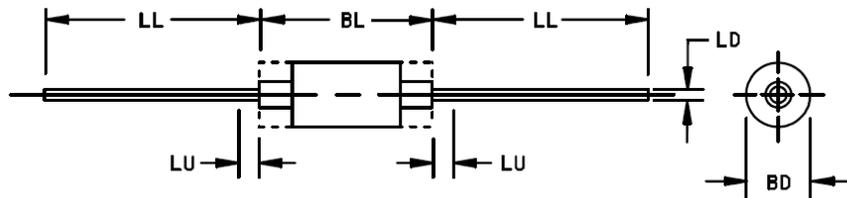
1N746A-1 thru 1N759A-1 & 1N4370A-1 thru 1N4372A-1



Silicon Zener Diode Series

Rev. V2

Outline



| Symbol | Inches | | Millimeters | | Notes |
|--------|--------|-------|-------------|-------|-------|
| | Min. | Max. | Min. | Max. | |
| BD | 0.055 | 0.090 | 1.40 | 2.29 | 3 |
| BL | 0.120 | 0.200 | 3.05 | 5.08 | 4 |
| LD | 0.018 | 0.023 | 0.46 | 0.58 | |
| LL | 1.000 | 1.500 | 25.40 | 38.10 | |
| LU | | 0.050 | | 1.27 | 5 |

Notes:

1. Dimensions are in inches.
2. Millimeters are given for general information only.
3. Dimension BD shall be measured at the largest diameter.
4. The BL dimension shall include the entire body including slugs.
5. Dimension LU shall include the sections of the lead over which the diameter is uncontrolled. This uncontrolled area is defined as the zone between the edge of the diode body and extending .050 inch (1.27 mm) onto the leads.
6. In accordance with ASME Y14.5M, diameters are equivalent to Φ x symbology.

1N746A-1 thru 1N759A-1 & 1N4370A-1 thru 1N4372A-1



Silicon Zener Diode Series

Rev. V2

VPT Components All rights reserved.

Information in this document is provided in connection with VPT Components' products. These materials are provided by VPT Components as a service to its customers and may be used for informational purposes only. Except as provided in VPT Components' Terms and Conditions of Sale for such products or in any separate agreement related to this document, VPT Components assumes no liability whatsoever. VPT Components assumes no responsibility for errors or omissions in these materials. VPT Components may make changes to specifications and product descriptions at any time, without notice. VPT Components makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF VPT COMPONENTS' PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. VPT COMPONENTS FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. VPT COMPONENTS SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

VPT Components' products are not intended for use in medical, lifesaving or life sustaining applications. VPT Components' customers using or selling VPT Components products for use in such applications do so at their own risk and agree to fully indemnify VPT Components for any damages resulting from such improper use or sale.