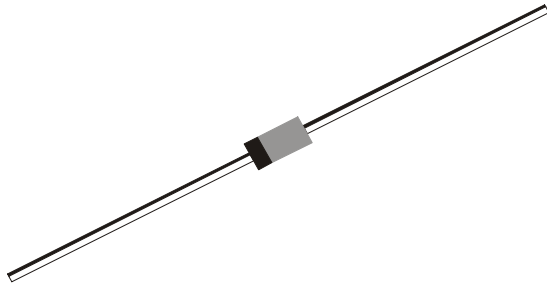


SILICON GLASS PASSIVATED 1.0 WATT ZENER DIODES

**1N4728A to 1N4764A
3.3V to 100V**

**1N4187B to 1N4188B
110V to 120V**

**DO-41
Glass Axial Package**



FEATURES

These Zeners are best suited for General Purpose Industrial, Entertainment, Military & Space Applications. The Glass Passivated Chips are Hermetically Sealed with Double Studs, Providing Excellent Stability and Reliability.

ABSOLUTE MAXIMUM RATINGS

| DESCRIPTION | SYMBOL | VALUE | UNIT |
|--|-----------|-------------|----------------------|
| Power Dissipation @ $T_a=50^\circ\text{C}$ | P_D | 1 | W |
| Derate above 50°C | | 6.67 | mW/ $^\circ\text{C}$ |
| Operating and Storage Temperature | T_{stg} | - 65 to+200 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ $V_F < 1.2\text{V}$ @ 200mA)

| Device | V_{ZT}^{**} @ I_{ZT} | r_{zt}^{**} | I_{ZT} | r_{zK} @ I_{zK} | Temp . Coeff of Zener Voltage typ. %/ $^\circ\text{C}$ | I_R | V_R | I_{ZM} | I_{ZSM}^* | |
|---------|--------------------------|---------------------|-------------|-----------------------------|--|--------------------------|------------|-------------|-------------|------|
| | Nominal (V) | MAX (Ω) | MAX (mA) | MAX (Ω) (mA) | | Max (μA) | Max (V) | Max (mA) | Max (mA) | |
| 1N4728A | 3.3 | 10 | 76.0 | 400 | 1.00 | -0.06 | 100 | 1.0 | 276 | 1380 |
| 1N4729A | 3.6 | 10 | 69.0 | 400 | 1.00 | -0.06 | 100 | 1.0 | 252 | 1260 |
| 1N4730A | 3.9 | 9.0 | 64.0 | 400 | 1.00 | -0.05 | 50 | 1.0 | 234 | 1190 |
| 1N4731A | 4.3 | 9.0 | 58.0 | 400 | 1.00 | -0.03 | 10 | 1.0 | 217 | 1070 |
| 1N4732A | 4.7 | 8.0 | 53.0 | 500 | 1.00 | -0.01 | 10 | 1.0 | 193 | 970 |
| 1N4733A | 5.1 | 7.0 | 49.0 | 550 | 1.00 | 0.01 | 10 | 1.0 | 178 | 890 |
| 1N4734A | 5.6 | 5.0 | 45.0 | 600 | 1.00 | 0.03 | 10 | 2.0 | 162 | 810 |
| 1N4735A | 6.2 | 2.0 | 41.0 | 700 | 1.00 | 0.04 | 10 | 3.0 | 146 | 730 |
| 1N4736A | 6.8 | 3.5 | 37.0 | 700 | 1.00 | 0.05 | 10 | 4.0 | 133 | 660 |
| 1N4737A | 7.5 | 4.0 | 34.0 | 700 | 0.50 | 0.05 | 10 | 5.0 | 121 | 605 |
| 1N4738A | 8.2 | 4.5 | 31.0 | 700 | 0.50 | 0.06 | 10 | 6.0 | 110 | 550 |
| 1N4739A | 9.1 | 5.0 | 28.0 | 700 | 0.50 | 0.06 | 10 | 7.0 | 100 | 500 |
| 1N4740A | 10 | 7.0 | 25.0 | 700 | 0.25 | 0.07 | 10 | 7.6 | 91 | 454 |
| 1N4741A | 11 | 8.0 | 23.0 | 700 | 0.25 | 0.07 | 5 | 8.4 | 83 | 414 |
| 1N4742A | 12 | 9.0 | 21.0 | 700 | 0.25 | 0.07 | 5 | 9.1 | 76 | 380 |
| 1N4743A | 13 | 10 | 19.0 | 700 | 0.25 | 0.07 | 5 | 9.9 | 69 | 344 |
| 1N4744A | 15 | 14 | 17.0 | 700 | 0.25 | 0.08 | 5 | 11.4 | 61 | 304 |
| 1N4745A | 16 | 16 | 15.5 | 700 | 0.25 | 0.08 | 5 | 12.2 | 57 | 285 |
| 1N4746A | 18 | 20 | 14.0 | 750 | 0.25 | 0.08 | 5 | 13.7 | 50 | 250 |
| 1N4747A | 20 | 22 | 12.5 | 750 | 0.25 | 0.08 | 5 | 15.2 | 45 | 225 |
| 1N4748A | 22 | 23 | 11.5 | 750 | 0.25 | 0.08 | 5 | 16.7 | 41 | 205 |
| 1N4749A | 24 | 25 | 10.5 | 750 | 0.25 | 0.08 | 5 | 18.2 | 38 | 190 |
| 1N4750A | 27 | 35 | 9.5 | 750 | 0.25 | 0.09 | 5 | 20.6 | 34 | 170 |
| 1N4751A | 30 | 40 | 8.5 | 1000 | 0.25 | 0.09 | 5 | 22.8 | 30 | 150 |
| 1N4752A | 33 | 45 | 7.5 | 1000 | 0.25 | 0.09 | 5 | 25.1 | 27 | 135 |

** Pulse Condition : $20\text{ms} \leq t_p \leq 50\text{ms}$, Duty Cycle $\leq 2\%$

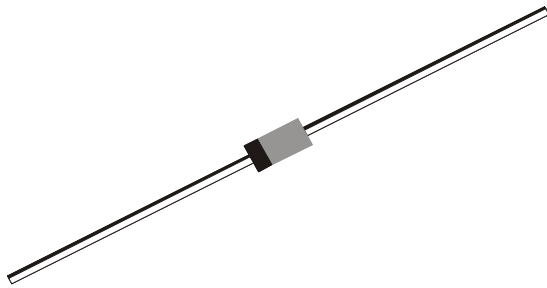
* Rectangle wave form ($t_p=10\text{ms}$)

SILICON GLASS PASSIVATED 1.0 WATT ZENER DIODES

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3.3V to 100V**

**1N4187B to 1N4188B
110V to 120V**

**DO-41
Glass Axial Package**



ELECTRICAL CHARACTERISTICS (T_a=25°C V_F <1.2V @ 200mA)

| Device | V _{ZT} ** @ I _{ZT} | r _{zt} ** | I _{ZT} | r _{ZK} @ I _{ZK} | Temp . Coeff of Zener Voltage typ. %/ °C | I _R | V _R | I _{ZM} | I _{ZSM} * | |
|---------|--------------------------------------|--------------------|-----------------|-----------------------------------|--|----------------|----------------|-----------------|--------------------|-----|
| | Nominal (V) | MAX (Ω) | MAX (mA) | MAX (Ω) | | Max (μA) | | Max (mA) | Max (mA) | |
| 1N4753A | 36 | 50 | 7.0 | 1000 | 0.25 | 0.09 | 5 | 27.4 | 25 | 125 |
| 1N4754A | 39 | 60 | 6.5 | 1000 | 0.25 | 0.09 | 5 | 29.7 | 23 | 115 |
| 1N4755A | 43 | 70 | 6.0 | 1500 | 0.25 | 0.09 | 5 | 32.7 | 22 | 110 |
| 1N4756A | 47 | 80 | 5.5 | 1500 | 0.25 | 0.09 | 5 | 35.8 | 19 | 95 |
| 1N4757A | 51 | 95 | 5.0 | 1500 | 0.25 | 0.09 | 5 | 38.8 | 18 | 90 |
| 1N4758A | 56 | 110 | 4.5 | 2000 | 0.25 | 0.09 | 5 | 42.6 | 16 | 80 |
| 1N4759A | 62 | 125 | 4.0 | 2000 | 0.25 | 0.09 | 5 | 47.1 | 14 | 70 |
| 1N4760A | 68 | 150 | 3.7 | 2000 | 0.25 | 0.09 | 5 | 51.7 | 13 | 65 |
| 1N4761A | 75 | 175 | 3.3 | 2000 | 0.25 | 0.09 | 5 | 56.0 | 12 | 60 |
| 1N4762A | 82 | 200 | 3.0 | 3000 | 0.25 | 0.09 | 5 | 62.2 | 11 | 55 |
| 1N4763A | 91 | 250 | 2.8 | 3000 | 0.25 | 0.09 | 5 | 69.2 | 10 | 50 |
| 1N4764A | 100 | 350 | 2.5 | 3000 | 0.25 | 0.09 | 5 | 76.0 | 9.0 | 45 |
| 1N4187B | 110 | 450 | 2.3 | 4000 | 0.25 | 0.10 | 5 | 83.6 | 8.6 | 72 |
| 1N4188B | 120 | 550 | 2.0 | 4500 | 0.25 | 0.10 | 5 | 91.2 | 7.8 | 66 |

Tolerance on Nominal V_Z:

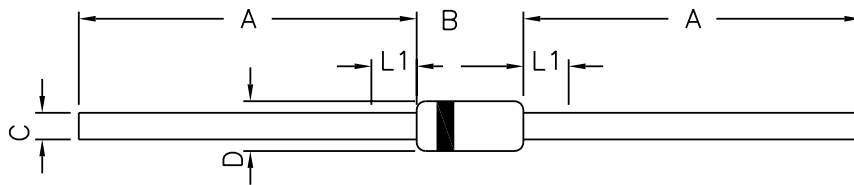
Device 1N4728A to 1N4764A - Suffix ' A ' specifies ± 5% tolerance and without any ' Suffix ' ± 10%

Device 1N4187B to 1N4188B - Suffix ' B ' specifies ± 5% tolerance

** Pulse Condition : 20ms ≤ t_p ≤ 50ms, Duty Cycle ≤ 2%

* Rectangle wave form (t_p=10ms)

DO-41 Glass Axial Package

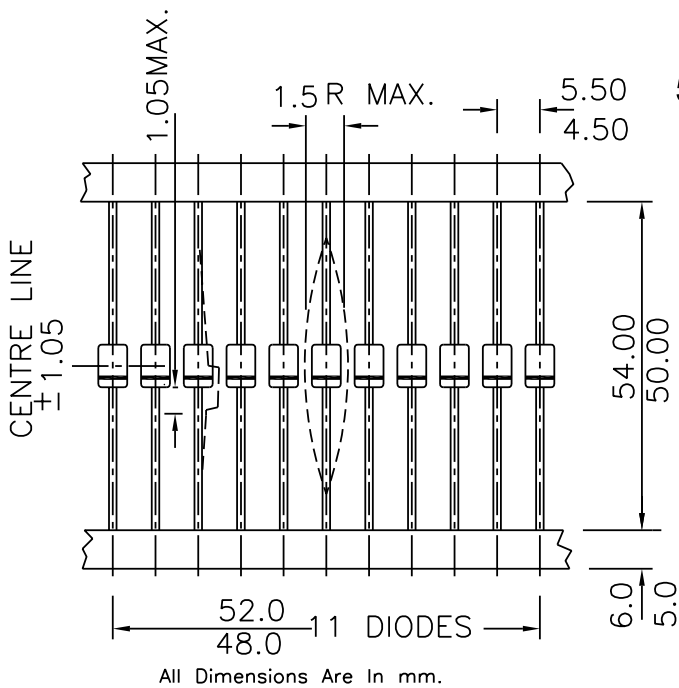


| DIM | MIN | MAX |
|-----|-------|------|
| A | 25.40 | - |
| B | - | 5.20 |
| C | 0.72 | 0.86 |
| D | 2.04 | 2.71 |
| L1 | - | 1.27 |

NOTES:-

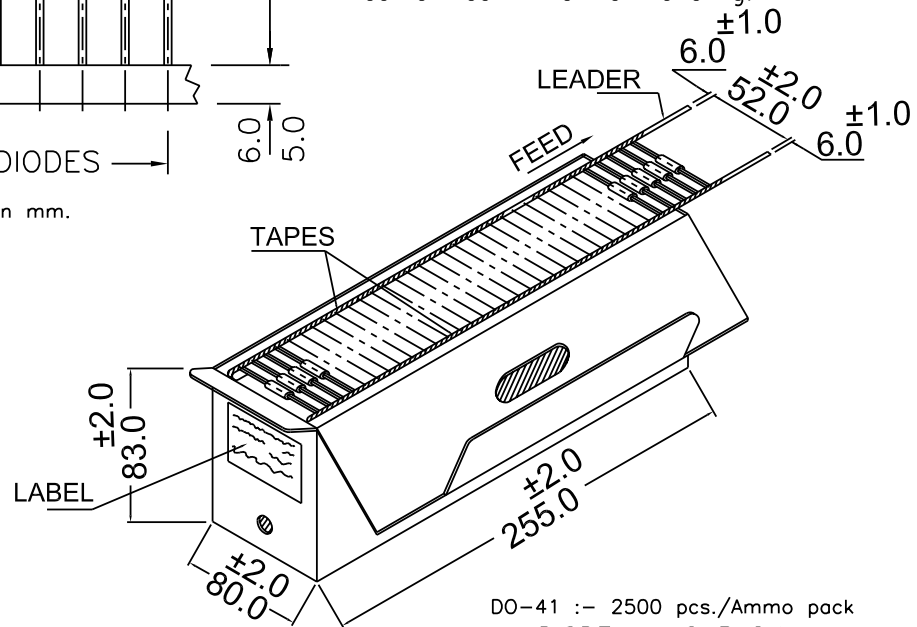
Cathode is marked by Band.
All Dimensions Are In mm.

DO-41, 52mm Taping Specification



52mm Taping Specification

1. T & A Indicates Axial Tape & Ammo packing (52 mm Tape Specing)
2. 300 mm (min) leader tape on every spool.
3. No. of empty places allowed 0.25% without consecutive empty places.
4. Ends of leads shall preferably not protrude beyond the tapes.
5. Components shall be held sufficiently in the tape or tapes so that they can not come free in normal handling.



on request also available in 26 mm Tape and Ammo Pack

Packing Detail

| PACKAGE | STANDARD PACK | | INNER CARTON BOX | | OUTER CARTON BOX | | |
|-----------|---------------|------------------|------------------|------|------------------|-------|-------|
| | Details | Net Weight/Qty | Size | Qty | Size | Qty | Qty |
| DO-41 T&A | 2.5K/ammo box | 1.04kg/2.55K pcs | 10"X3.5"X3.5" | 2.5K | 12.7"X12.7"X20" | 62.5K | 30Kgs |

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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