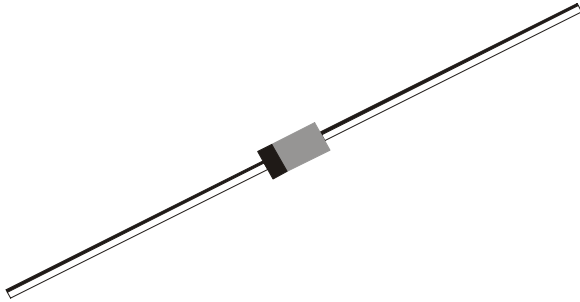


SILICON GLASS PASSIVATED 2.0 WATT ZENER DIODES

ZY7.5V to ZY47V

DO- 41
Glass Axial Package



For use in Stabilizing and Clipping Circuits with High Power Rating

ABSOLUTE MAXIMUM RATINGS

| DESCRIPTION | SYMBOL | VALUE | UNIT |
|--------------------------------------------|-----------|-------------|------------------|
| Power Dissipation @ $T_a=25^\circ\text{C}$ | * P_D | 2 | W |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 55 to+150 | $^\circ\text{C}$ |

THERMAL RESISTANCE

| | | | |
|---------------------------------|-----------------|----|-----|
| Junction to ambient in free air | * $R_{th(j-a)}$ | 60 | K/W |
|---------------------------------|-----------------|----|-----|

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

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise) $V_F < 1.1\text{V}$ @ 1A

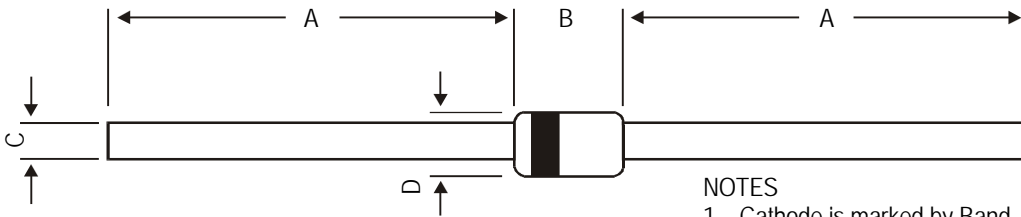
| Device # | **Zener Voltage @ I_{ZT} | | Dynamic Resistance @ I_{ZT} $f=1\text{KHz}$ (max) r_{zj} (W) | Temp . Coeff of Zener Voltage @ I_Z test $a V_Z 10^{-4}/\text{K}$ | Test Current @ I_Z test I_{ZT} (mA) | Reverse Voltage @ $I_R = 1 \text{ mA}$ V_R (V) | ***Admissible Zener Current @ $T_a=45^\circ\text{C}$ I_Z (mA) |
|----------|----------------------------|------|---------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------|
| | min V_Z (V) | max | | | | | |
| ZY7.5 | 7.0 | 7.9 | 2 | -0.....+7 | 100 | >2.0 | 200 |
| ZY8.2 | 7.7 | 8.7 | 2 | +3.....+8 | 100 | >3.5 | 180 |
| ZY9.1 | 8.5 | 9.6 | 4 | +3.....+8 | 50 | >7.4 | 165 |
| ZY10 | 9.4 | 10.6 | 4 | +5.....+9 | 50 | >8.2 | 145 |
| ZY11 | 10.4 | 11.6 | 7 | +5.....+10 | 50 | >9.2 | 135 |
| ZY12 | 11.4 | 12.7 | 7 | +5.....+10 | 50 | >10 | 120 |
| ZY13 | 12.4 | 14.1 | 10 | +5.....+10 | 50 | >10.7 | 110 |
| ZY15 | 13.8 | 15.8 | 10 | +5.....+10 | 50 | >12 | 98 |
| ZY16 | 15.3 | 17.1 | 15 | +6.....+11 | 25 | >13.3 | 90 |
| ZY18 | 16.8 | 19.1 | 15 | +6.....+11 | 25 | >14.7 | 80 |
| ZY20 | 18.8 | 21.2 | 15 | +6.....+11 | 25 | >16.5 | 72 |
| ZY22 | 20.8 | 23.3 | 15 | +6.....+11 | 25 | >18.3 | 66 |
| ZY24 | 22.8 | 25.6 | 15 | +6.....+11 | 25 | >20.1 | 60 |
| ZY27 | 25.1 | 28.9 | 15 | +6.....+11 | 25 | >22.5 | 53 |
| ZY30 | 28 | 32 | 15 | +6.....+11 | 25 | >25.1 | 48 |
| ZY33 | 31 | 35 | 15 | +6.....+11 | 25 | >27.8 | 4 |
| ZY36 | 34 | 38 | 40 | +6.....+11 | 10 | >30.2 | 40 |
| ZY39 | 37 | 41 | 40 | +6.....+11 | 10 | >32.9 | 37 |
| ZY43 | 40 | 46 | 45 | +7.....+12 | 10 | >35.6 | 33 |
| ZY47 | 44 | 50 | 45 | +7.....+12 | 10 | >39.2 | 30 |

**Tested with Pulse $t_p=5\text{ms}$

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

ZY7.5_47V Rev _2 050604E

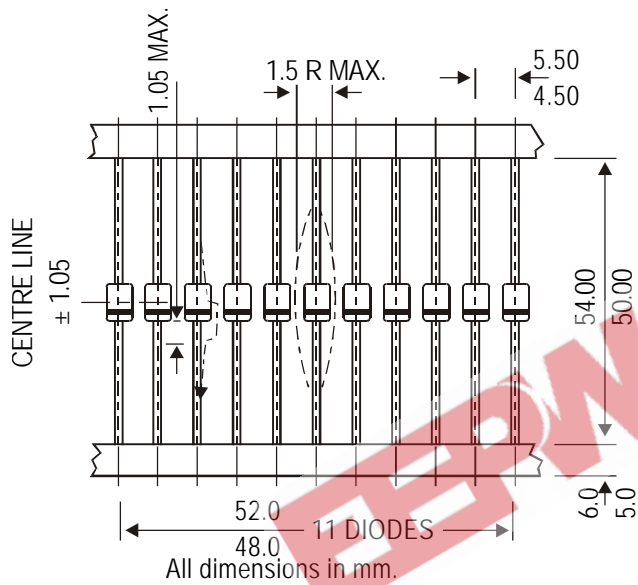
DO- 41 Glass Axial Package



| DIM | MIN | MAX |
|-----|-------|------|
| A | 27.90 | — |
| B | 4.06 | 5.51 |
| C | 0.71 | 0.87 |
| D | 2.03 | 2.72 |

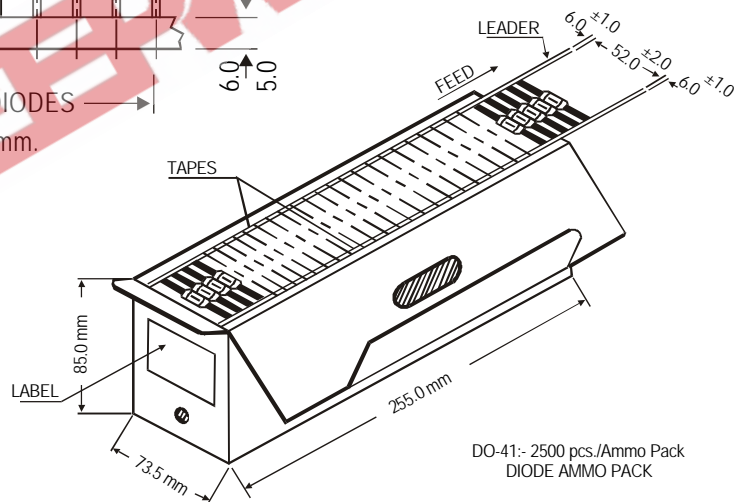
- NOTES
1. Cathode is marked by Band.
 2. All dimensions are in mm.

DO-41, 52mm Taping Specification



52 mm Taping Specification

1. T & A indicates Axil Tape & Ammo packing (52 mm Tape Spacing).
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 | Gr Wt |
| DO-41 T&A | 2.5K/ammo box | 1.04 kg/2.5K pcs | 10" x 3.5" x 3.5" | 2.5K | 12.7" x 12.7" x 20" | 62.5K | 30 kgs |



Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete 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 Discrete 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).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



CDIL is a registered Trademark of
Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.

Telephone + 91-11-2579 6150, 5141 1112 Fax + 91-11-2579 5290, 5141 1119

email@cdil.com www.cdilsemi.com