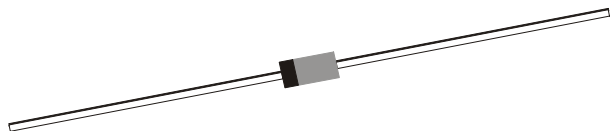


**SILICON DIAC
BIDIRECTIONAL TRIGGER DIODES
GLASS PASSIVATED PNPN DEVICE**

DB3, DB4

**DO- 35
Glass Axial Package**



Functioning as a Trigger Diode with a Fixed Voltage Reference, DB3/DB4 can be used in Conjunction with Triacs for Simplified Gate Control Circuits or as a Starting Element in Fluorescent Lamp Ballasts

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless specified otherwise))

DESCRIPTION	SYMBOL	VALUE	UNIT
Power Dissipation on Printed Circuit ($L=10\text{mm}$) ($T_a=50^\circ\text{C}$)	P_{tot}	150	mW
Repetitive Peak on-State Current ($t_p=20\mu\text{s}$, $f=100\text{Hz}$)	I_{TRM}	2	A
Storage Temperature Range	T_{stg}	- 40 to +125	$^\circ\text{C}$
Junction Temperature Range	T_j	- 40 to +110	$^\circ\text{C}$
THERMAL RESISTANCE			
Junction to Ambient in free air	$R_{\text{th (j-a)}}$	400	$^\circ\text{C/W}$
Junction to Leads	$R_{\text{th (j-l)}}$	150	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_j=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
* Breakover Voltage	V_{BO}	** $C = 22\text{nF}$ see diagram 1 DB3 DB4	28 35	36 45	V V
Breakover Voltage Symmetry	$[I+V_{\text{BO}} -I-V_{\text{BO}}]$	** $C = 22\text{nF}$ see diagram 1		± 3	V
* Dynamic Breakover Voltage	$I\Delta V_{\pm I}$	$\Delta I=[I_{\text{BO}} \text{ to } I_{\text{F}}=10\text{mA}]$ see diagram 1	5		V
* Output Voltage	V_{O}	see diagram 2	5		V
* Breakover Current	I_{BO}	** $C = 22\text{nF}$		50	μA
* Rise Time	t_r	see diagram 3	TYP 1.5		μs
* Leakage Current	I_{B}	$V_{\text{B}} = 0.5 V_{\text{BO}}$ max see diagram 1		10	μA

* Electrical characteristic applicable in both forward and reverse directions

** Connected in parallel with the devices.

DB3_DB4Rev_1 190402E

DIAGRAM 1 :Current-voltage characteristics

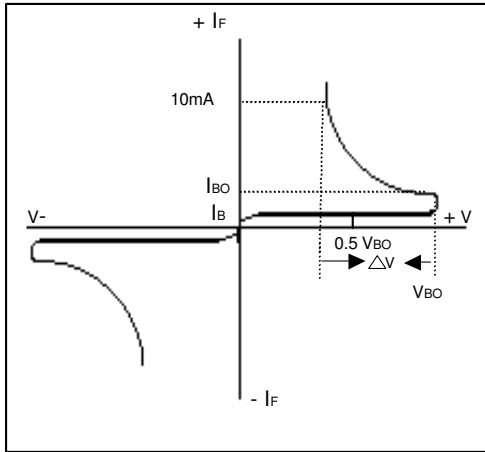


DIAGRAM 2 :Test circuit for output voltage

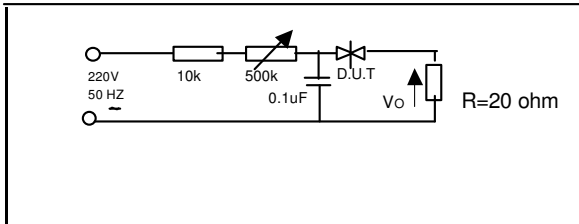
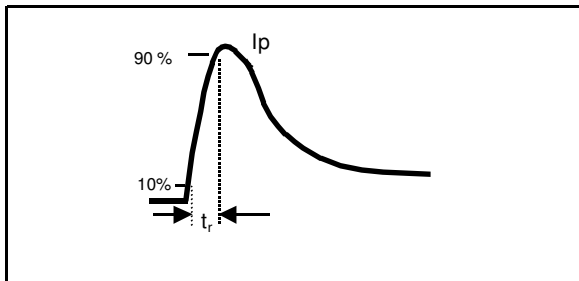
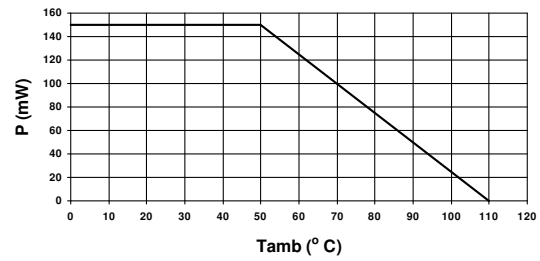


DIAGRAM 3 : Test circuit see diagram 2.
Adjust R for $I_p = 0.5A$

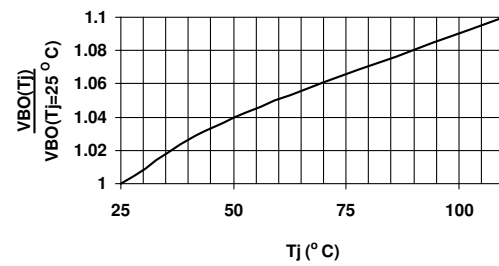


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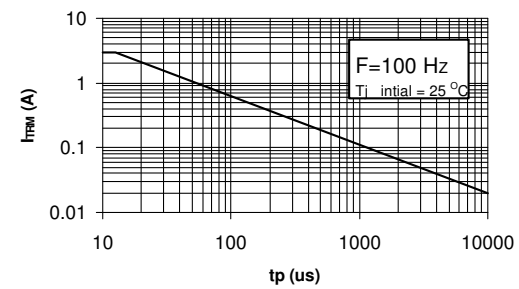
**Power dissipation versus ambient temperature
(maximum values)**



**Relative variation of V_{BO} versus junction temperature
(typical values)**

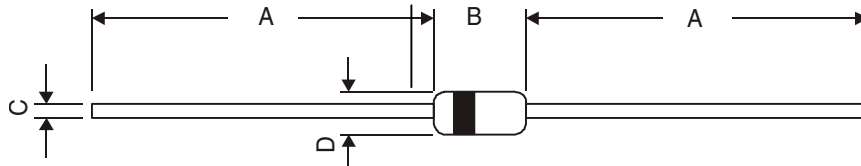


Peak pulse current versus pulse duration (maximum value)



DO- 35 Glass Axial Package

DO-35 Glass Axial Package

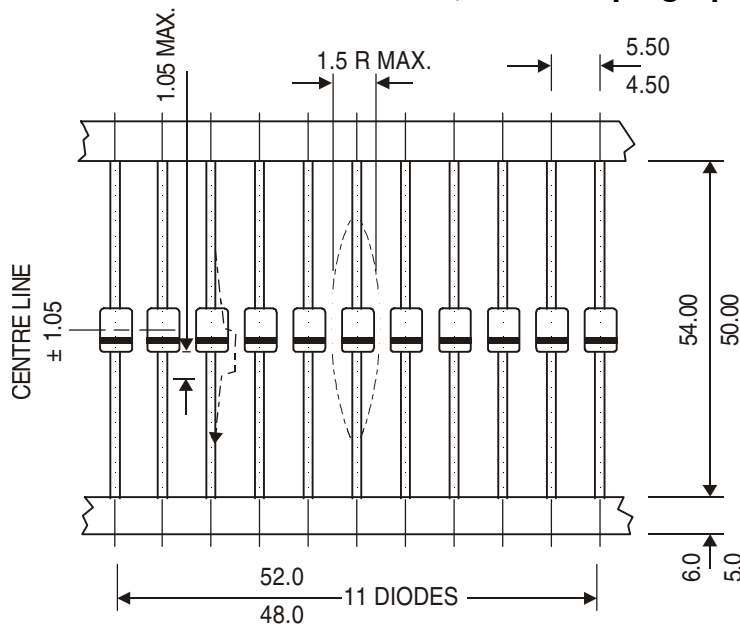


NOTE: Cathode is marked by Band.

DIM	MIN	MAX
A	25.40	—
B	3.05	4.15
C	0.46	0.56
D	1.70	2.29

All dimensions are in mm.

DO-35, 52mm Taping Specification

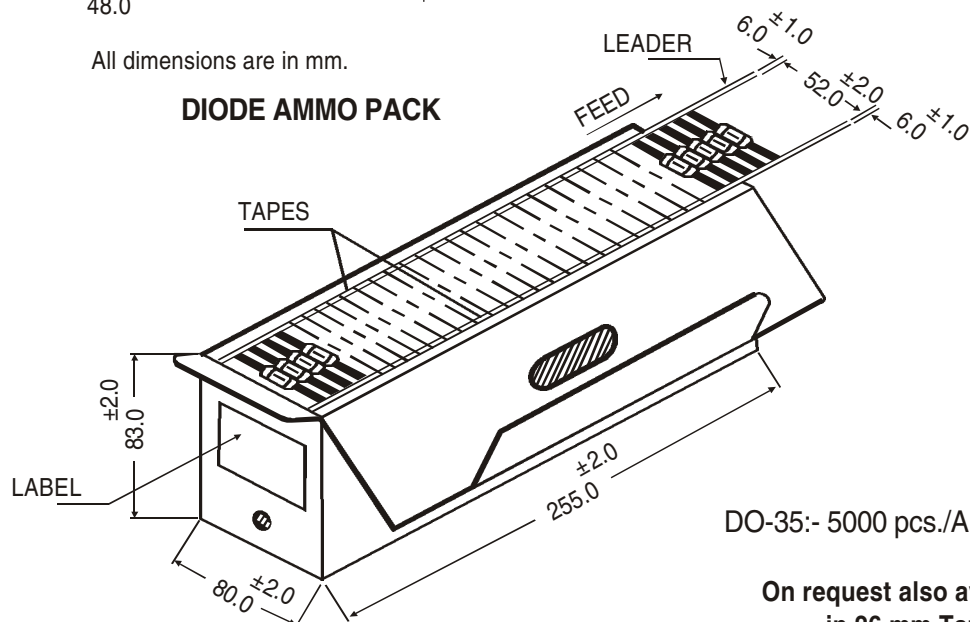


All dimensions are in mm.

52 mm Taping Specification

1. T & A indicates Axial Tape and Ammo Packing (52 mm Tape Spacing).
2. 300 mm (min) leader tape on every tape.
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.

DIODE AMMO PACK



DO-35:- 5000 pcs./Ammo Pack

On request also available
in 26 mm Tape

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
DO-35 T&A	5K/ammo box	0.88 kg/5K pcs	10" x 3.2" x 3.2"	5K	12.7" x 12.7" x 20"	125K	25 kgs

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).

Customer Notes

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 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).

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