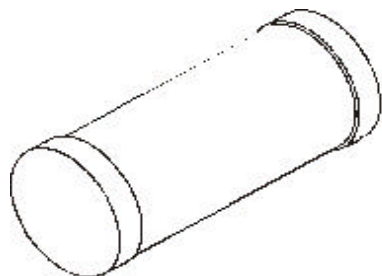


**SILICON DIAC
BIDIRECTIONAL TRIGGER DIODE
GLASS PASSIVATED PNPN DEVICE**

CLLDB3

**SOD - 80C
Mini MELF (LL-34)**



Functioning as a Trigger Diode with a Fixed Voltage Reference, CLLDB3 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=10mm) ($T_a=50^\circ\text{C}$)	P_{tot}	150	mW
Up to $T_a = 50^\circ\text{C}$ and Mounted on a Ceramic Substrate of 10mm x 10mm x 0.6mm	P_{tot}	120	mW
Repetitive Peak on-State Current ($t_p=20\text{ms}$, $f=100\text{Hz}$)	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-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 = 22nF see diagram 1	28	36	V
Breakover Voltage Symmetry	$[+V_{\text{BO}} - -V_{\text{BO}}]$	** C = 22nF see diagram 1		± 3	V
* Dynamic Breakover Voltage	$ \Delta V_{\pm} $	$\Delta 1=[I_{\text{BO}} \text{ to } I_{\text{F}}=10\text{mA}]$ see diagram 1	5		V
* Output Voltage	V_{O}	see diagram 2	5		V
* Breakover Current	I_{BO}	** C = 22nF		50	μA
* Rise Time	t_r	see diagram 3	TYP 1.5		μs
* Leakage Current	I_{B}	$V_{\text{B}} = 0.5 V_{\text{BO}} \text{ max}$ see diagram 1		10	μA

* Electrical characteristic applicable in both forward and reverse directions

** Connected in parallel with the devices.

CLLDB3

DIAGRAM 1 :Current-voltage characteristics

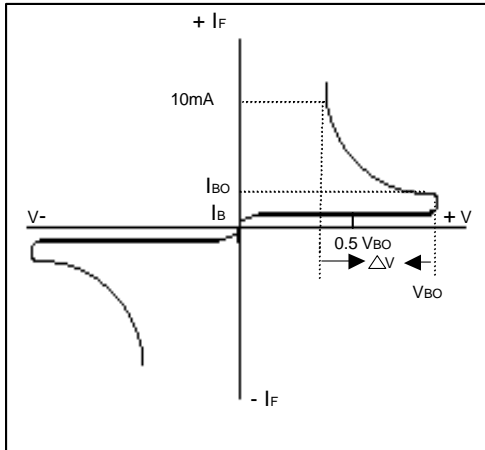


DIAGRAM 2 :Test circuit for output voltage

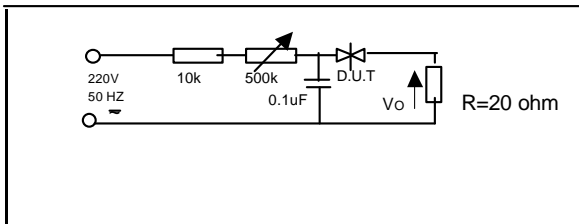
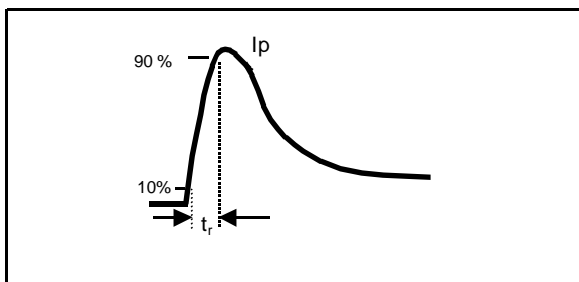
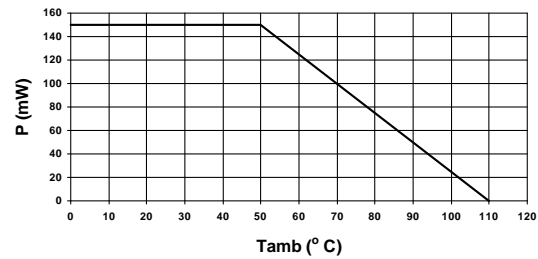


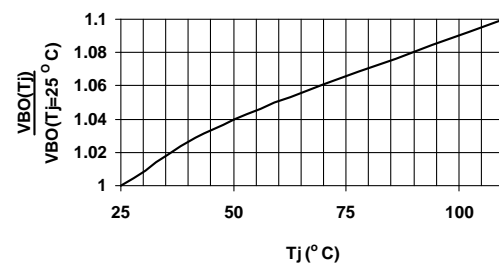
DIAGRAM 3 : Test circuit see diagram 2.
Adjust R for $I_p=0.5A$



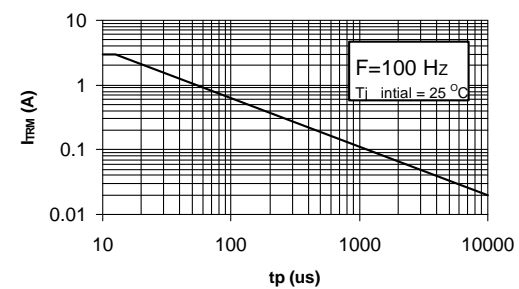
**Power dissipation versus ambient temperature
(maximum values)**



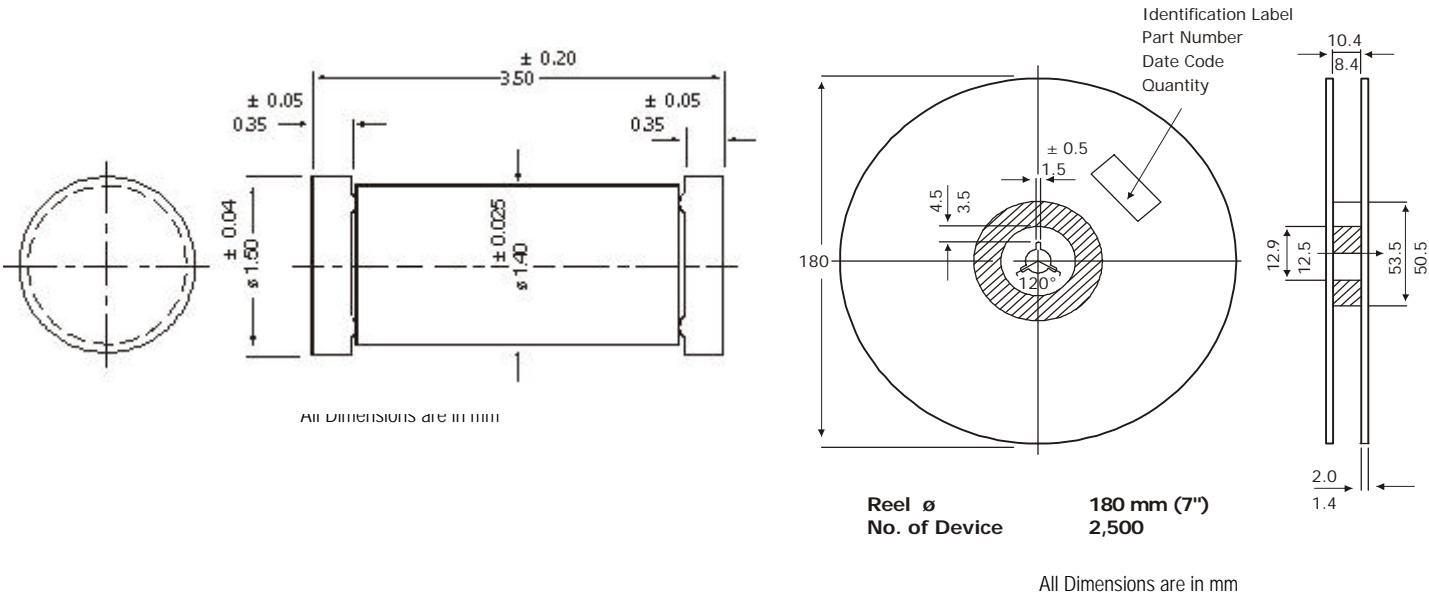
**Relative variation of V_{BO} versus junction temperature
(typical values)**



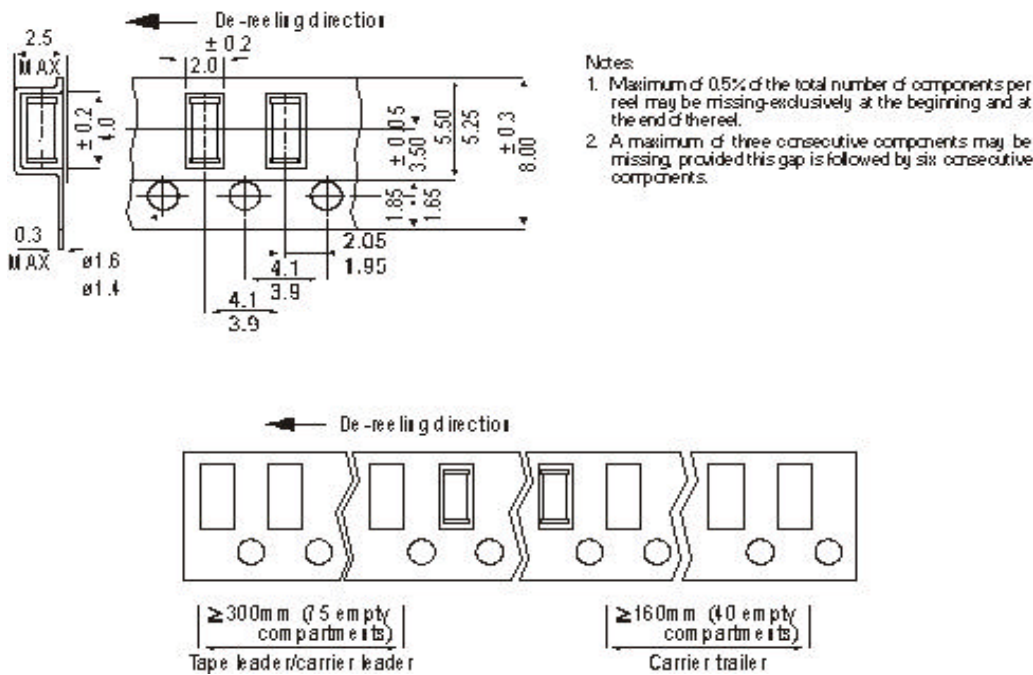
Peak pulse current versus pulse duration (maximum value)



SOD 80C (LL-34) Mini MELF Hermetically Sealed Glass Package



TAPE & REEL



All Dimensions are in mm

Drawings are not to scale

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
SOD-80C T&R	2.5K/reel	225 gm/2.5K pcs	9" x 9" x 9"	40K	18" x 12" x 10" 19" x 19" x 20"	80K 320K	7.2 kgs 28.8 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).

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