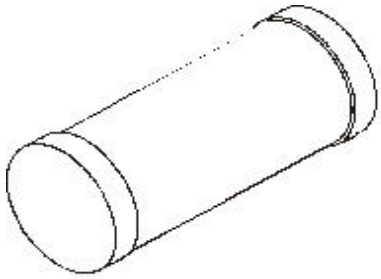
SILICON DIAC
BIDIRECTIONAL TRIGGER DIODE
GLASS PASSIVATED PNPN DEVICE

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=25ºC unless specified otherwise))

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

ELECTRICAL CHARACTERISTICS (T_j=25ºC 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	$[I+V_{BO}I-I-V_{BO}I]$	** C = 22nF see diagram 1		± 3	V
* Dynamic Breakover Voltage	$I\Delta V\pm I$	$\Delta1=[I_{BO}$ to I_F=10mA] 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_B = 0.5 V_{BO} 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

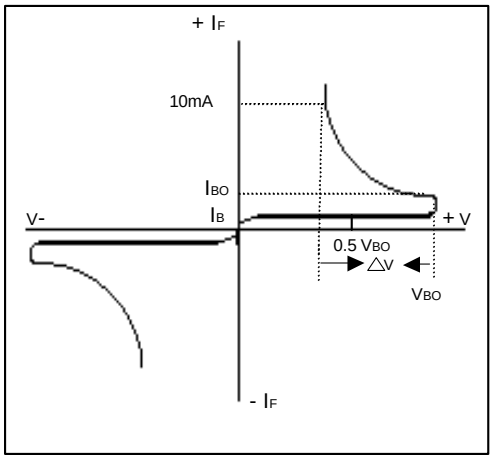


DIAGRAM 2 :Test circuit for output voltage

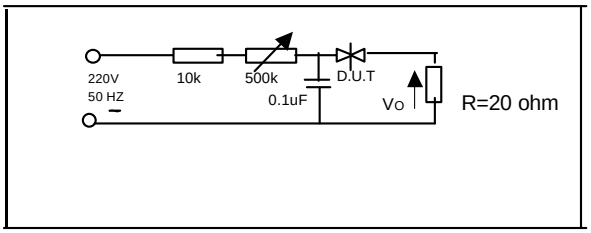
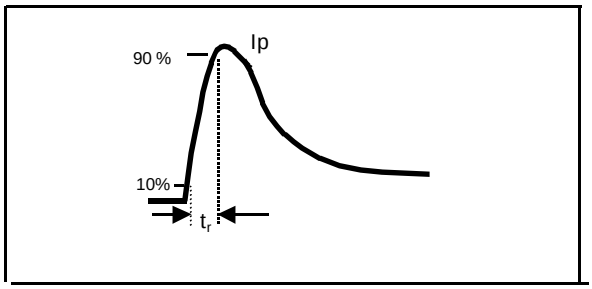
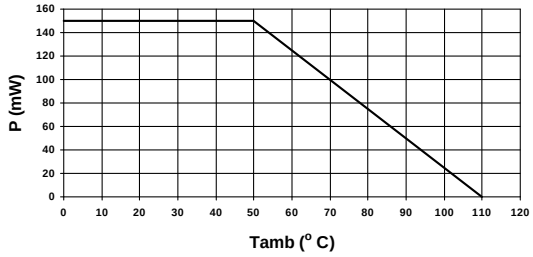


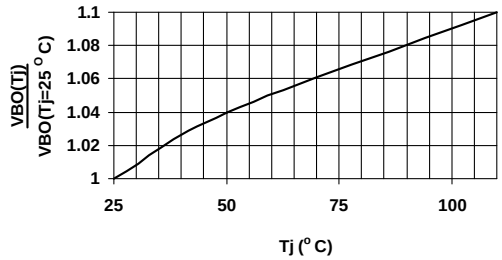
DIAGRAM 3 : Test circuit see diagram 2.
Adjust R for Ip=0.5A



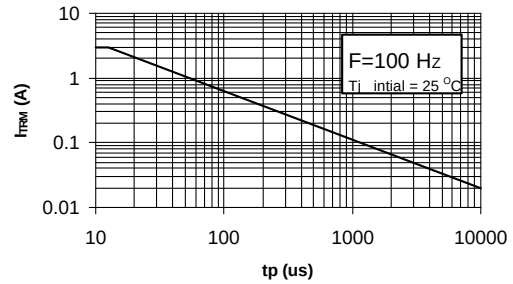
Power dissipation versus ambient temperature (maximum values)



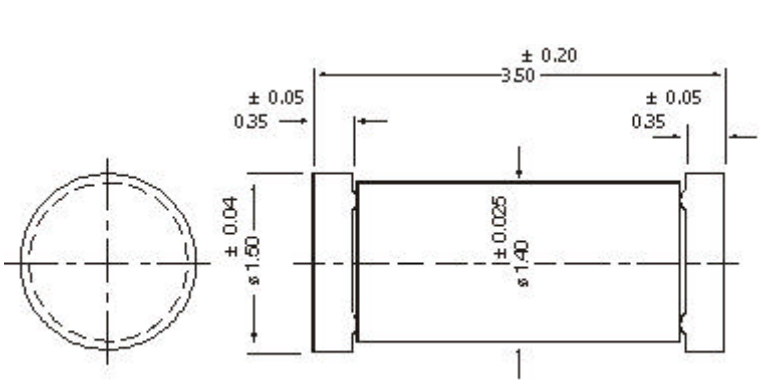
Relative variation of V_{BO} versus junction temperature (typical values)



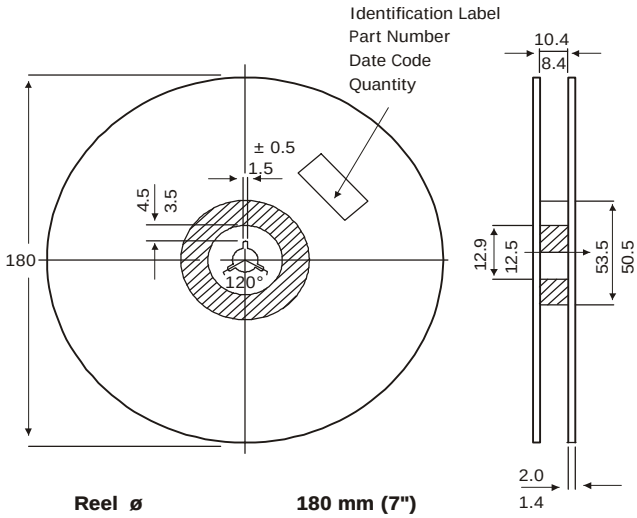
Peak pulse current versus pulse duration (maximum value)



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



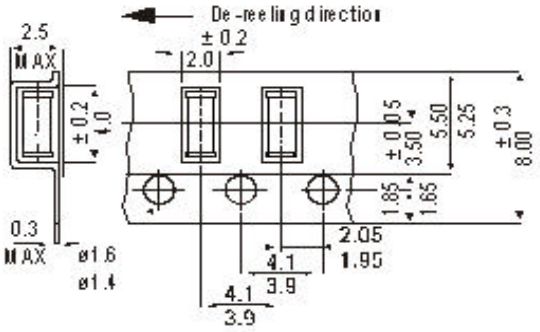
All Dimensions are in mm



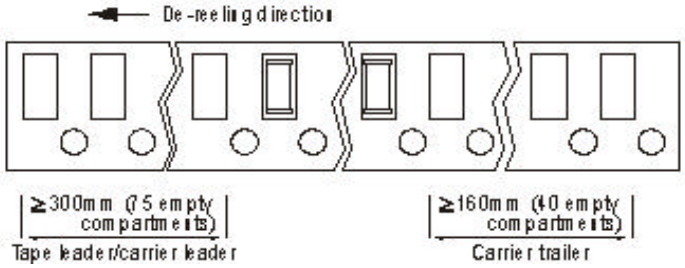
Reel ø	**180 mm (7")**
No. of Device	**2,500**

All Dimensions are in mm

TAPE & REEL



Notes:
1. Maximum of 0.5% of the total number of components per reel may be missing exclusively at the beginning and at the end of the reel.
2. A maximum of three consecutive components may be missing, provided this gap is followed by six consecutive components.



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

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