

TAITRON

components incorporated

Bidirectional DIAC Trigger Diode

DB3AM

Bidirectional DIAC Trigger Diode

Features

- Low breakover current
- Excellent symmetry
- Very low leakage current
- Trigger diode with a fixed voltage reference
- RoHS Compliance



Mini-MELF (SOD80C)



Mechanical Data

Case:	Mini-MELF Glass Case (SOD80C)
Weight:	Approx. 0.05 gram

Maximum Ratings and Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	Value			Unit	Conditions
		Min.	Typ.	Max.		
V_{BO}	Breakover Voltage*	28	32	36	V	$I_{BO}, C=22\text{nF}^{**}$
$ +V_{BO} - -V_{BO} $	Breakover Voltage Symmetry	-3	-	3	V	$I_{BO}, C=22\text{nF}^{**}$
$ \pm\Delta V $	Dynamic Breakover Voltage**	5	-	-	V	V_{BO} and V_F at 10mA
V_O	Output Voltage*	5	-	-	V	See Fig.6 ($R=20\Omega$)
I_{BO}	Breakover Current*	-	-	50	μA	$C=22\text{nF}^{**}$
T_r	Rise Time*	-	-	2	μs	See Fig.5
I_B	Leakage Current*	-	-	10	μA	$V_B=0.5V_{BO}$ Max.
I_P	Peak Current*	0.3	-	-	A	See Fig.6 (Gate)
P_d	Power Dissipation on Printed Circuit	-	-	150	mW	$T_a=50^{\circ}\text{C}$
I_{TRM}	Repetitive Peak on-state Current	-	-	2	A	$t_p=20\mu\text{s}, f=100\text{Hz}$
R_{thJA}	Typical Thermal Resistance	-	-	400	$^{\circ}\text{C} / \text{W}$	
R_{thJL}		-	-	150	$^{\circ}\text{C} / \text{W}$	

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Symbol	Description	Value	Unit	Conditions
T _J	Operating Temperature range	-40 to + 110	°C	
T _{STG}	Storage Temperature Range	-40 to + 125		

*Electrical characteristic applicable in forward and reverse directions.

**Connected in parallel with the devices.

Typical Characteristics Curves

Fig.1-Max. Power Dissipation

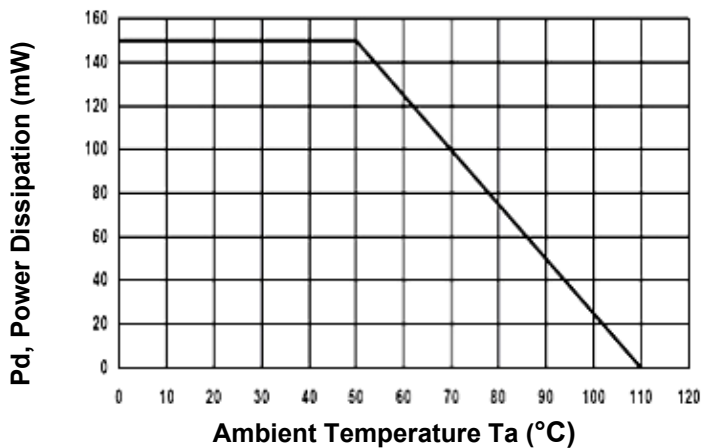


Fig.2- Typical Relative Variation of VBO

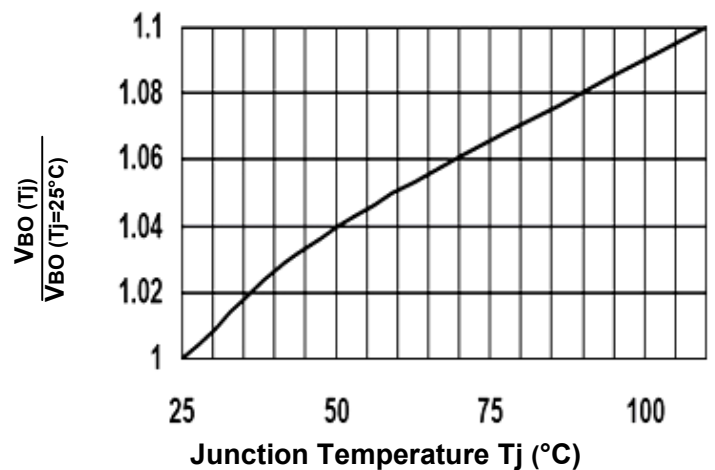
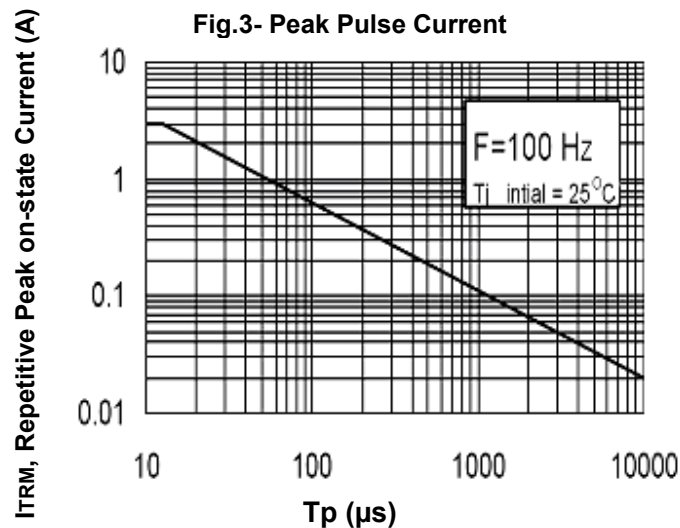


Fig.3- Peak Pulse Current



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Fig.4-Voltage – Current characteristic Curve

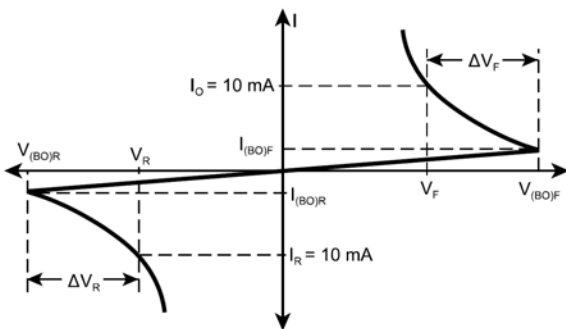


Fig.5- Rise Time Measurement

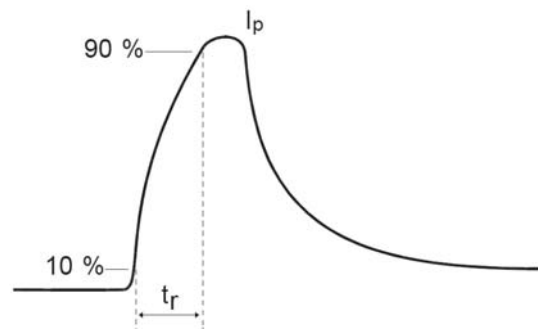
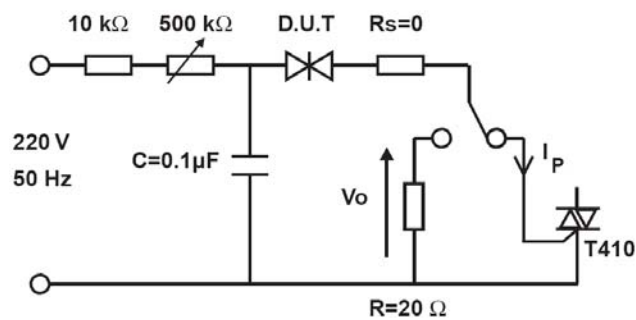


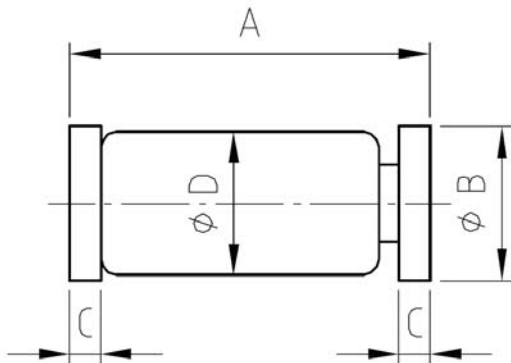
Fig.6-Test Circuit for Output Voltage



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Dimensions in Millimeters



REF.	DIMENSIONS		
	Milimeters		
	Min.	Typ.	Max.
A	3.30	3.50	3.70
B	1.46	1.50	1.54
C	0.30	0.35	0.40
D	1.37	1.40	1.43

Mini-MELF (SOD80C)

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