

**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**

<b>Case:</b>	Mini-MELF Glass Case (SOD80C)
<b>Weight:</b>	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	$\mu\text{A}$	$C=22\text{nF}^{**}$
$T_r$	Rise Time*	-	-	2	$\mu\text{s}$	See Fig.5
$I_B$	Leakage Current*	-	-	10	$\mu\text{A}$	$V_B=0.5V_{BO}$ 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	$^{\circ}\text{C} / \text{W}$	

# Bidirectional DIAC Trigger Diode

## DB3AM

Symbol	Description	Value	Unit	Conditions
T <sub>J</sub>	Operating Temperature range	-40 to + 110	°C	
T <sub>STG</sub>	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

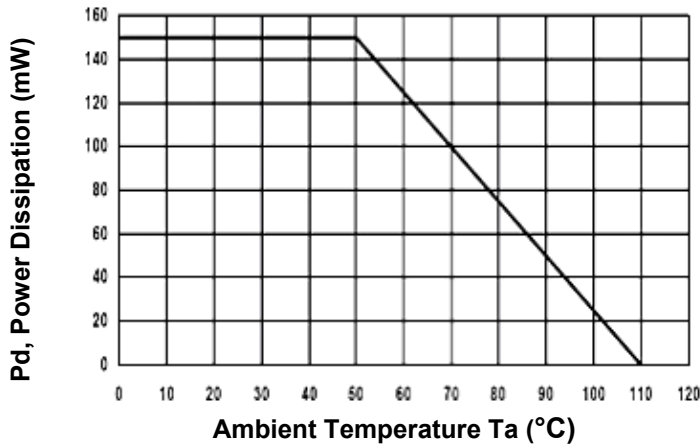


Fig.2- Typical Relative Variation of V<sub>BO</sub>

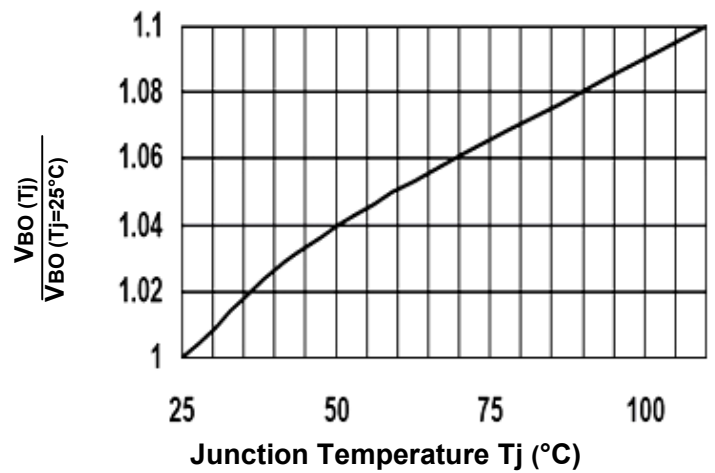
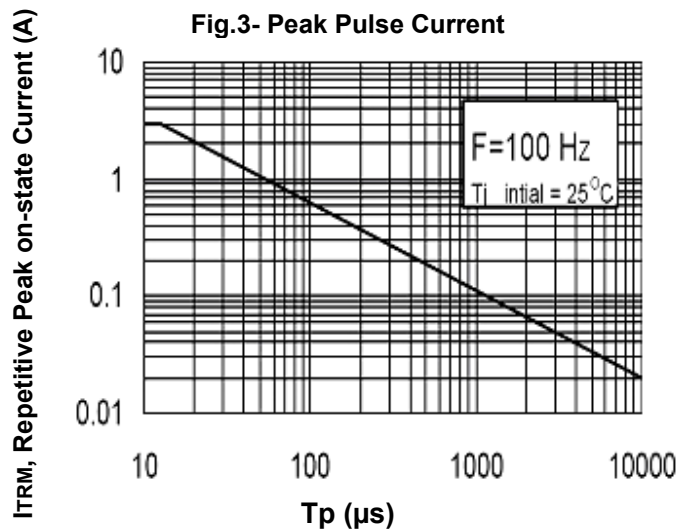


Fig.3- Peak Pulse Current



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## DB3AM

Fig.4-Voltage – Current characteristic Curve

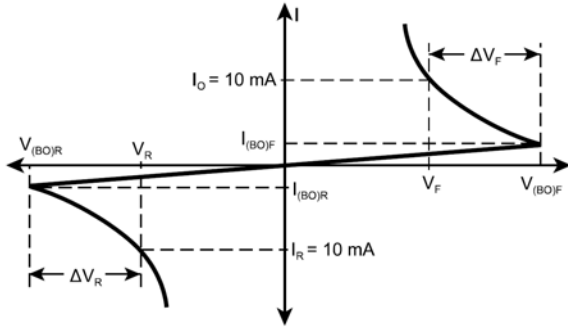


Fig.5- Rise Time Measurement

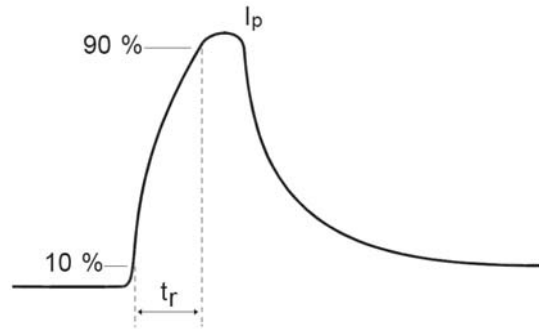
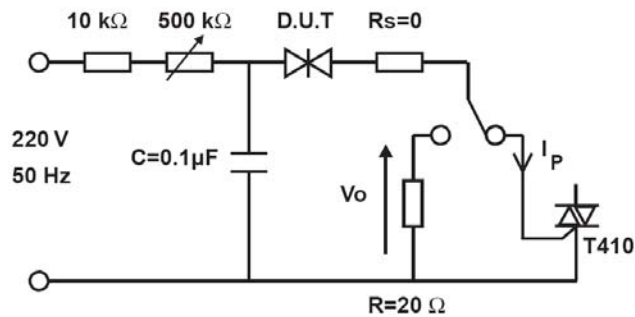


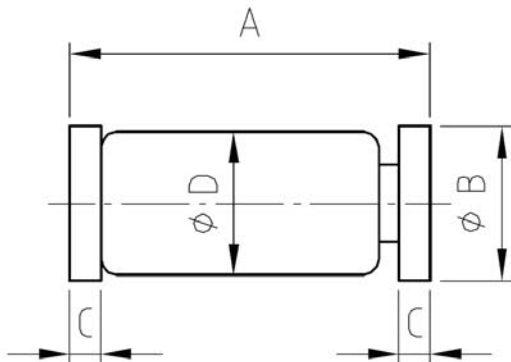
Fig.6-Test Circuit for Output Voltage



# Bidirectional DIAC Trigger Diode

## DB3AM

### 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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