SGS-THOMSON MICROELECTRONICS

DB 3/DB 4

TRIGGER DIODES

APPLICATIONS

Thyristors and triacs triggering.

DO 35
(Glass)

ADVANTAGES

High reliability glass passivation insuring parameter stability and protection against junction contamination

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
P	Power Dissipation on Printed Circuit (L = 10 mm)	T_a = 50 °C	150	mW
I_{TRM}	Repetitive Peak on-state Current	t_p = 20 µs F = 100 Hz	2	A
T_{stg} T_j	Storage and Operating Junction Temperature Range		– 40 to 125 – 40 to 110	°C °C

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th\ (j-a)}$	Junction-ambient	400	°C/W
$R_{th\ (j-l)}$	Junction-leads	150	°C/W

ELECTRICAL CHARACTERISTICS (T_j = 25 °C)

Symbol	Parameter	Test Conditions	Types	Min.	Typ.	Max.	Unit
V_{BO}	Breakover Voltage*	C = 22 nF** See diagram 1	DB3	28	32	36	V
			DB4	35	40	45	
$[\|+V_{BO}\|-\|-V_{BO}\|]$	Breakover Voltage Symmetry	C = 22 nF** See diagram 1				± 3	V
$\|\Delta V\pm\|$	Dynamic Breakback Voltage*	$\Delta I = [I_{BO}$ to I_F = 10 mA] See diagram 1		5			V
V_O	Output Voltage*	See diagram 2		5			V
I_{BO}	Breakover Current*	C = 22 nF**				100	µA
t_r	Rise Time*	See diagram 3			1.5		µs
I_B	Leakage Current*	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 device.

DIAGRAM 1 : Current-voltage characteristics.

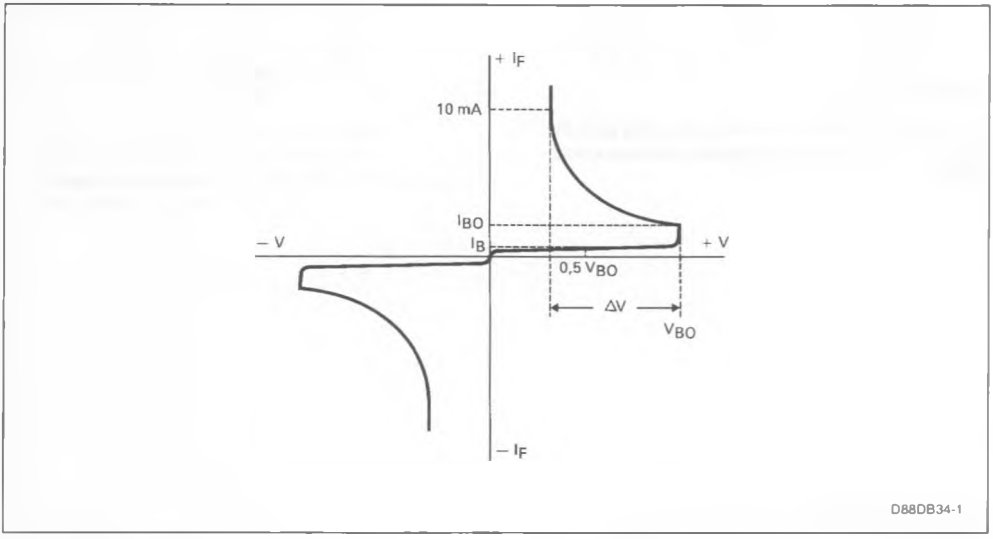


DIAGRAM 2 : Test circuit for output voltage.

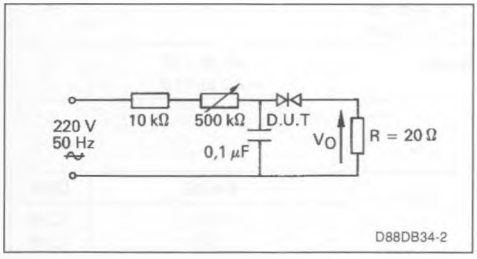
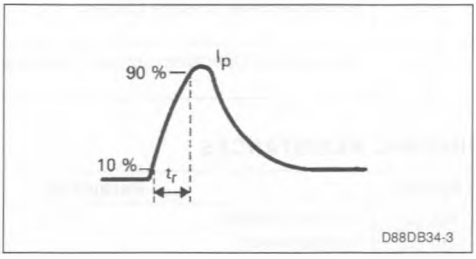


DIAGRAM 3 : Test circuit see diagram 2.
Adjust R for Ip = 0.5A.



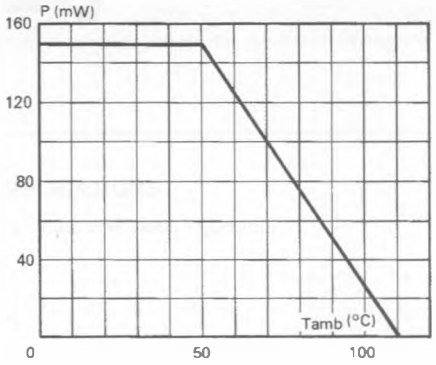


Fig. 1 - Power dissipation versus ambient temperature (maximum values).

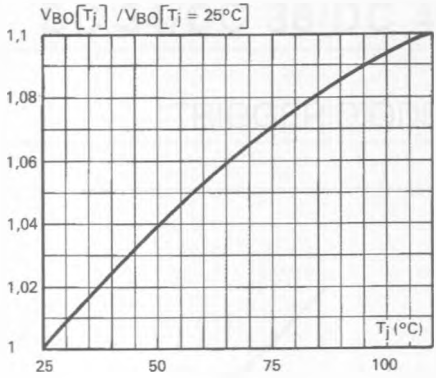


Fig. 2 - Relative variation of V_{BO} versus junction temperature (typical values).

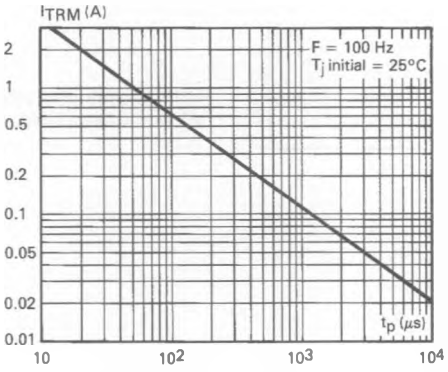
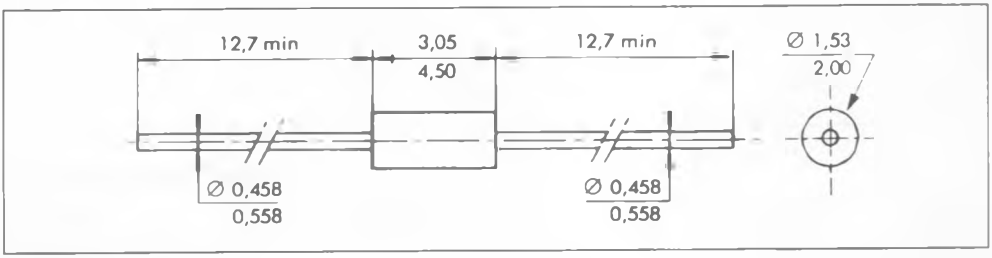


Fig. 3 - Peak pulse current versus pulse duration (maximum values).

PACKAGE MECHANICAL DATA

DO 35 Glass



Weight : 0.15 g
Marking : clear