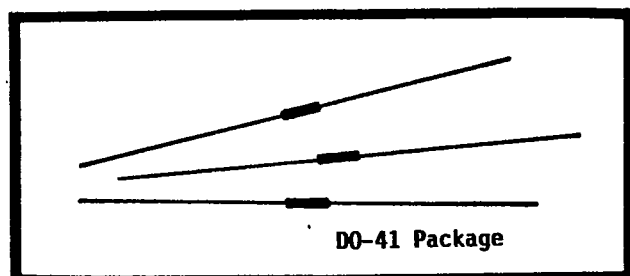


BILATERAL TRIGGER DIACS



FEATURES:

- * Wide Voltage Range - 27 to 70 Volts $V_{(BO)}$
- * JEDEC DO-41 Package
- * Pre-tinned leads

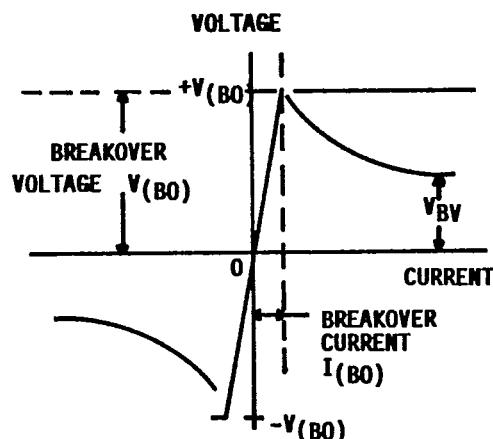
GENERAL DESCRIPTION:

The diac semiconductor is a full-wave or bi-directional thyristor. It is triggered from a blocking-to-conduction state for either polarity of applied voltage whenever the amplitude of applied voltage exceeds the breakover voltage rating of the diac.

Specifically designed as low-cost bidirectional triggers for line operated triac control circuits such as light dimmers, motor controls and process controls.

The diac specifications listed in this data sheet are for standard products. The suffix "T" signifies tape and reel packing, i.e., D32T.

V-1 CHARACTERISTICS



BILATERAL TRIGGER DIAC SPECIFICATIONS

- * Maximum Ratings, Absolute-Maximum Values
Maximum Trigger Firing Capacitance.....0.1 μ F
Device Dissipation
(at $T_A = -40^\circ\text{C}$ to $+40^\circ\text{C}$).....250mW
Derate Above $+40^\circ\text{C}$3.6mW/ $^\circ\text{C}$
- * Temperature Ranges
Storage..... -40° to $+125^\circ\text{C}$
Operating (Junction)..... -40° to $+110^\circ\text{C}$
- * Thermal Resistance
Junction to Ambient ($R_{\theta JA}$)=278 $^\circ\text{C}/\text{W}$
Junction to Lead ($R_{\theta JL}$)=100 $^\circ\text{C}/\text{W}$ based on maximum lead temperature of 85°C @ <250mW.

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$)

Part Number	Breakover Voltage (Forward and Reverse)		Breakover Voltage Symmetry $\Delta V_{(BO)} = \left +V_{(BO)} \right - \left -V_{(BO)} \right $	Dynamic Breakback Voltage $\left \Delta V_- \right ^{**}$	Peak Breakover Current at Breakover Voltage $I_{(BO)} \mu\text{A}$	Peak Pulse Current For 10 μs 120 PPS $T_A \leq 40^\circ\text{C}$ I_{TRM}
	Min.	Max.	Volts Max.	Volts Min.	Max.	Amps Max.
D-32	27	37	3*	5	50	2.0
D-35	30	40	3*	5	50	2.0
D-40	35	45	3*	5	50	2.0
D-50	42	58	4	8	50	1.7
D-60	56	70	4	10	50	1.5

* Breakover Voltage symmetry as close as 0.5 Volt is available from factory on these products.

** See Figures 3 and 4 for Test Circuit and Waveforms.

Collmer Semiconductor, Inc.

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Figure 1:
Repetitive Peak On-State
Current vs Pulse Duration

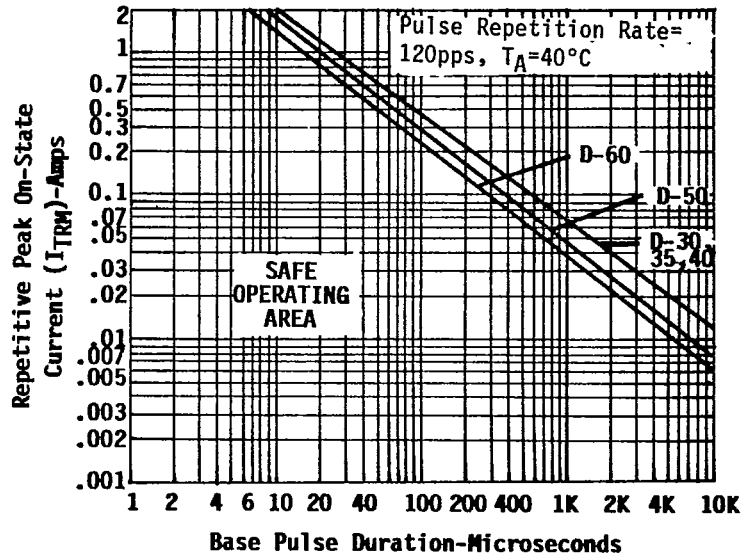


Figure 2:
Normalized V_{B0} Change vs Junction Temperature

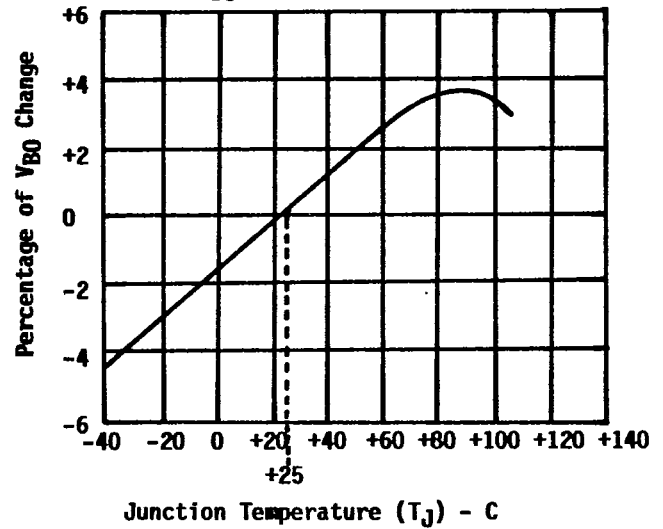


Figure 3:
Circuit Used to Measure Diac Characteristics

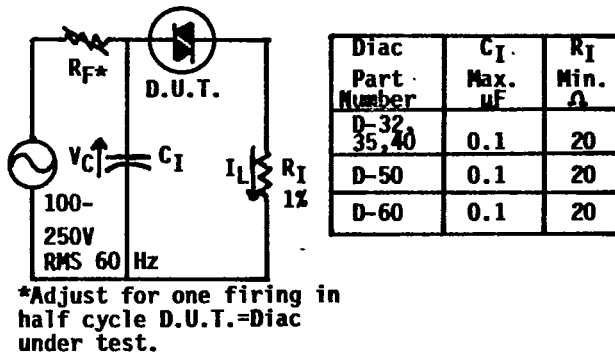
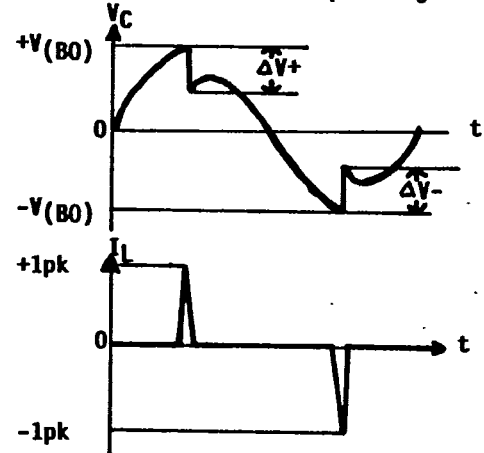


Figure 4:
Test Circuit Waveforms (See Figure 3)



COLLMER SEMICONDUCTOR, INC. reserves the right to make changes in these specifications at any time and without notice in order to supply the best product possible.

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