

**Rochester Electronics
Manufactured Components**

Rochester branded components are manufactured using either die/wafers purchased from the original suppliers or Rochester wafers recreated from the original IP. All recreations are done with the approval of the OCM.

Parts are tested using original factory test programs or Rochester developed test solutions to guarantee product meets or exceed the OCM data sheet.

Quality Overview

- ISO-9001
- AS9120 certification
- Qualified Manufacturers List (QML) MIL-PRF-35835
 - Class Q Military
 - Class V Space Level
- Qualified Suppliers List of Distributors (QSLD)
 - Rochester is a critical supplier to DLA and meets all industry and DLA standards.

Rochester Electronics, LLC is committed to supplying products that satisfy customer expectations for quality and are equal to those originally supplied by industry manufacturers.

The original manufacturer's datasheet accompanying this document reflects the performance and specifications of the Rochester manufactured version of this device. Rochester Electronics guarantees the performance of its semiconductor products to the original OEM specifications. 'Typical' values are for reference purposes only. Certain minimum or maximum ratings may be based on product characterization, design, simulation, or sample testing.

DB3-DB3TG

150mW Bi-directional Trigger Diodes

Features

- V_{BO} : 32V Version
- Low break-over current
- DO-35 package (JEDEC)
- Hermetically sealed glass
- Compression bonded construction
- All external surfaces are corrosion resistant and terminals are readily solderable
- RoHS compliant
- High reliability glass passivation insuring parameter stability and protection against junction contamination.
- Terminal: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed : 260°C/10 seconds



DO-35
Color Band Denotes Cathode

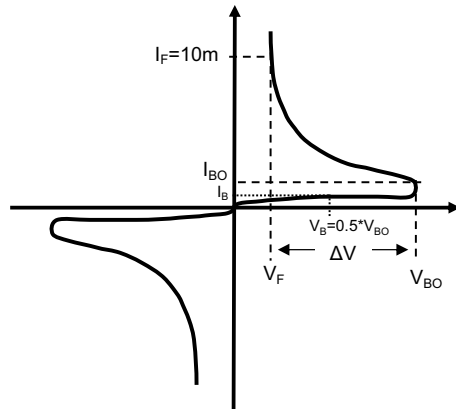
Absolute Maximum Ratings and Electrical Characteristics

Symbol	Parameter		Value		Units
			DB3	DB3TG	
V_{BO}	Break-over Voltage @ $C=22nF$	Min.	28	30	V
		Typ.	32	32	V
		Max.	36	34	V
$\pm V_{BO}$	Break-over Voltage Symmetry @ $C=22nF$	Max.	± 3	± 2	V
I_{BO}	Break-over Current @ $C=22nF$	Max.	100	15	μA
ΔV	Dynamic Break-over Voltage @ I_{BO} to $I_F=10mA$	Min.	5	9	V
I_B	Leakage Current @ $V_B=0.5V_{BO}(Max.)$	Max.	10		μA
V_O	Output Voltage *see diagram 1	Min.	5		V
P_D	Power Dissipation		150		mW
I_{FRM}	Repetitive Peak Forward Current, Pulse Width=20 μ sec		2		A
$R_{\theta ja}$	Typical Thermal Resistance, Junction to Ambient (Note1)		400		°C/W
T_J, T_{STG}	Junction and Storage Temperature Range		-40 to +125		°C

* Rating at 25°C ambient temperature unless otherwise specified.

* **Notes:** 1. Valid provided that electrodes are kept at ambient temperature

Typical Performance Characteristics



V_{BO} : Break-Over Voltage
 I_{BO} : Break-Over Current
 ΔV : Dynamic Breakover Voltage
 I_B : Leakage Current at $V_B=0.5 \cdot V_{BO}$
 V_F : Voltage at Current $I_F=10mA$

Diagram 1 : Test circuit

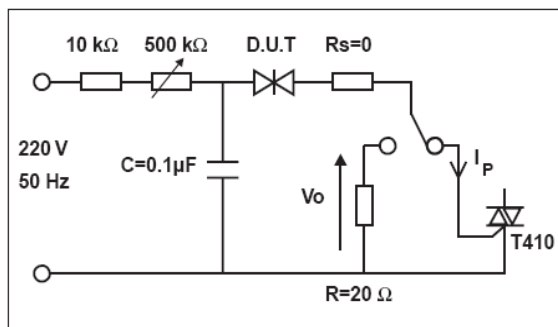


Figure 2. Relative Variation of VBO versus Junction Temperature

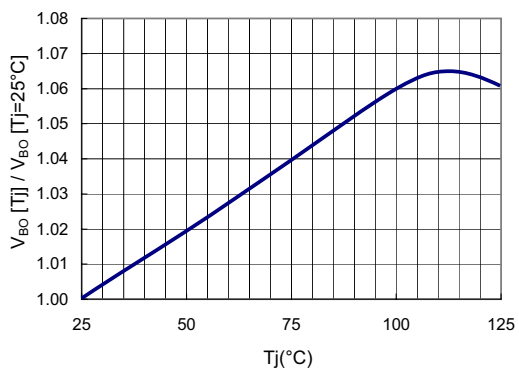
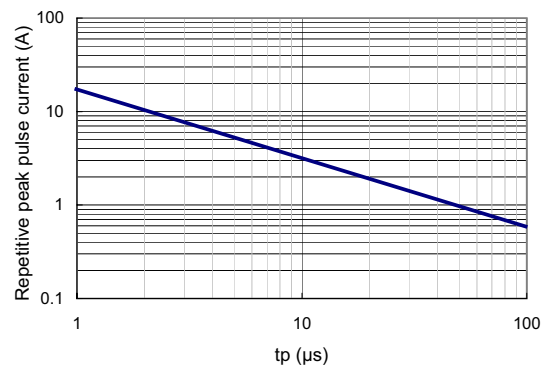
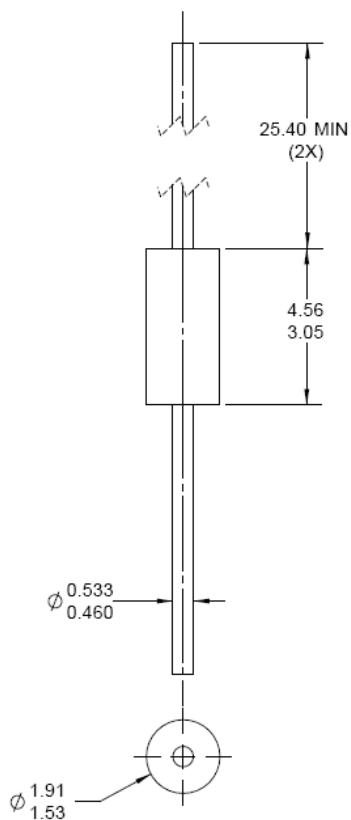


Figure 3. Repetitive Peak Pulse Current versus Pulse Duration (maximum values)



Physical Dimensions

DO-35



NOTES: UNLESS OTHERWISE SPECIFIED




- A) PACKAGE STANDARD REFERENCE:
JEDEC DO-204, VARIATION AH.
- B) HERMETICALLY SEALED GLASS PACKAGE.
- C) PACKAGE WEIGHT IS 0.137 GRAM.
- D) ALL DIMENSIONS ARE IN MILLIMETERS.
- E) DRAWING FILE NAME: DO35AREV02

Dimensions in Millimeters



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Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative / In Design	Datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

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