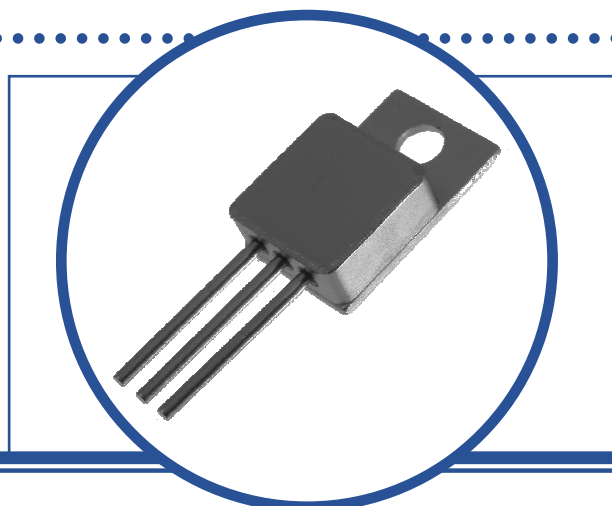


# DUAL FAST RECOVERY RECTIFIER DIODE

**BYV32-50M      BYV32-100M**  
**BYV32-150M    BYV32-200M**

- Very Low Reverse Recovery Time –  $t_{rr} < 35\text{ns}$ .
- Voltage Range 50V To 200V.
- Hermetic TO220 (TO-257AB) Isolated Metal Package.
- Ideally Suited For Switching Power Supplies, Inverters And As Free Wheeling Diodes.
- Space Level and High-Reliability Screening Options Available



## ABSOLUTE MAXIMUM RATINGS (Per Diode, $T_C = 25^\circ\text{C}$ unless otherwise stated)

|                   |  | 50M           | 100M | 150M | 200M |
|-------------------|--|---------------|------|------|------|
| $V_{RRM}$         | Repetitive Peak Reverse Voltage                              | 50V           | 100V | 150V | 200V |
| $V_{RWM}$         | Working Peak Reverse Voltage                                 | 50V           | 100V | 150V | 200V |
| $V_R$             | Continuous Reverse Voltage                                   | 50V           | 100V | 150V | 200V |
| $I_{FRM}$         | Repetitive Peak Forward Current ( $t_p = 10\mu\text{s}$ )    | 200A          |      |      |      |
| $I_{F(AV)}^{(1)}$ | Average Forward Current ( $T_C = 70^\circ\text{C}$ )         | 20A           |      |      |      |
| $I_{FSM}$         | Surge Peak Forward Current ( $t_p = 8.3\text{ms}$ half-sine) | 80A           |      |      |      |
| $T_{STG}$         | Storage Temperature Range                                    | -65 to +200°C |      |      |      |
| $T_J$             | Maximum Operating Junction Temperature                       | +200°C        |      |      |      |

## ELECTRICAL CHARACTERISTICS (Per Diode, $T_C = 25^\circ\text{C}$ unless otherwise stated)

| Symbol          | Parameter               | Test Conditions           | Min                              | Typ  | Max                      | Units         |
|-----------------|-------------------------|---------------------------|----------------------------------|------|--------------------------|---------------|
| $V_F^{(2)}$     | Forward Voltage Drop    | $I_F = 8\text{A}$         |                                  |      | 1.1                      | V             |
|                 |                         | $I_F = 20\text{A}$        |                                  |      | $T_C = 25^\circ\text{C}$ |               |
|                 |                         | $I_F = 5\text{A}$         | $T_C = 100^\circ\text{C}$        | 0.95 |                          |               |
| $I_R$           | Reverse Leakage Current | $V_R = V_{RWM}$           |                                  |      | 30                       | $\mu\text{A}$ |
|                 |                         | $T_C = 100^\circ\text{C}$ |                                  |      | 600                      |               |
| $t_{rr1}^{(3)}$ | Reverse Recovery Time   | $I_F = 1.0\text{A}$       | $di/dt = 50\text{A}/\mu\text{s}$ |      | 35                       | ns            |
| $t_{rr2}$       |                         | $I_F = 0.5\text{A}$       |                                  |      |                          |               |
|                 |                         | $I_{REC} = 0.25\text{A}$  |                                  |      | 25                       |               |

### Notes

- (1) Switching operation, Duty Cycle = 50%, both diodes conducting.
- (2) Pulse Width < 300 $\mu\text{s}$ , Duty Cycle < 2%
- (3) By design, not a production test

## THERMAL PROPERTIES

| Symbol          | Parameter                                       | Max | Units                     |
|-----------------|---|-----|---------------------------|
| $R_{\theta JC}$ | Thermal Resistance Junction to Case (per diode) | 4.3 | $^\circ\text{C}/\text{W}$ |

Semelab Limited reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing an order.



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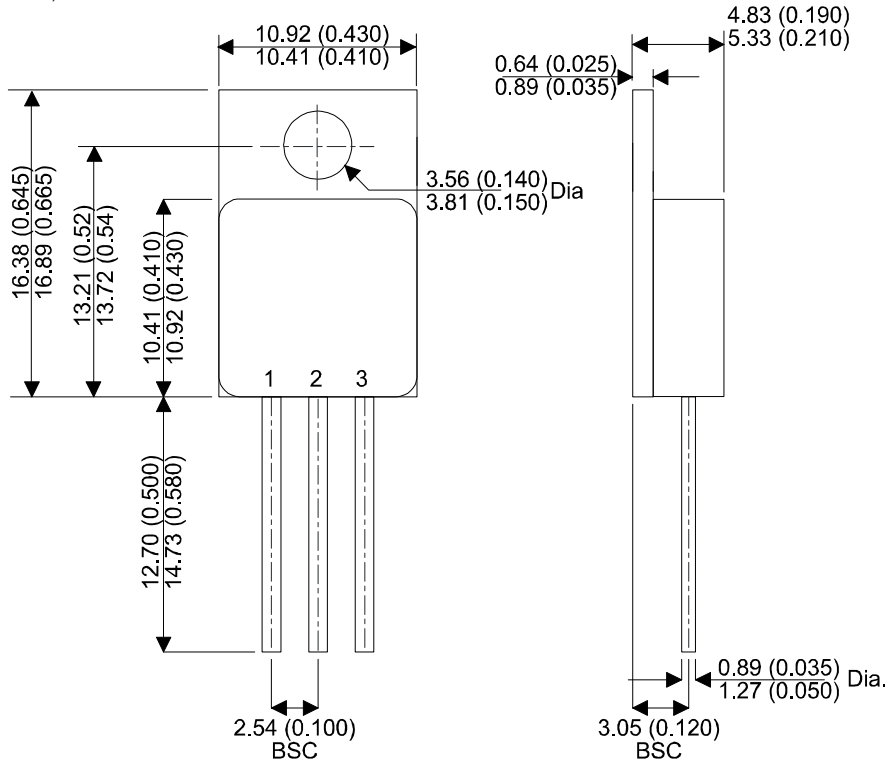
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# DUAL FAST RECOVERY RECTIFIER DIODE BYV32-M SERIES

## MECHANICAL DATA

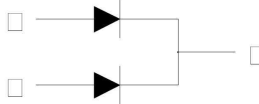
Dimensions in mm (inches)



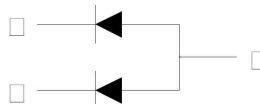
## TO220M (TO-257AB)

| Variant     | Pin 1     | Pin 2      | Pin 3     |
|-------------|-----------|------------|-----------|
| BYV32-xxxM  | Anode 1   | Cathode    | Anode 2   |
| BYV32-xxxAM | Cathode 1 | Anode      | Cathode 2 |
| BYV32-xxxRM | Cathode 1 | Centre Tap | Anode     |

### BYV32-xxxM



### BYV32-xxxAM



### BYV32-xxxRM

