

## BY396 - BY399

**PRV : 100 - 800 Volts**  
**Io : 3.0 Amperes**

### FEATURES :

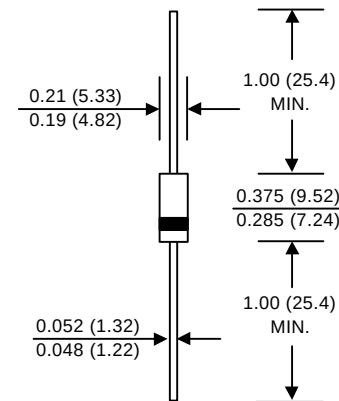
- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency

### MECHANICAL DATA :

- \* Case : DO-201AD Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 1.16 grams

## FAST RECOVERY RECTIFIER DIODES

### DO-201AD



Dimensions in inches and ( millimeters )

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

| RATING                                                                                                  | SYMBOL | BY396         | BY397 | BY398 | BY399 | UNIT |
|---------------------------------------------------------------------------------------------------------|--------|---------------|-------|-------|-------|------|
| Maximum Recurrent Peak Reverse Voltage                                                                  | VRRM   | 100           | 200   | 400   | 800   | V    |
| Maximum RMS Voltage                                                                                     | VRMS   | 70            | 140   | 280   | 560   | V    |
| Maximum DC Blocking Voltage                                                                             | VDC    | 100           | 200   | 400   | 800   | V    |
| Maximum Average Forward Current<br>0.375"(9.5mm) Lead Length Ta = 55 °C                                 | IF(AV) | 3.0           |       |       |       | A    |
| Peak Forward Surge Current,<br>8.3ms Single half sine wave Superimposed<br>on rated load (JEDEC Method) | IFSM   | 100           |       |       |       | A    |
| Maximum Peak Forward Voltage at IF = 3.0 Amps.                                                          | VF     | 1.25          |       |       |       | V    |
| Maximum DC Reverse Current Ta = 25 °C<br>at Rated DC Blocking Voltage Ta = 100 °C                       | IR     | 10            |       |       |       | μA   |
|                                                                                                         | IR(H)  | 100           |       |       |       | μA   |
| Maximum Reverse Recovery Time ( Note 1 )                                                                | Trr    | 250           |       |       |       | ns   |
| Typical Junction Capacitance ( Note 2 )                                                                 | CJ     | 60            |       |       |       | pf   |
| Junction Temperature Range                                                                              | TJ     | - 65 to + 150 |       |       |       | °C   |
| Storage Temperature Range                                                                               | TSTG   | - 65 to + 150 |       |       |       | °C   |

### Notes :

( 1 ) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.

( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC

## RATING AND CHARACTERISTIC CURVES ( BY396 - BY399 )

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

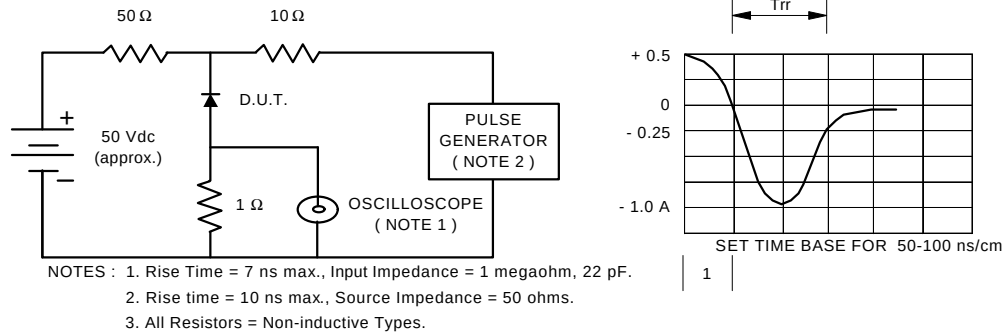


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

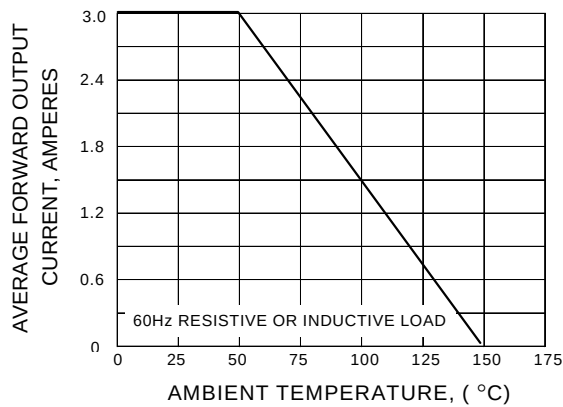


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

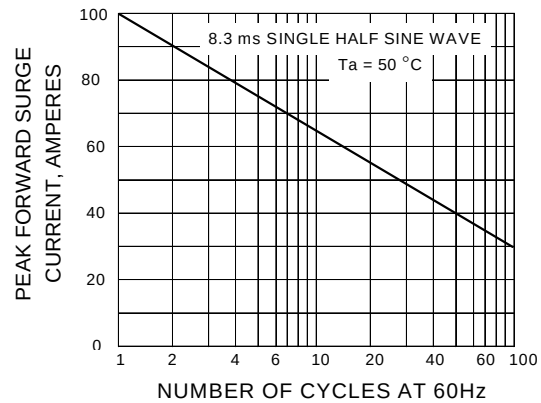


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

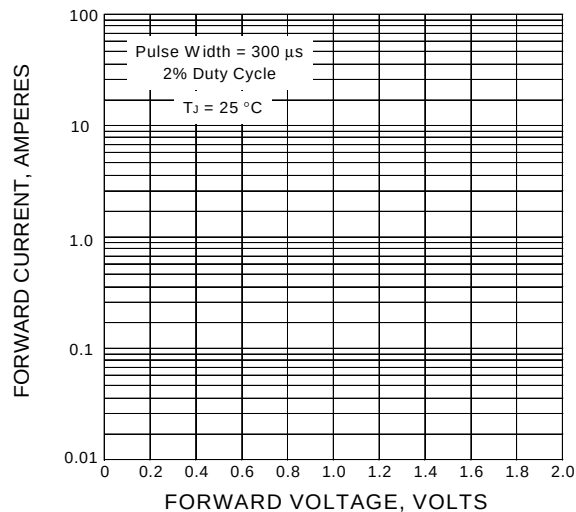


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

