

# BYW95A - BYW96E

**PRV : 200 - 1000 Volts**  
**Io : 3.0 Amperes**

## FEATURES :

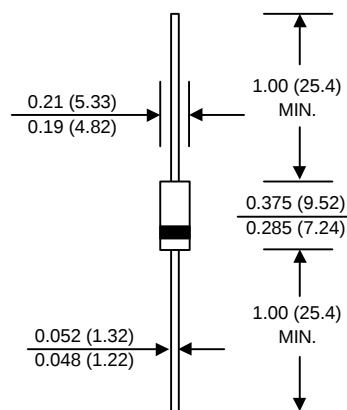
- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* Pb / RoHS Free

## 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

# AVALANCHE FAST SOFT-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%.

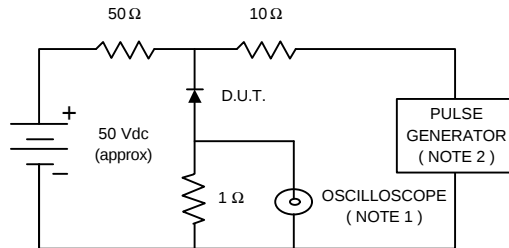
| RATING                                                                | SYMBOL                 | BYW 95A       | BYW 95B | BYW 95C | BYW 96D | BYW 96E | UNIT  |
|-----------------------------------------------------------------------|------------------------|---------------|---------|---------|---------|---------|-------|
| Maximum Repetitive Peak Reverse Voltage                               | V <sub>RRM</sub>       | 200           | 400     | 600     | 800     | 1000    | V     |
| Maximum Continuous Reverse Voltage                                    | V <sub>R</sub>         | 200           | 400     | 600     | 800     | 1000    | V     |
| Min. Reverse Avalanche Breakdown Voltage @ I <sub>R</sub> = 0.1 mA    | V <sub>(BR)R-min</sub> | 300           | 500     | 700     | 900     | 1100    | V     |
| Maximum Average Forward Current    T <sub>tp</sub> = 60 °C (Note 1)   | I <sub>F(AV)</sub>     | 3.0           |         |         |         |         | A     |
| Maximum Non-Repetitive Peak Forward Surge Current                     | I <sub>FSM</sub>       | 70            |         |         |         |         | A     |
| Maximum Repetitive Peak Forward Current                               | I <sub>FRM</sub>       | 15            |         |         |         |         | A     |
| Maximum Forward Voltage at I <sub>F</sub> = 5.0 Amps.                 | V <sub>F</sub>         | 1.5           |         |         |         |         | V     |
| Maximum Reverse Current at Reverse Voltage                            | I <sub>R</sub>         | 5.0           |         |         |         |         | μA    |
| Maximum Reverse Current at Reverse Voltage    T <sub>j</sub> = 165 °C | I <sub>R(H)</sub>      | 150           |         |         |         |         | μA    |
| Maximum Reverse Recovery Time (Note 2)                                | T <sub>rr</sub>        | 250           |         |         | 300     |         | ns    |
| Thermal Resistance - Junction to Ambient                              | R <sub>θJA</sub>       | 75            |         |         |         |         | K / W |
| Junction Temperature Range                                            | T <sub>j</sub>         | - 65 to + 175 |         |         |         |         | °C    |
| Storage Temperature Range                                             | T <sub>STG</sub>       | - 65 to + 175 |         |         |         |         | °C    |

### Notes :

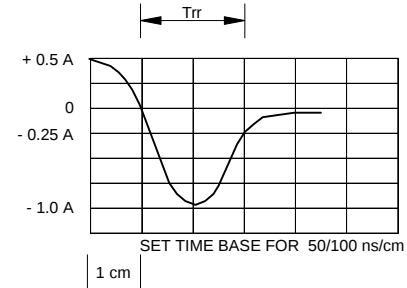
- (1) Lead Length 10 mm.
- (2) Measured with  $I_F = 0.5$  A,  $I_R = 1.0$  A,  $I_{rr} = 0.25$  A

## RATING AND CHARACTERISTIC CURVES ( BYW95A - BYW96E )

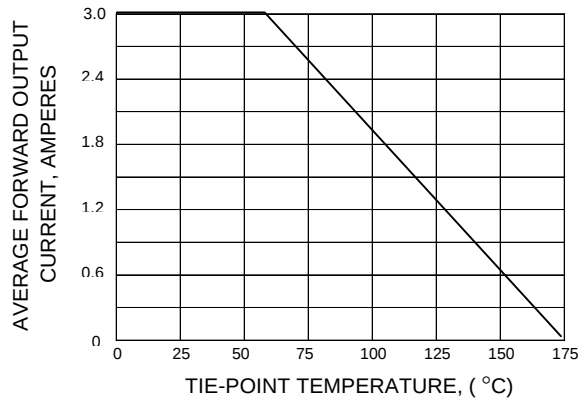
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



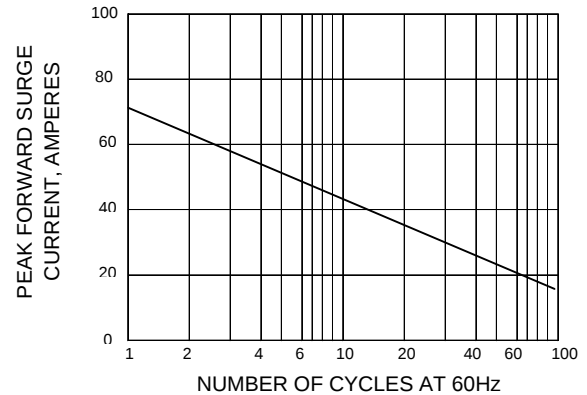
NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.



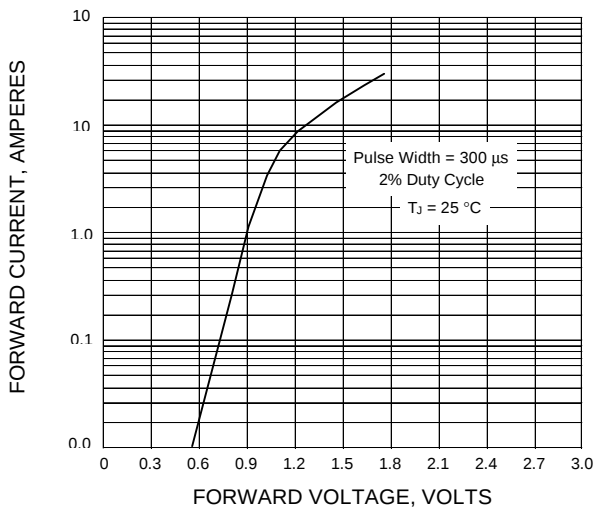
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

