

**SMALL SIGNAL DIODE**

**VOLTAGE RANGE 120 to 250 Volts CURRENT 200 mAmpere**

**FEATURES**

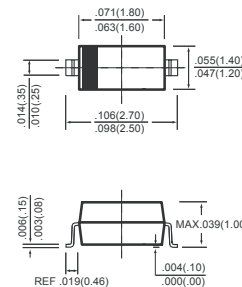
- \* Fast Switching Speed
- \* Surface Mount Package Ideally Suited for Automatic Insertion
- \* For General Purpose Switching Applications

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-O rate flame retardant
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.004 grams



**SOD-323**



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings 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%.

**MAXIMUM RATINGS** (@ $T_A=25^\circ\text{C}$  unless otherwise noted)

| RATINGS  | SYMBOL               | BAV19WS | BAV20WS      | BAV21WS | UNITS |
|--|----------------------|---------|--------------|---------|-------|
| Non-Repetitive Peak Reverse Voltage  | $V_{RM}$             | 120     | 200          | 250     | Volts |
| Maximum Repetitive Peak Reverse Voltage  | $V_{RRM}$            | 100     | 150          | 200     | Volts |
| Maximum Working Peak reverse Voltage   | $V_{RWM}$            |         |              |         |       |
| Maximum DC Blocking Voltage  | $V_R$                |         |              |         |       |
| RMS Reverse Voltage  | $V_{RMS}$            | 71      | 106          | 141     | Volts |
| Forward Continuous Current   | $I_{FM}$             |         | 400          |         | mAmps |
| Average Rectified Output Current   | $I_O$                |         | 200          |         | mAmps |
| Peak Forward Surge Current   | @ $t < 1.0\text{mS}$ |         | 2.5          |         | Amps  |
|  | @ $t < 1.0\text{S}$  |         | 0.5          |         |       |
| Repetitive Peak Forward Current  | $I_{FRM}$            |         | 625          |         | mAmps |
| Reverse Recovery Time( $I_F=I_R=30\text{mA}$ $I_{rr}=0.1I_R$ , $R_L=100\Omega$ ) | $T_{rr}$             |         | 50           |         | nS    |
| Capacitance between terminals ( $V_R=0\text{V}$ , $f=1\text{MHz}$ )              | $CT$                 |         | 5            |         | pF    |
| Power Dissipation  | $PD$                 |         | 200          |         | mW    |
| Storage Temperature Range  | $T_{STG}$            |         | -65 to + 150 |         | °C    |

**ELECTRICAL CHARACTERISTICS** (@ $T_A=25^\circ\text{C}$  unless otherwise noted)

| CHARACTERISTICS | SYMBOL                        | BAV19WS | BAV20WS | BAV21WS | UNITS |
|-----------------|-------------------------------|---------|---------|---------|-------|
| Forward Voltage | @ $I_F=0.1\text{A}$           |         | 1.0     |         | Volts |
|                 | @ $I_F=0.2\text{A}$           |         | 1.25    |         |       |
| Reverse Current | @ $V_R=100\text{V}$ (BAV19WS) |         | 0.1     |         | uAmps |
|                 | @ $V_R=150\text{V}$ (BAV20WS) |         |         |         |       |
|                 | @ $V_R=200\text{V}$ (BAV21WS) |         |         |         |       |

Note 1: "Fully ROHS compliant", "100% Sn plating (Pb-free)".

# RATING AND CHARACTERISTICS CURVES ( BAV19WS/BAV20WS/BAV21WS )

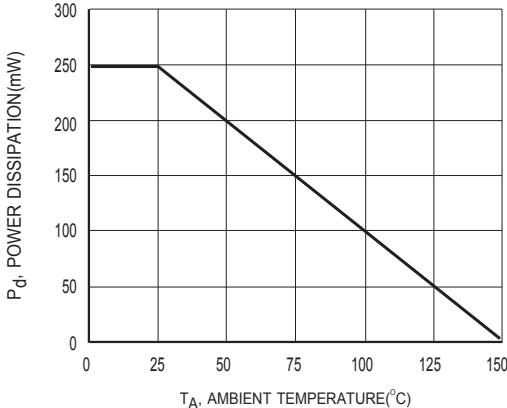


Figure1 Power Derating Curve

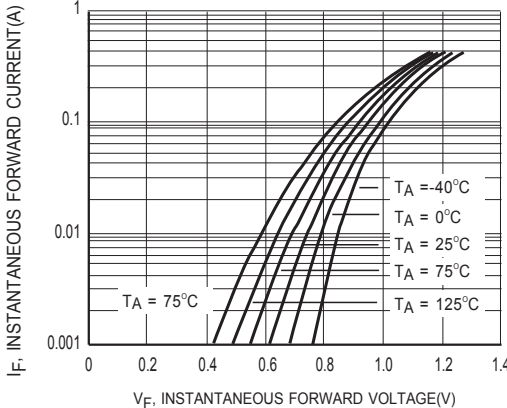


Figure2 Typical Forward Characteristics

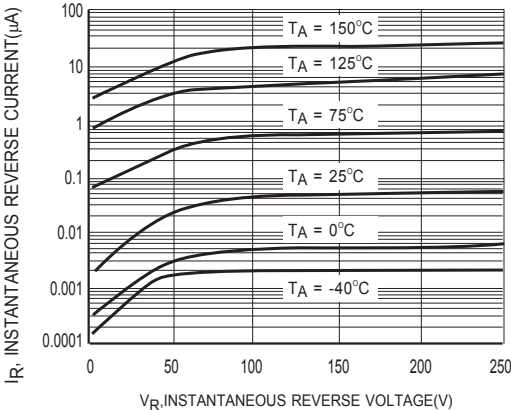


Figure3 Typical Reverse Characteristics

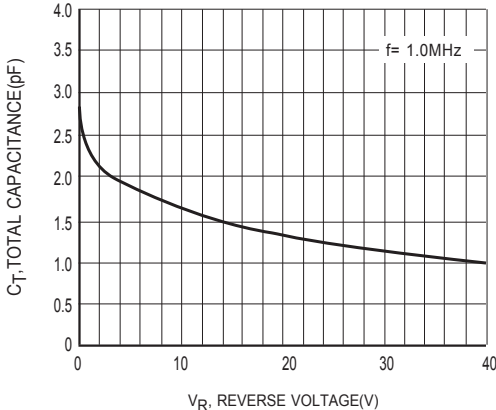


Figure4 Typical Capacitance vs Reverse Voltage

## DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.