



# SMALL SIGNAL DIODE

## **VOLTAGE RANGE 30 Volts**

#### **FEATURES**

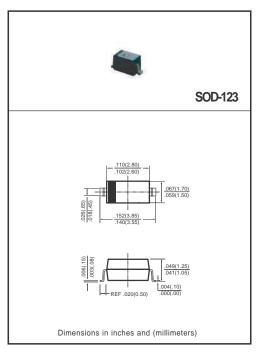
- \* Low Forward Voltage Drop
- \* Fast Switching Time
- \* Surface Mount Package Ideally Suited for Automatic Insertion

#### **MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-O rate flame retardant
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any \* Weight: 0.01 gram

#### 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%.



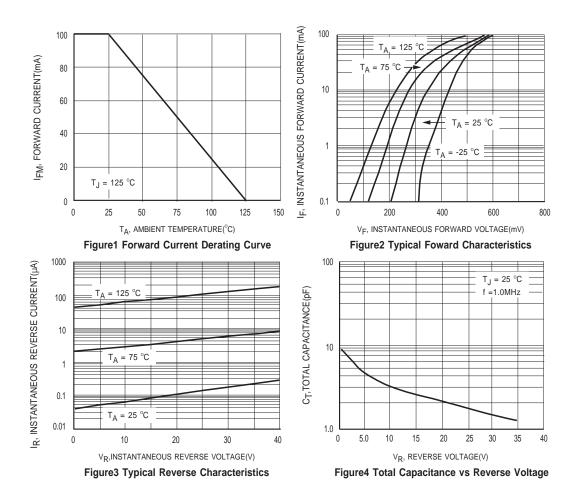
#### $\textbf{MAXIMUM RATINGS} \ (@\ \textit{TA=25}\ ^{\circ}\textit{C}\ unless\ otherwise\ noted)$

| RATINGS   | SYMBOL   | BAT42W       | UNITS |
|---|--|--------------|-------|
| Reverse Breakdown Voltage   | V <sub>(BR)R</sub>                                     | 30           | Volts |
| Maximum Repetitive Peak Reverse Voltage<br>Maximum Working Peak reverse Voltage<br>Maximum DC Blocking Voltage                | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 30           | Volts |
| Maximum RMS Voltage   | V <sub>RMS</sub>                                       | 21           | Volts |
| Maximum Forward Comtinuous Current  | I <sub>FM</sub>  | 200          | mAmps |
| Non-Repetitive Peak Forward Surge Current @t<1.0s   | I <sub>FRM</sub>                                       | 500          | mAmps |
| Peak Forward Surge Current @<10ms   | I <sub>FSM</sub>                                       | 4.0          | Amps  |
| Typical Reverse Recovery Time(I <sub>F</sub> =I <sub>R</sub> =10mA,I <sub>II</sub> =0.1X <sub>IR</sub> ,R <sub>L</sub> =100 ) | Trr  | 5            | nS    |
| Typical Junction Capacitance(V <sub>R</sub> =1.0V,f=1.0MHz)   | СТ   | 10           | pF    |
| Maximum Power Dissipation   | PD   | 200          | mW    |
| Typical Thermal Resistance  | R JA   | 500          | K/W   |
| Operating and Storage Temperature Range   | T <sub>STG</sub>                                       | -55 to + 125 | °C    |

### ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

| CHARACTERISTICS                       |  | SYMBOL         | BAT42W      | UNITS |
|---------------------------------------|--|----------------|-------------|-------|
| Maximum Instantaneous Forward Voltage | @I <sub>F</sub> =10mA<br>@I <sub>F</sub> =50mA | V <sub>F</sub> | 0.4<br>0.65 | Volts |
| Maximum Instantaneous Reverse Current | @V <sub>R</sub> =25V                           | I <sub>R</sub> | 0.5         | μAmps |

## RATING AND CHARACTERISTICS CURVES (BAT42W)



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