

SMALL SIGNAL DIODE
VOLTAGE RANGE 30 Volts

FEATURES

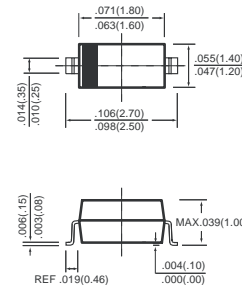
- * Low Forward Voltage Drop
- * Fast Switching Time
- * Surface Mount Package Ideally Suited for Automatic Insertion
- * Also Available in Lead Free Version

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°C unless otherwise noted)

| RATINGS | SYMBOL | BAT42WS | UNITS |
|--|----------------------------------|--------------|-------|
| Reverse Breakdown Voltage @ I _R =100μA | V _{(BR)R} | 30 | Volts |
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | 30 | Volts |
| Maximum Working Peak reverse Voltage | V _{RWM} | | |
| Maximum DC Blocking Voltage | V _R | | |
| Maximum RMS Voltage | V _{RMS} | 21 | Volts |
| Maximum Forward Continuous Current | I _{FM} | 200 | mAmps |
| Repetitive Peak Forward Current @ t<1.0s | I _{FRM} | 500 | mAmps |
| Non-Repetitive Peak Forward Surge Current @ t<10ms | I _{FSM} | 4.0 | Amps |
| Typical Reverse Recovery Time (I _F =I _R =10mA, I _{rr} =0.1xI _R , R _L =100Ω) | T _{rr} | 5 | nS |
| Typical Junction Capacitance (V _R =1.0, f=1.0MHz) | CT | 10 | pF |
| Maximum Power Dissipation (Note 1) | PD | 200 | mW |
| Typical Thermal Resistance | R _{JA} | 625 | K/W |
| Operating and Storage Temperature Range | T _J ,T _{STG} | -55 to + 125 | °C |

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

| CHARACTERISTICS | SYMBOL | BAT42WS | UNITS |
|---------------------------------------|----------------|------------------------|-------|
| Maximum Instantaneous Forward Voltage | V _F | @ I _F =10mA | 0.4 |
| | | @ I _F =50mA | 0.65 |
| Maximum Instantaneous Peverse Current | I _R | 0.5 | uAmps |

Note 1. Part mounted on FR-4 PC board with minimum recommended pad layout.

RATING AND CHARACTERISTICS CURVES (BAT42WS)

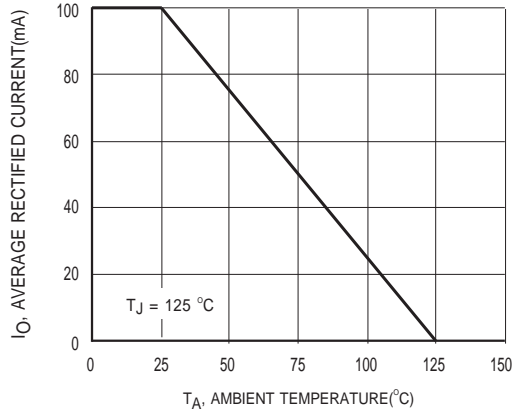


Figure1 Forward Current Derating Curve

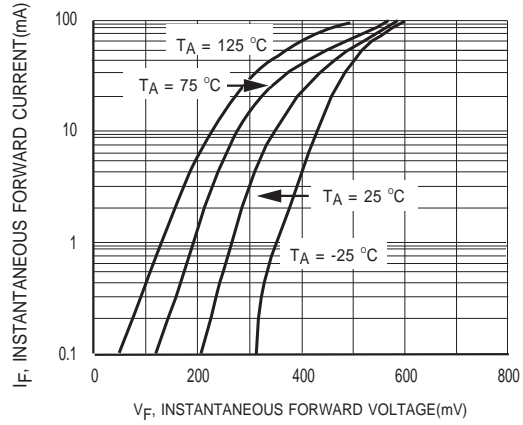


Figure2 Typical Foward Characteristics

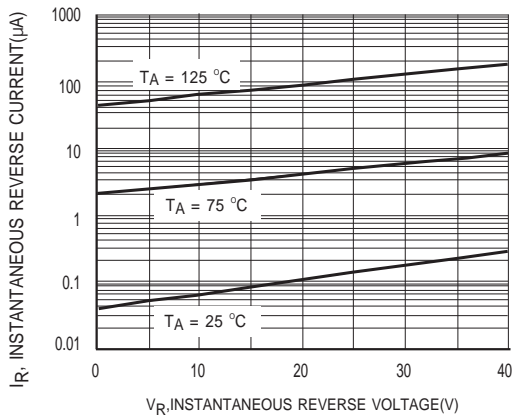


Figure3 Typical Reverse Characteristics

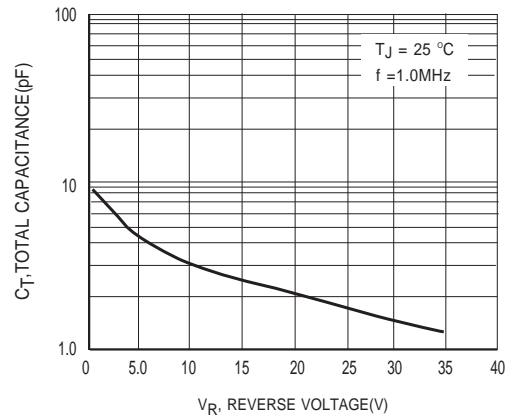


Figure4 Typical Capacitance vs Reverse Voltage

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