

II. Schottky Rectifier

BAT54WS

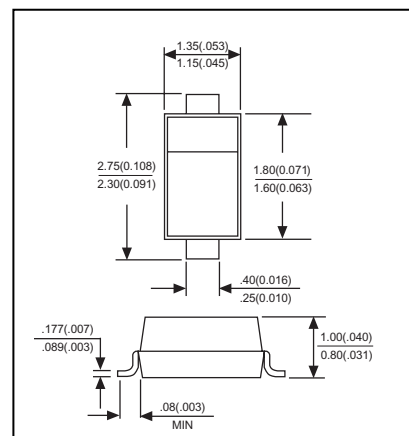
SOD-323

FEATURES

- Low turn-on voltage
- Fast switching
- Ultra-small surface mount package
- PN junction guard ring for transient and ESD protection

APPLICATIONS

- Schottky barrier detector and switching diodes



ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| BAT54WS | L9 | SOD-323 |

MAXIMUM RATING @ Ta=25°C unless otherwise specified

| Parameter | Symbol | Limits | Unit |
|---|-----------------|-------------|------|
| Peak Repetitive reverse voltage | V_{RRM} | 30 | V |
| Working peak reverse voltage | V_{RWM} | | |
| DC reverse voltage | V_R | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 21 | V |
| Average Rectified Output Current | I_O | 100 | mA |
| Repetitive peak Forward Current | I_{FRM} | 300 | mA |
| Forward Surge Current @t<1.0s | I_{FSM} | 600 | mA |
| Power Dissipation | P_d | 200 | mW |
| Thermal resistance, junction to ambient air | $R_{\theta JA}$ | 625 | °C/W |
| Junction temperature | T_j | 125 | °C |
| Storage temperature range | T_{stg} | -65 to +125 | °C |

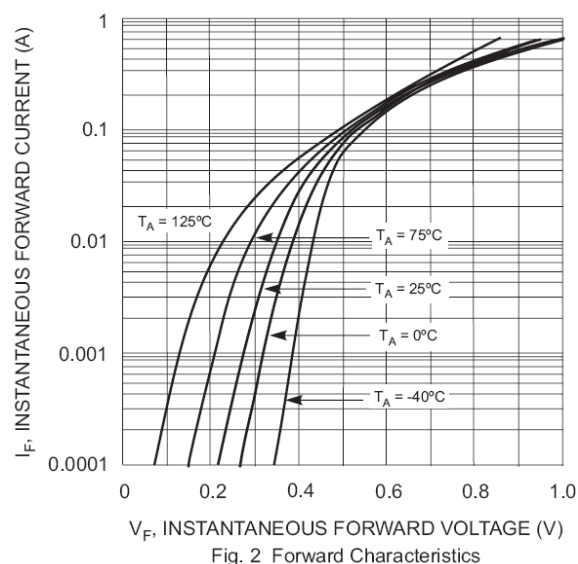
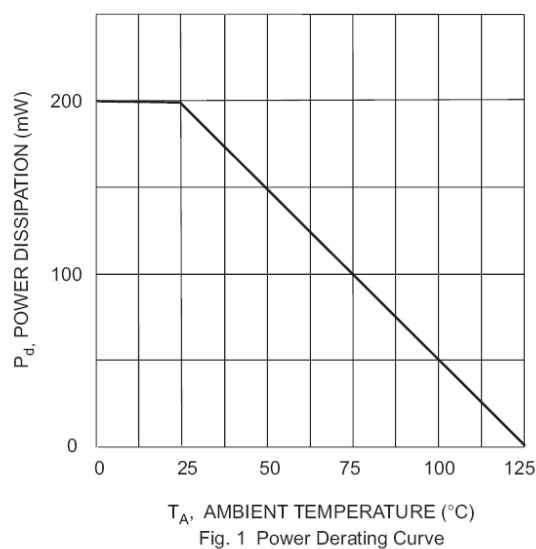
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ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|---------------------------|-------------|--|------|------|------|---------------|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R=100\mu\text{A}$ | 30 | | | V |
| Forward voltage | V_{F1} | $I_F=0.1\text{mA}$ | | | 240 | mV |
| | V_{F2} | $I_F=1.0\text{mA}$ | | | 320 | mV |
| | V_{F3} | $I_F=10\text{mA}$ | | | 400 | mV |
| | V_{F4} | $I_F=30\text{mA}$ | | | 500 | mV |
| | V_{F5} | $I_F=100\text{mA}$ | | | 1000 | mV |
| Reverse leakage current | I_R | $V_R=25\text{V}$ | | | 2.0 | μA |
| Reverse recovery time | t_{rr} | $I_F=10\text{mA}, I_R=10\text{mA}$ to $1\text{mA } R_L=100\Omega$ | | | 5.0 | ns |
| Junction capacitance | C_J | $V_R=1.0\text{V}, f=1.0\text{MHz}$ | | | 10 | pF |

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



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