

BAT54W

SINGLE SCHOTTKY BARRIER DIODE

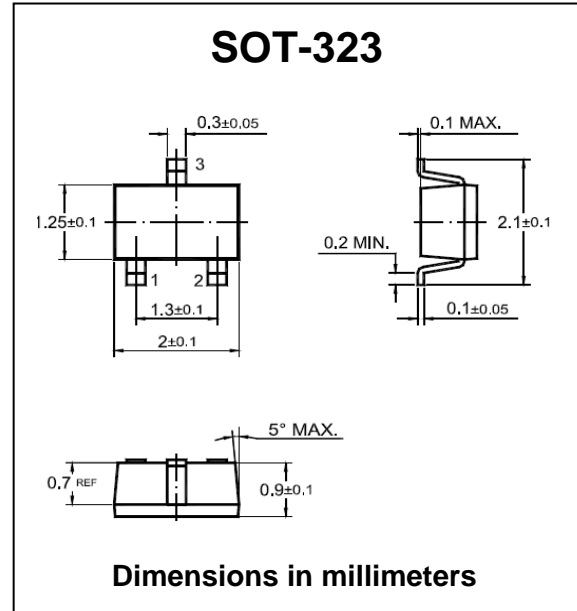
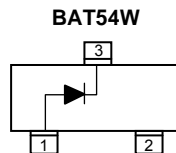
PRV : 30 Volts
Io : 200 mA

FEATURES :

- * Low forward voltage drop
- * Ultra high-speed switching
- * Very small SMD package
- * Guard ring protected
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SOT-323 plastic Case



MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified.

| Parameter | Symbol | Value | Unit |
|---|-----------------|-------------|------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 30 | V |
| Maximum Rectified Average Forward Current | $I_{F(AV)}$ | 200 | mA |
| Maximum Repetitive Peak Forward Current | I_{FRM} | 300 | mA |
| Maximum Peak Forward Surge Current at $t_p < 10$ ms | I_{FSM} | 600 | mA |
| Total Power Dissipation | P_{tot} | 200 | mW |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | 625 | K/W |
| Junction Temperature Range | T_J | 125 | °C |
| Storage Temperature Range | T_{STG} | -65 to +150 | °C |

ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified.)

| Parameter | Test Condition | Symbol | Min. | Typ. | Max. | Unit |
|---------------------------|--|------------|------|------|------|---------|
| Reverse Breakdown Voltage | $I_R = 100 \mu A$ pulses | $V_{(BR)}$ | 30 | - | - | V |
| Leakage Current (Note 1) | $V_R = 25$ V | I_R | - | - | 2 | μA |
| Forward Voltage (Note 1) | $I_F = 0.1$ mA | V_F | - | - | 240 | mV |
| | $I_F = 1$ mA | V_F | - | - | 320 | mV |
| | $I_F = 10$ mA | V_F | - | - | 400 | mV |
| | $I_F = 30$ mA | V_F | - | - | 500 | mV |
| | $I_F = 100$ mA | V_F | - | - | 800 | mV |
| Diode Capacitance | $V_R = 1$ V, $f = 1$ MHz | C_{tot} | - | - | 10 | pF |
| Reverse Recovery Time | $I_F = 10$ mA through $I_R = 10$ mA, to $I_{rr} = 1$ A, $R_L = 100 \Omega$ | T_{rr} | - | - | 5 | ns |

Note : (1) Pulse test $t_p = 300 \mu s$, $\delta = 0.02$