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SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED


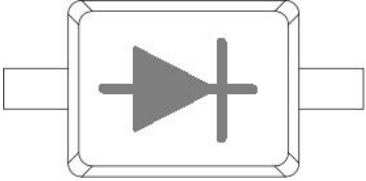

BAT54WS

Product specification

FEATURES

- Extremely Fast Switching Speed
- Low Forward Voltage

Reference News

| PACKAGE OUTLINE | PIN CONFIGURATION | Marking |
|--|---|---|
|  <p>SOD-323</p> |  |  |

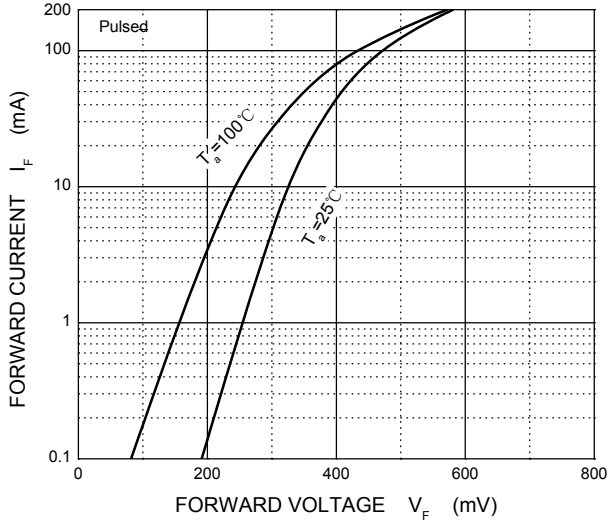
Maximum Ratings @Ta=25°C

| Parameter | Symbol | Limit | Unit |
|--|-----------------|------------|------|
| Non-Repetitive Peak Reverse Voltage | V_{RM} | 30 | V |
| DC Blocking Voltage | V_R | 21 | V |
| Average Rectified Output Current | I_o | 100 | mA |
| Forward Continuous Current | I_F | 200 | mA |
| Repetitive Peak Forward Current | I_{FRM} | 300 | mA |
| Non-repetitive Peak Forward Surge Current @t=8.3ms | I_{FSM} | 600 | mA |
| Power Dissipation | P_D | 200 | mW |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 500 | °C/W |
| Operating Junction Temperature Range | T_J | -40 ~ +125 | °C |
| Storage Temperature Range | T_{STG} | -55 ~ +150 | °C |

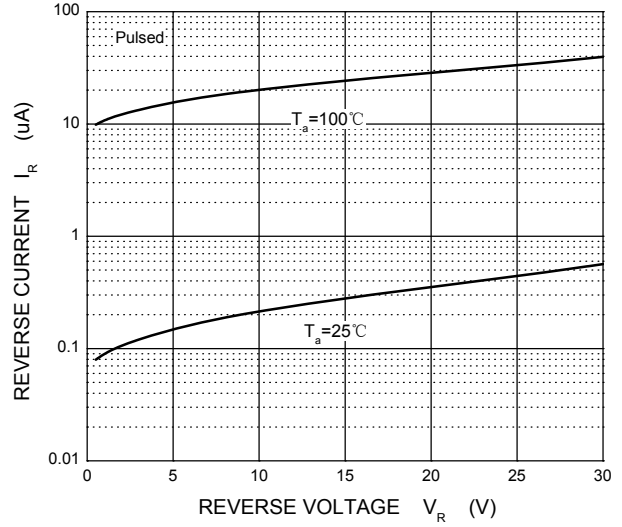
Electrical Characteristics @Ta=25°C

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

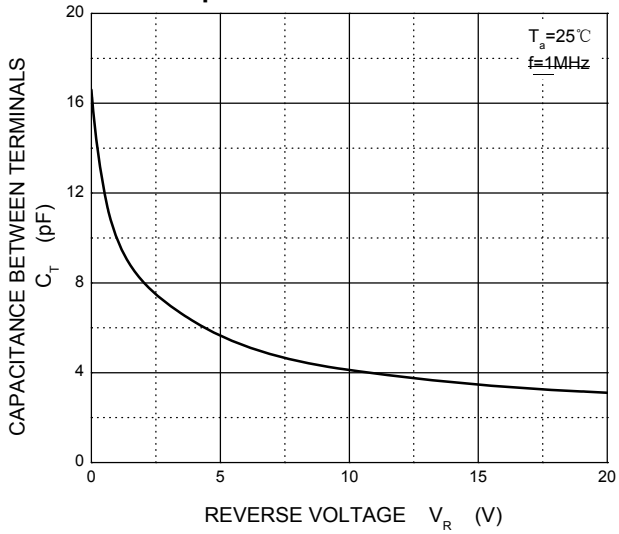
Forward Characteristics



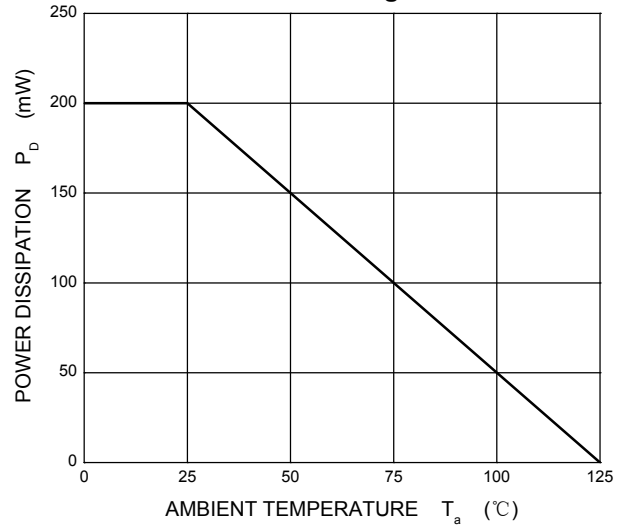
Reverse Characteristics



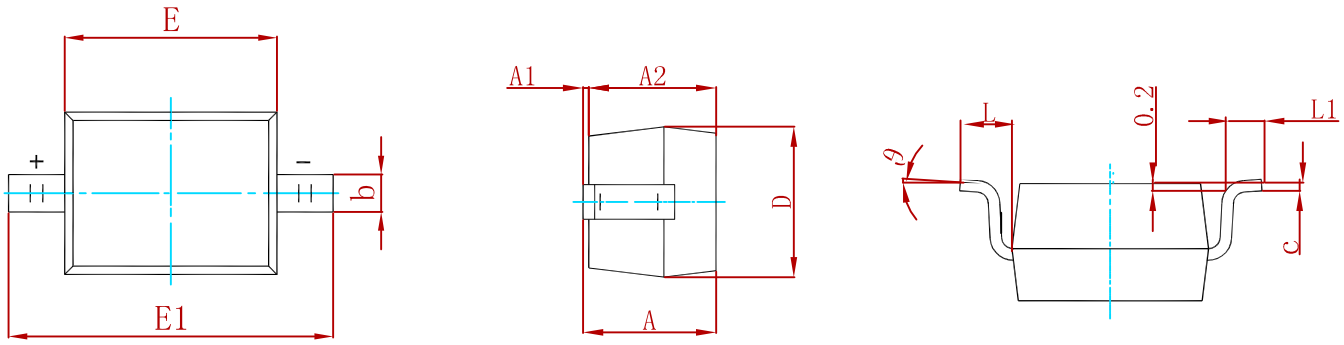
Capacitance Characteristics



Power Derating Curve

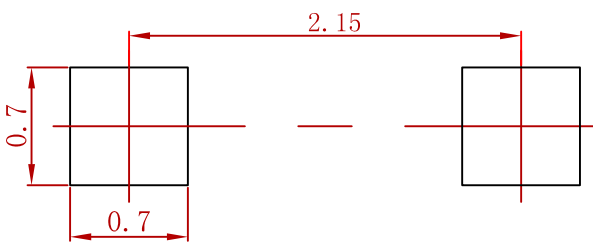


PACKAGE MECHANICAL DATA



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | | 1.000 | | 0.039 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.800 | 0.900 | 0.031 | 0.035 |
| b | 0.250 | 0.350 | 0.010 | 0.014 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 1.200 | 1.400 | 0.047 | 0.055 |
| E | 1.600 | 1.800 | 0.063 | 0.071 |
| E1 | 2.550 | 2.750 | 0.100 | 0.108 |
| L | 0.475 REF. | | 0.019 REF. | |
| L1 | 0.250 | 0.400 | 0.010 | 0.016 |
| θ | 0° | 8° | 0° | 8° |

Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: ±0.05mm.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

| P/N | PKG | QTY |
|---------|---------|------|
| BAT54WS | SOD-323 | 3000 |

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