

BAT46WS

SMALL SIGNAL SCHOTTKY BARRIER DIODE

Features

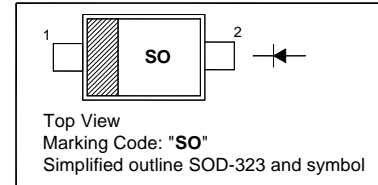
- Low Forward Voltage drop
- Surface mount device

Description

- High voltage schottky rectifier suited for SLIC protection during the card insertion operation

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |

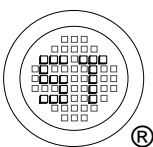


Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|--------------------------------------|------------|---------------|--------------------|
| Repetitive Peak Reverse Voltage | V_{RRM} | 100 | V |
| Continuous Forward Current | I_F | 150 | mA |
| Power Dissipation | P_{tot} | 230 | mW |
| Thermal Resistance Junction Ambient | R_{thJA} | 550 | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 65 to + 150 | $^\circ\text{C}$ |

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|---|----------|------|---------|--|---------------|
| Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$ | V_{BR} | 100 | - | - | V |
| Forward Voltage at $I_F = 0.1\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 250\text{ mA}$ | V_F | - | - | 0.25 0.45 1 | V |
| Reverse Current at $V_R = 1.5\text{ V}$ at $V_R = 10\text{ V}$ at $V_R = 50\text{ V}$ at $V_R = 75\text{ V}$ at $V_R = 1.5\text{ V}, T_J = 60\text{ }^\circ\text{C}$ at $V_R = 10\text{ V}, T_J = 60\text{ }^\circ\text{C}$ at $V_R = 50\text{ V}, T_J = 60\text{ }^\circ\text{C}$ at $V_R = 75\text{ V}, T_J = 60\text{ }^\circ\text{C}$ | I_R | - | - | 0.5 0.8 2 5 5 7.5 15 20 | μA |
| Total Capacitance at $V_R = 0\text{ V}, f = 1\text{ MHz}$ at $V_R = 1\text{ V}, f = 1\text{ MHz}$ | C_T | - | 10 6 | - | pF |



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Fig. 1: Forward current versus forward voltage at different temperatures (typical values).

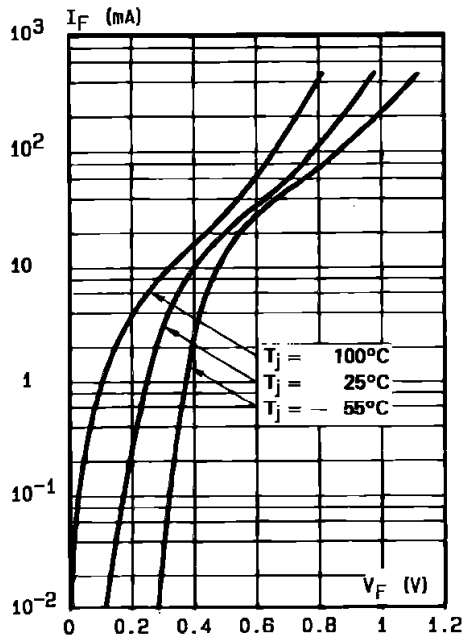


Fig. 2: Forward current versus forward voltage (typical values).

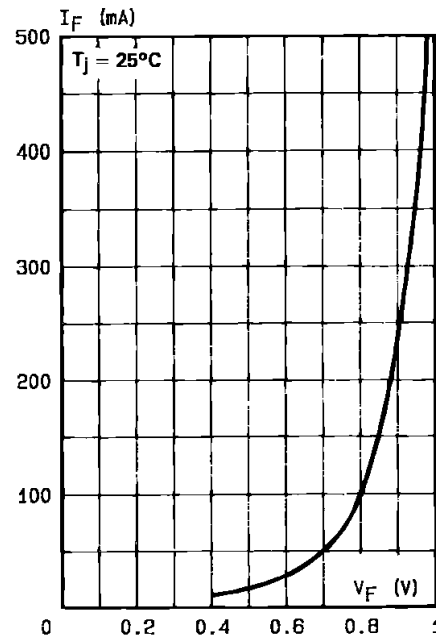


Fig. 3: Reverse current versus junction temperature (typical values).

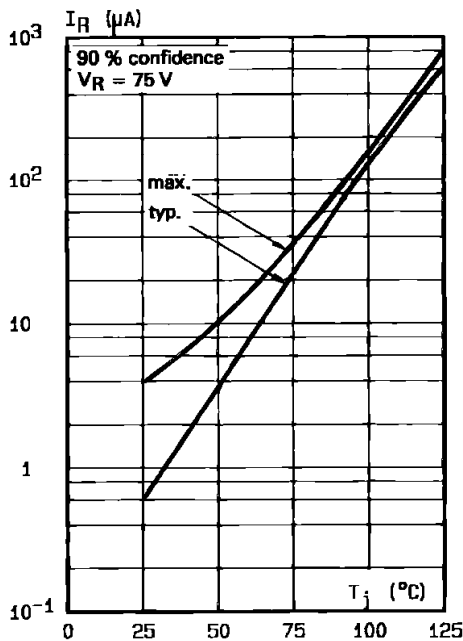
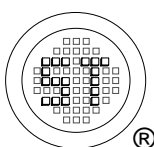
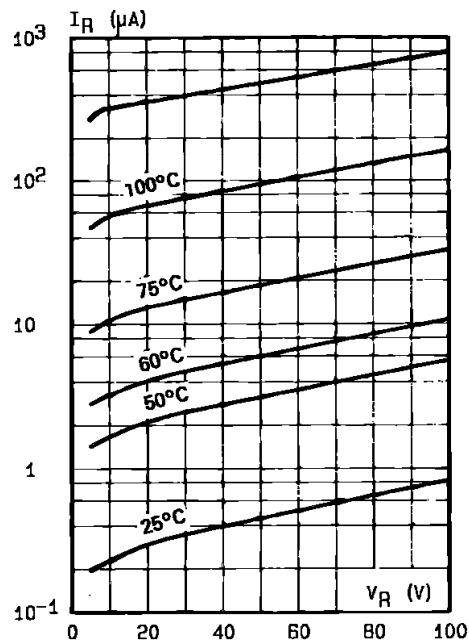


Fig. 4: Reverse current versus continuous reverse voltage (typical values).

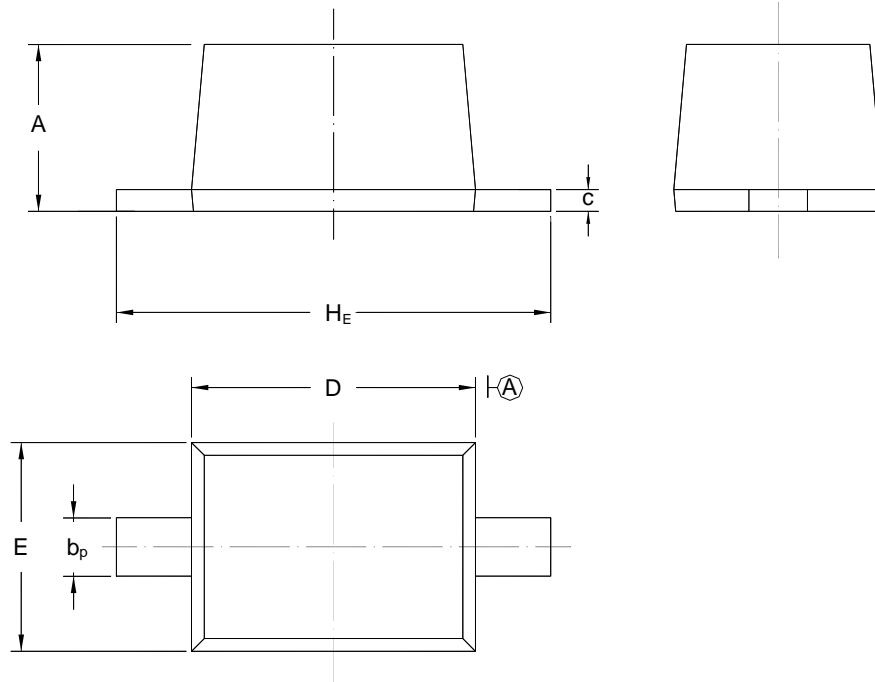


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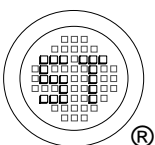
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



| UNIT | A | b_p | C | D | E | H_E |
|------|--------------|--------------|--------------|--------------|--------------|--------------|
| mm | 1.10 0.80 | 0.40 0.25 | 0.15 0.10 | 1.80 1.60 | 1.35 1.15 | 2.80 2.30 |



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