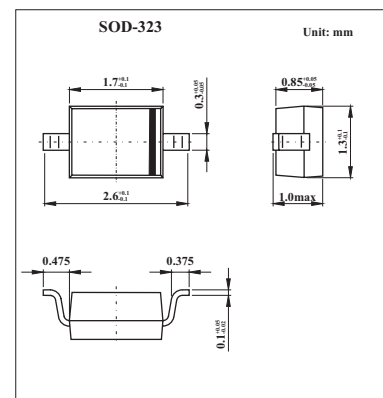


## SURFACE MOUNT SCHOTTKY BARRIER DIODE

## BAT42WS / BAT43WS

## ■ Features

- Low Switching
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material - UL Recognition Flammability Classification 94V-O

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

| Characteristic                                               | Symbol          | Value       | Unit             |
|--------------------------------------------------------------|-----------------|-------------|------------------|
| Peak Repetitive Reverse Voltage                              | $V_{RRM}$       |             |                  |
| Working Peak Reverse Voltage                                 | $V_{RWM}$       | 30          | V                |
| DC Blocking Voltage                                          | $V_R$           |             |                  |
| Forward Continuous Current (Note 1)                          | $I_F$           | 200         | mA               |
| Rectified Peak Forward Current (Note 1) @ $T < 1.0\text{s}$  | $I_{FSM}$       | 500         | mA               |
| Non-Repetitive Peak Forward Current @ $t < 10\text{ms}$      | $I_{FSM}$       | 4.0         | A                |
| Power Dissipation                                            | $P_d$           | 200         | mW               |
| Typical Thermal Resistance, Junction to Ambient Air (Note 1) | $R_{\theta JA}$ | 625         | K/W              |
| Operating and Storage Temperature Range                      | $T_J, T_{STG}$  | -55 to +125 | $^\circ\text{C}$ |

Note:

- Valid provided that terminals are kept at ambient temperature.

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

| Characteristic            | Symbol      | Test Condition                                                             | Min | Typ | Max  | Unit          |
|---------------------------|-------------|----------------------------------------------------------------------------|-----|-----|------|---------------|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | @ $I_{RS} = 100 \mu\text{A}$                                               | 30  |     |      | V             |
| Forward Voltage           | $V_F$       | BAT42WS @ $I_F = 1.0 \text{ mA}$                                           |     |     | 0.4  | V             |
|                           |             | BAT42WS @ $I_F = 200 \text{ mA}$                                           |     |     | 1.0  |               |
|                           |             | BAT43WS @ $I_F = 2.0 \text{ mA}$                                           |     |     | 0.33 |               |
|                           |             | BAT43WS @ $I_F = 200 \text{ mA}$                                           |     |     | 1.0  |               |
| Reverse Leakage Current   | $I_R$       | @ $V_R = 25 \text{ V}$                                                     |     |     | 0.5  | $\mu\text{A}$ |
| Junction Capacitance      | $C_j$       | $V_R = 1.0 \text{ V}, f = 1.0 \text{ MHz}$                                 |     |     | 10   | pF            |
| Reverse Recovery Time     | $t_{rr}$    | $I_F = I_R = 10 \text{ mA}$<br>$I_{RR} = 0.1 \times I_R, R_L = 100 \Omega$ |     |     | 5.0  | nS            |

## ■ Marking

| Type    | BAT42WS | BAT43WS |
|---------|---------|---------|
| Marking | L2      | L3      |