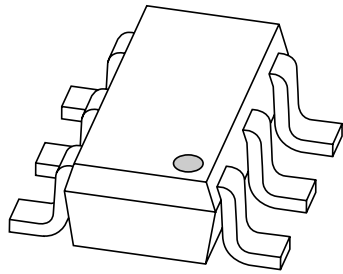


# DATA SHEET



## **1PS74SB23** Schottky barrier diode

Product specification

## Schottky barrier diode

1PS74SB23

## FEATURES

- Ultra fast switching speed
- Low forward voltage
- Fast recovery time
- Guard ring protected
- Small plastic SMD package
- Capability of absorbing very high surge current.

## APPLICATIONS

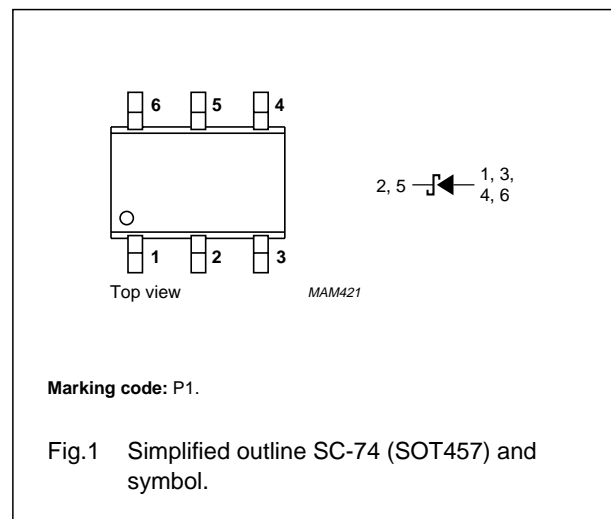
- Rectification
- Circuit protection
- Polarity protection
- Switched-mode power supplies.

## DESCRIPTION

Planar Schottky barrier diode encapsulated in an SC-74 (SOT457) small plastic SMD package.

## PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | anode       |
| 2   | cathode     |
| 3   | anode       |
| 4   | anode       |
| 5   | cathode     |
| 6   | anode       |



## LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

| SYMBOL    | PARAMETER                           | CONDITIONS  | MIN. | MAX. | UNIT         |
|-----------|-------------------------------------|---|------|------|--------------|
| $V_R$     | continuous reverse voltage          |   | –    | 25   | V            |
| $I_F$     | continuous forward current          |   | –    | 1    | A            |
| $I_{FSM}$ | non-repetitive peak forward current | $t_p = 8.3$ ms; half sinewave; JEDEC method; note 1 | –    | 25   | A            |
| $I_{RSM}$ | non-repetitive peak reverse current | $t_p = 100$ $\mu$ s                                 | –    | 0.5  | A            |
| $T_{stg}$ | storage temperature                 |   | –65  | +150 | $^{\circ}$ C |
| $T_j$     | junction temperature                |   | –    | 125  | $^{\circ}$ C |

## Note

1. Pins 1, 3, 4 and 6 are connected in parallel; pins 2 and 5 are connected in parallel.

## Schottky barrier diode

1PS74SB23

**ELECTRICAL CHARACTERISTICS** $T_{amb} = 25\text{ °C}$  unless otherwise specified.

| SYMBOL | PARAMETER         | CONDITIONS  | TYP. | MAX. | UNIT          |
|--------|-------------------|---|------|------|---------------|
| $V_F$  | forward voltage   | $I_F = 100\text{ mA}$                               | 260  | 300  | mV            |
|        |                   | $I_F = 1\text{ A}$                                  | 400  | 450  | mV            |
| $I_R$  | reverse current   | $V_R = 20\text{ V}$ ; note 1; see Fig.3             | 80   | 500  | $\mu\text{A}$ |
|        |                   | $V_R = 25\text{ V}$ ; note 1; see Fig.3             | –    | 1    | mA            |
| $C_d$  | diode capacitance | $f = 1\text{ MHz}$ ; $V_R = 4\text{ V}$ ; see Fig.4 | 100  | –    | pF            |

**Note**

1. Pulse test:  $t_p = 300\text{ }\mu\text{s}$ ;  $\delta = 0.02$ .

**THERMAL CHARACTERISTICS**

| SYMBOL        | PARAMETER                                   | CONDITIONS | VALUE | UNIT |
|---------------|---|------------|-------|------|
| $R_{th\ j-a}$ | thermal resistance from junction to ambient | note 1     | 250   | K/W  |

**Note**

1. Refer to SC-74 (SOT457) standard mounting conditions.

# Schottky barrier diode

# 1PS74SB23

## PACKAGE OUTLINE

Plastic surface mounted package; 6 leads

SOT457

