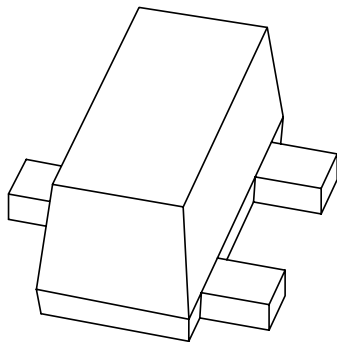


DATA SHEET



1PS89SB74

Schottky barrier double diode

Product specification

2001 Apr 20

Schottky barrier double diode

1PS89SB74

FEATURES

- Low forward voltage
- High breakdown voltage
- Guard ring protected
- Ultra small plastic SMD package
- Low capacitance.

APPLICATIONS

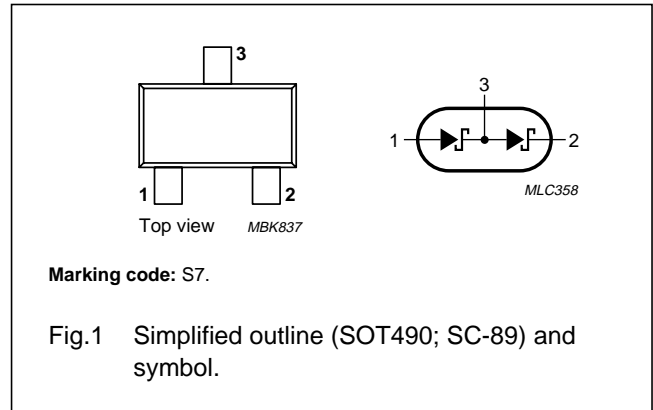
- Ultra high-speed switching
- Voltage clamping
- Protection circuits
- Blocking diodes.

DESCRIPTION

Planar Schottky barrier diode encapsulated in a SOT490 (SC-89) ultra small plastic SMD package.

PINNING

| PIN | DESCRIPTION |
|-----|---|
| 1 | anode (a ₁) |
| 2 | cathode (k ₂) |
| 3 | common (k ₁ , a ₂) |



LIMITING VALUES

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

| SYMBOL | PARAMETER | CONDITIONS | MIN. | MAX. | UNIT |
|---|---------------------------------------|-------------------------------|------|------|------|
| Per diode unless otherwise specified | | | | | |
| V _R | continuous reverse voltage | | – | 70 | V |
| I _F | continuous forward current | | – | 70 | mA |
| I _{FRM} | repetitive peak forward current | t _p ≤ 1 s; δ ≤ 0.5 | – | 70 | mA |
| I _{FSM} | non-repetitive peak forward current | t _p < 10 ms | – | 100 | mA |
| P _{tot} | total power dissipation (per package) | T _{amb} ≤ 25 °C | – | 200 | mW |
| T _{stg} | storage temperature | | –65 | +150 | °C |
| T _j | junction temperature | | – | +150 | °C |
| T _{amb} | operating ambient temperature | | –65 | +150 | °C |

Schottky barrier double diode

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

| SYMBOL | PARAMETER | CONDITIONS | MAX. | UNIT |
|------------------|----------------------------|--|------|---------------|
| Per diode | | | | |
| V_F | continuous forward voltage | see Fig.2; | | |
| | | $I_F = 1\text{ mA}$ | 410 | mV |
| | | $I_F = 10\text{ mA}$ | 750 | mV |
| | | $I_F = 15\text{ mA}$ | 1 | V |
| I_R | continuous reverse current | $V_R = 50\text{ V}$; see Fig.3; note 1 | 100 | nA |
| | | $V_R = 70\text{ V}$; see Fig.3; note 1 | 10 | μA |
| C_d | diode capacitance | $V_R = 0$; $f = 1\text{ MHz}$; see Fig.4 | 2 | pF |

Note

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

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|---------------|---|------------|-------|------|
| $R_{th\ j-a}$ | thermal resistance from junction to ambient | note 1 | 500 | K/W |

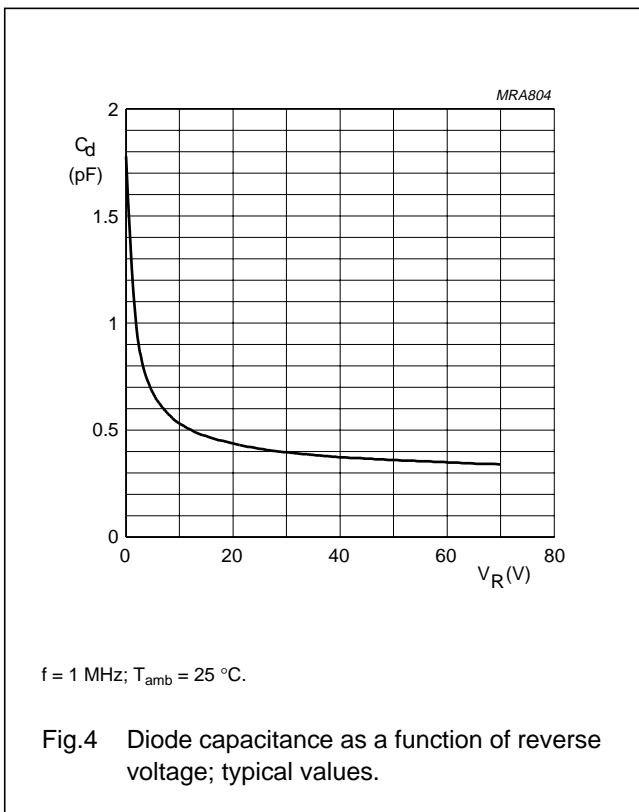
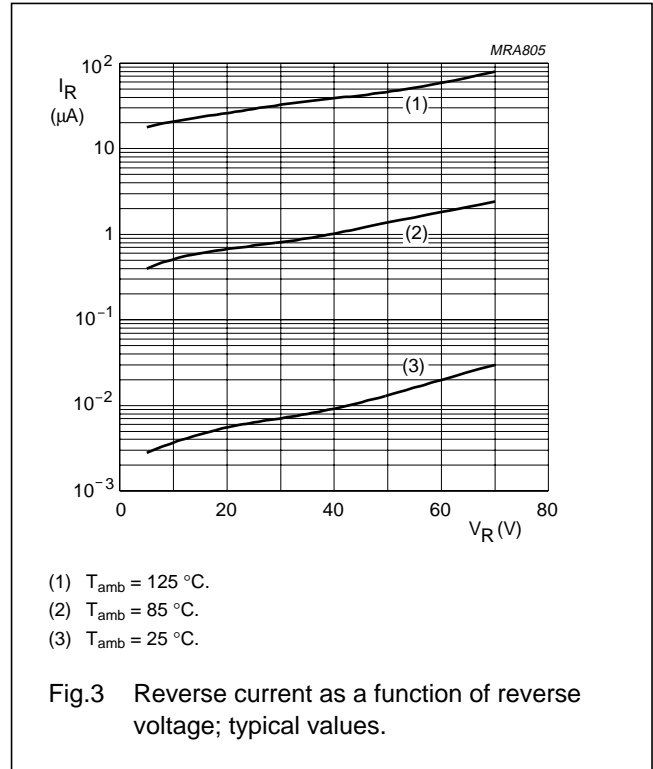
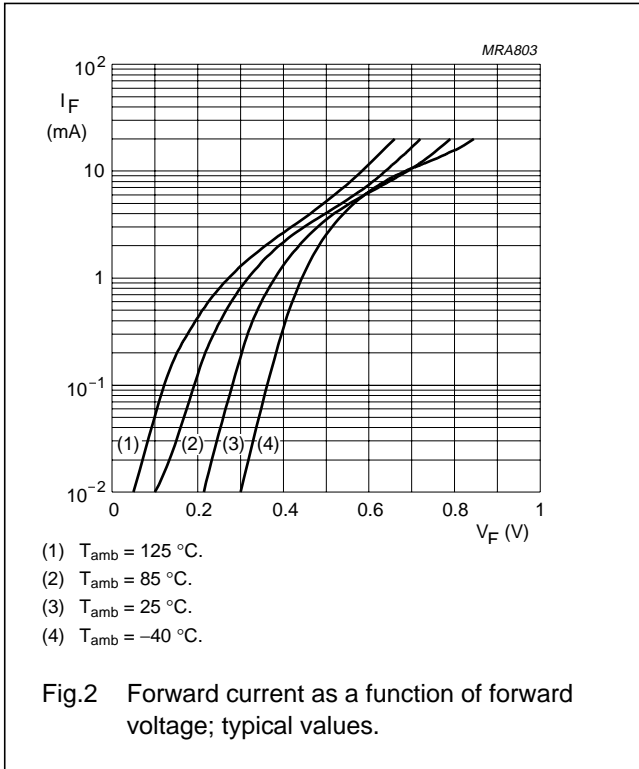
Note

1. Refer to SOT490 (SC-89) standard mounting conditions.

Schottky barrier double diode

1PS89SB74

GRAPHICAL DATA



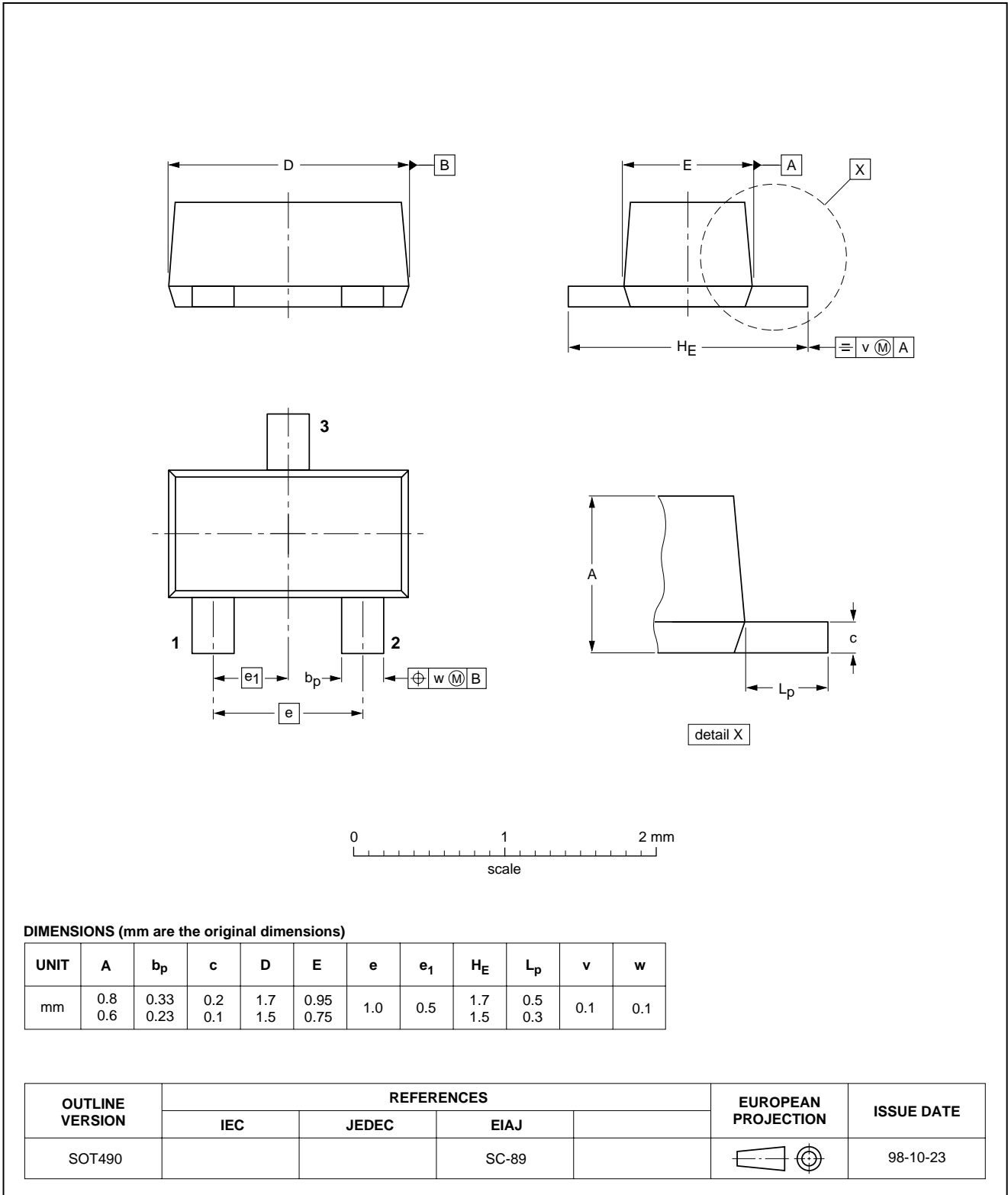
Schottky barrier double diode

1PS89SB74

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT490



Schottky barrier double diode

1PS89SB74

DATA SHEET STATUS

| DATA SHEET STATUS ⁽¹⁾ | PRODUCT STATUS ⁽²⁾ | DEFINITIONS |
|----------------------------------|-------------------------------|--|
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| Product data | Production | This data sheet contains data from the product specification. Philips Semiconductors reserves the right to make changes at any time in order to improve the design, manufacturing and supply. Changes will be communicated according to the Customer Product/Process Change Notification (CPCN) procedure SNW-SQ-650A. |

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Schottky barrier double diode

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