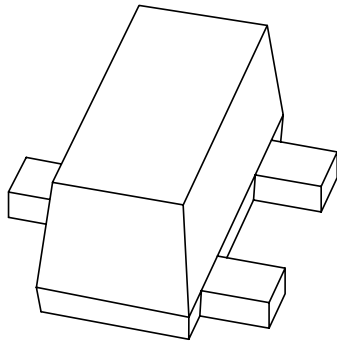


DATA SHEET



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

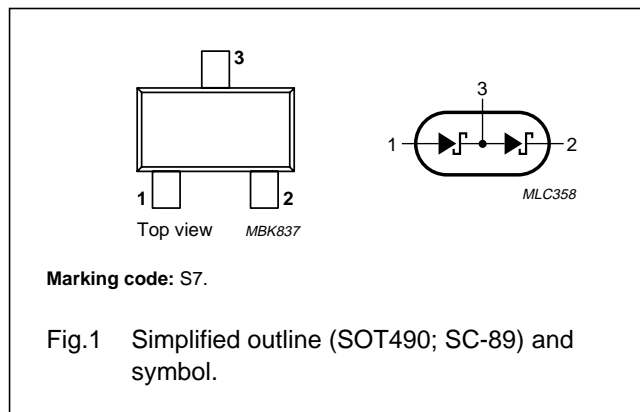
- Ultra high-speed switching
- Voltage clamping
- Protection circuits
- Blocking diodes.

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

1PS89SB74

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

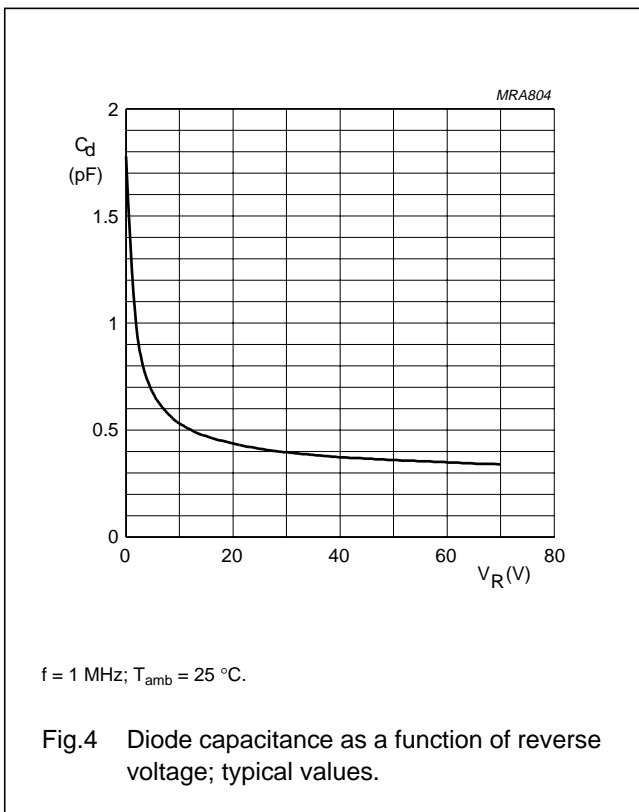
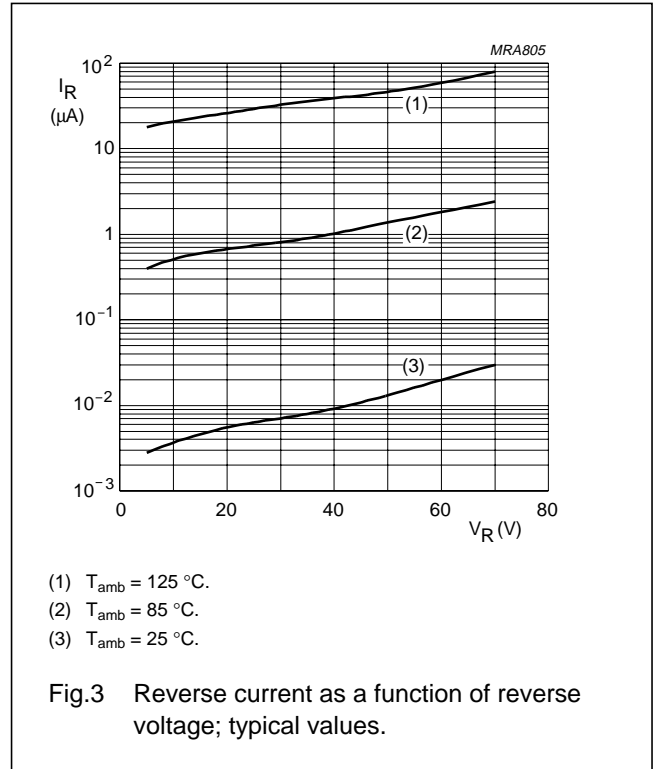
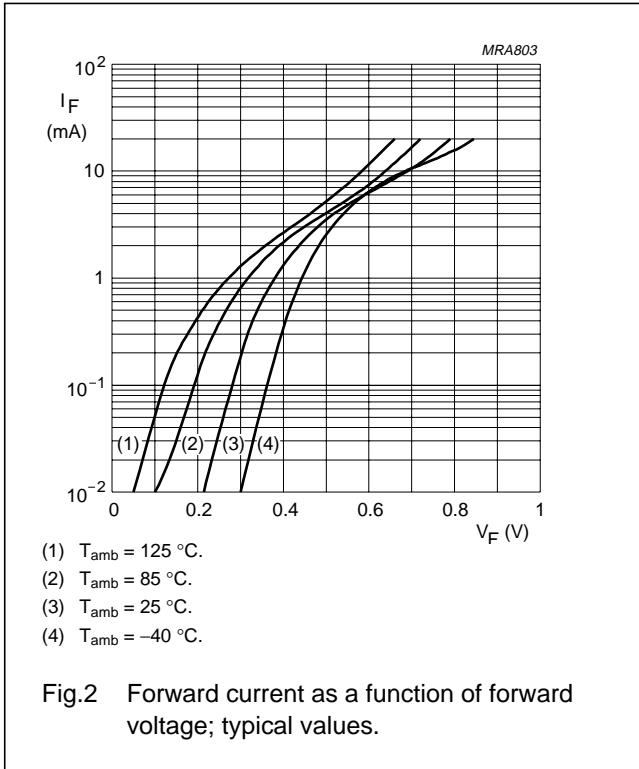
Note

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

Schottky barrier double diode

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GRAPHICAL DATA



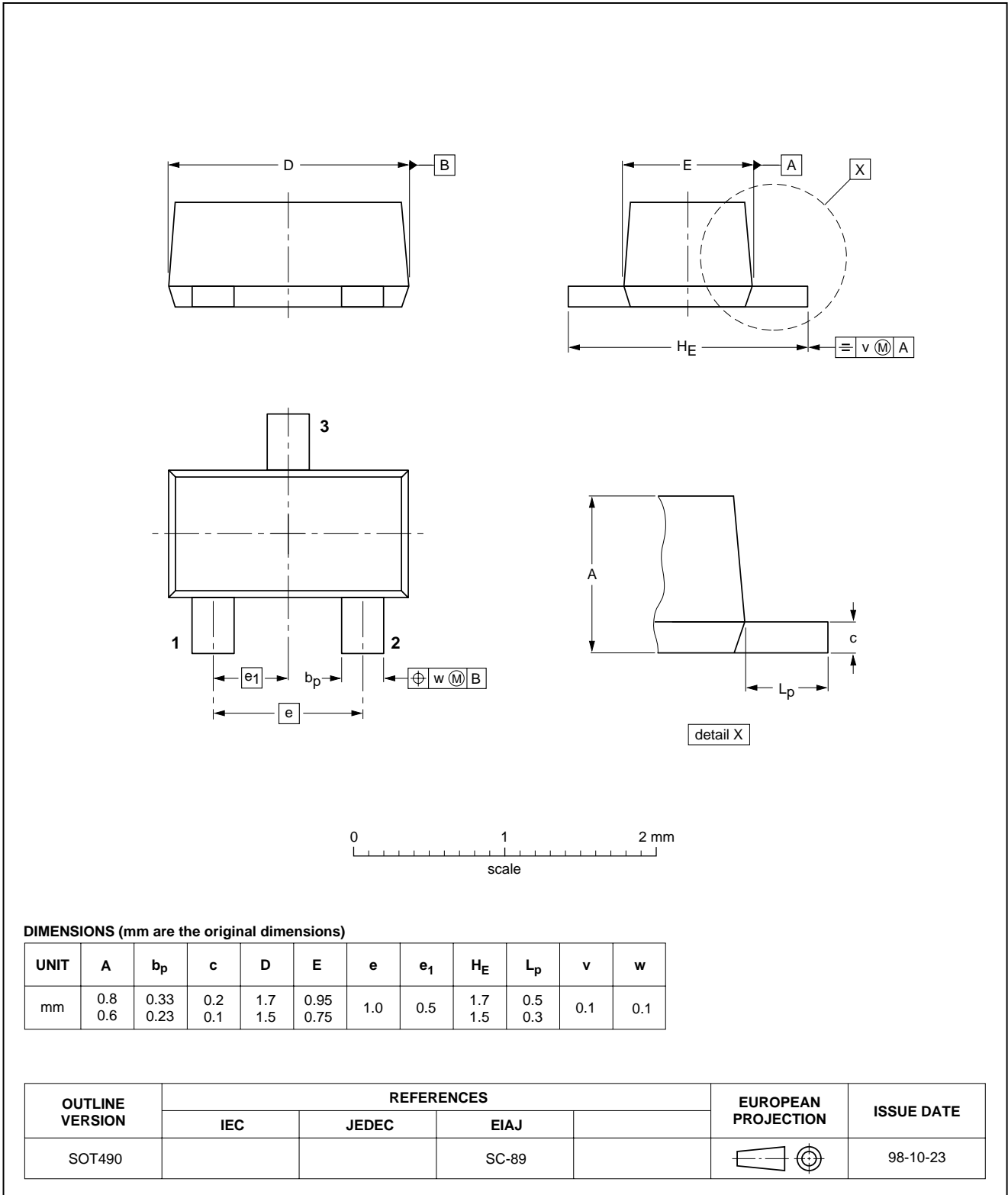
Schottky barrier double diode

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
Objective data	Development	This data sheet contains data from the objective specification for product development. Philips Semiconductors reserves the right to change the specification in any manner without notice.
Preliminary data	Qualification	This data sheet contains data from the preliminary specification. Supplementary data will be published at a later date. Philips Semiconductors reserves the right to change the specification without notice, in order to improve the design and supply the best possible product.
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Schottky barrier double diode

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