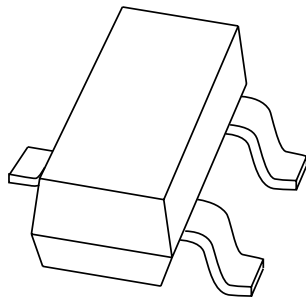


# DATA SHEET



**PMBD354**

Schottky barrier double diode

Product data sheet  
Supersedes data of 2002 Aug 06

2003 Mar 25

Schottky barrier double diode

PMBD354

FEATURES

- Low forward voltage
- Small SMD package
- Low capacitance
- Matched capacitance.

APPLICATIONS

- UHF mixer
- Sampling circuits
- Modulators
- Phase detection.

DESCRIPTION

Planar Schottky barrier double diode in a SOT23 small plastic SMD package.

MARKING

| TYPE NUMBER | MARKING CODE <sup>(1)</sup> |
|-------------|-----------------------------|
| PMBD354     | *V8                         |

Note

1. \* = p : Made in Hong Kong.  
\* = t : Made in Malaysia.  
\* = W : Made in China.

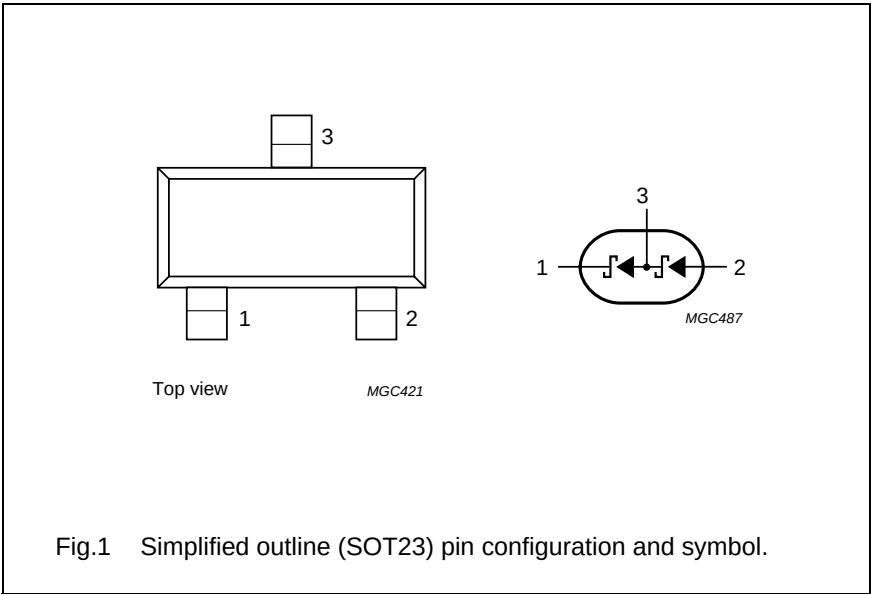
LIMITING VALUES

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

| SYMBOL           | PARAMETER                  | MIN. | MAX. | UNIT |
|------------------|----------------------------|------|------|------|
| Per diode        |                            |      |      |      |
| V <sub>R</sub>   | continuous reverse voltage | –    | 4    | V    |
| I <sub>F</sub>   | continuous forward current | –    | 30   | mA   |
| T <sub>stg</sub> | storage temperature        | –65  | +150 | °C   |
| T <sub>j</sub>   | junction temperature       | –    | 100  | °C   |

PINNING

| PIN | DESCRIPTION                                       |
|-----|---------------------------------------------------|
| 1   | cathode k <sub>1</sub>                            |
| 2   | anode a <sub>2</sub>                              |
| 3   | common connection a <sub>1</sub> , k <sub>2</sub> |



## Schottky barrier double diode

## PMBD354

**ELECTRICAL CHARACTERISTICS**

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

| SYMBOL           | PARAMETER            | CONDITIONS                                 | MAX. | UNIT          |
|------------------|----------------------|--------------------------------------------|------|---------------|
| <b>Per diode</b> |                      |                                            |      |               |
| $V_F$            | forward voltage      | see Fig.2                                  |      |               |
|                  |                      | $I_F = 0.1\text{ mA}$                      | 350  | mV            |
|                  |                      | $I_F = 1\text{ mA}$                        | 450  | mV            |
|                  |                      | $I_F = 10\text{ mA}$                       | 600  | mV            |
| $I_R$            | reverse current      | $V_R = 3\text{ V}$ ; note 1; see Fig.3     | 0.25 | $\mu\text{A}$ |
| $C_d$            | diode capacitance    | $f = 1\text{ MHz}$ ; $V_R = 0$ ; see Fig.4 | 1    | pF            |
| $\Delta C_d$     | capacitance matching | $f = 1\text{ MHz}$ ; $V_R = 0$             | 0.1  | pF            |

**Note**

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

**THERMAL CHARACTERISTICS**

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

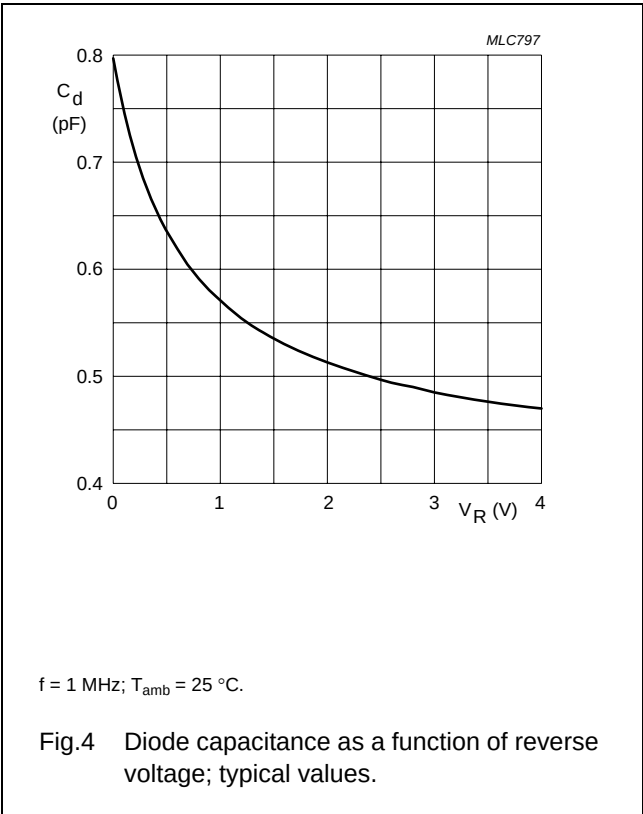
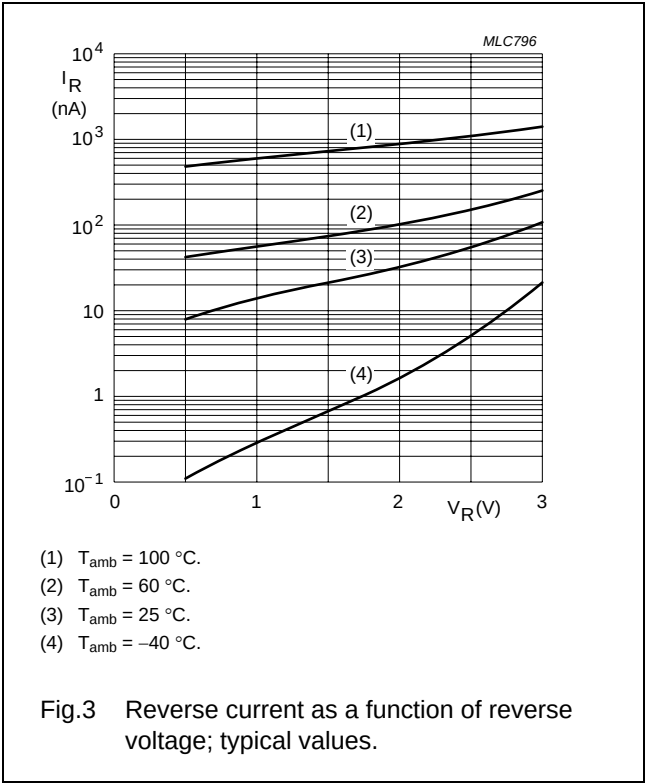
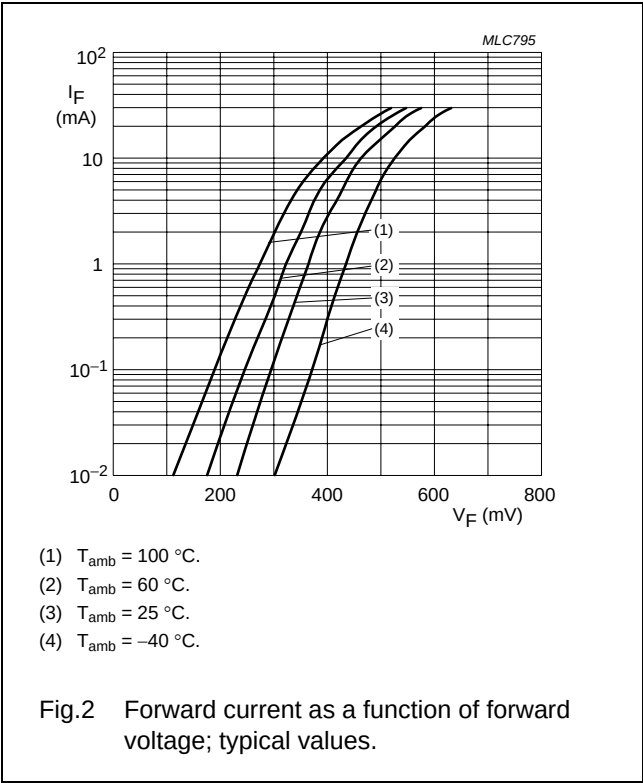
**Note**

1. Refer to SOT23 standard mounting conditions.

Schottky barrier double diode

PMBD354

GRAPHICAL DATA



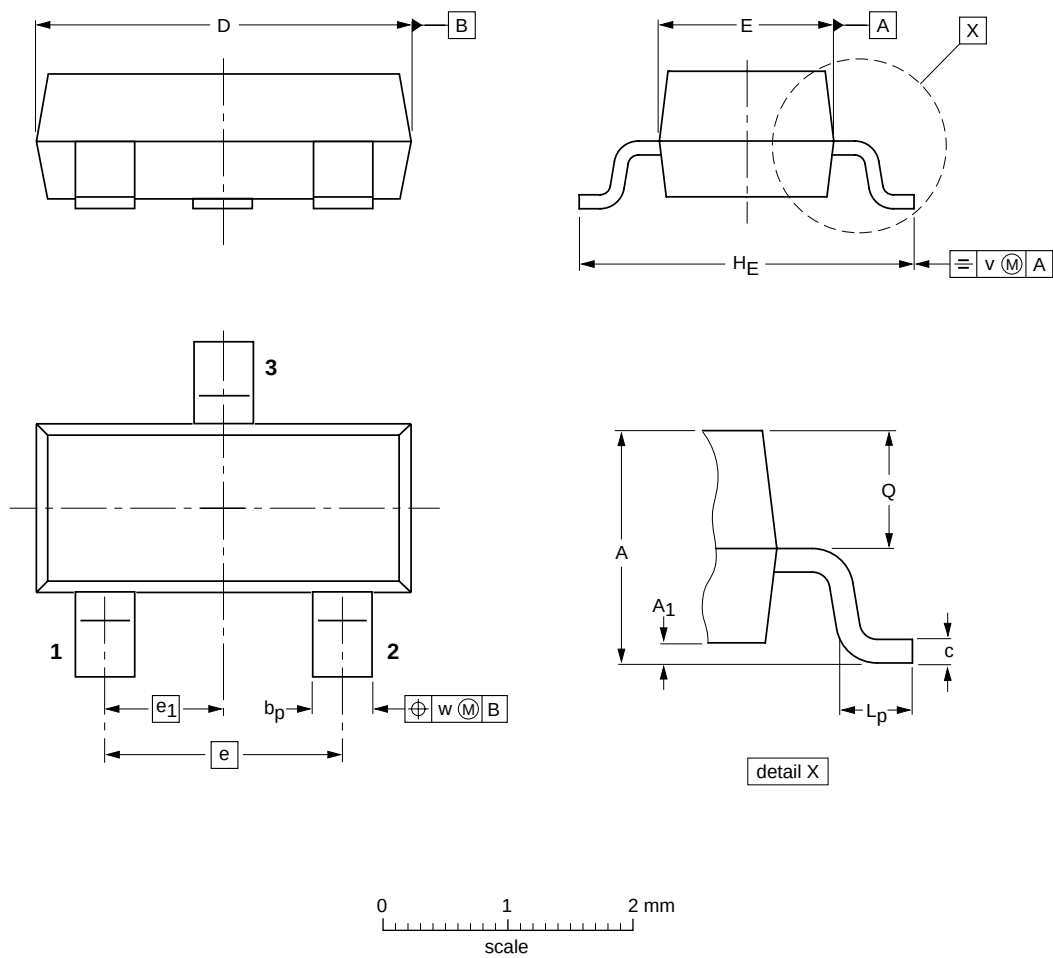
Schottky barrier double diode

PMBD354

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT23



DIMENSIONS (mm are the original dimensions)

| UNIT | A          | A <sub>1</sub><br>max. | b <sub>p</sub> | c            | D          | E          | e   | e <sub>1</sub> | H <sub>E</sub> | L <sub>p</sub> | Q            | v   | w   |
|------|------------|------------------------|----------------|--------------|------------|------------|-----|----------------|----------------|----------------|--------------|-----|-----|
| mm   | 1.1<br>0.9 | 0.1                    | 0.48<br>0.38   | 0.15<br>0.09 | 3.0<br>2.8 | 1.4<br>1.2 | 1.9 | 0.95           | 2.5<br>2.1     | 0.45<br>0.15   | 0.55<br>0.45 | 0.2 | 0.1 |

| OUTLINE<br>VERSION | REFERENCES |          |      |  | EUROPEAN<br>PROJECTION | ISSUE DATE                      |
|--------------------|------------|----------|------|--|------------------------|---------------------------------|
|                    | IEC        | JEDEC    | EIAJ |  |                        |                                 |
| SOT23              |            | TO-236AB |      |  |                        | <del>97-02-28</del><br>99-09-13 |

## Schottky barrier double diode

PMBD354

## DATA SHEET STATUS

| DOCUMENT STATUS <sup>(1)</sup> | PRODUCT STATUS <sup>(2)</sup> | DEFINITION                                                                            |
|--------------------------------|-------------------------------|---------------------------------------------------------------------------------------|
| Objective data sheet           | Development                   | This document contains data from the objective specification for product development. |
| Preliminary data sheet         | Qualification                 | This document contains data from the preliminary specification.                       |
| Product data sheet             | Production                    | This document contains the product specification.                                     |

## Notes

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## **Contact information**

For additional information please visit: **<http://www.nxp.com>**

For sales offices addresses send e-mail to: **[salesaddresses@nxp.com](mailto:salesaddresses@nxp.com)**

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