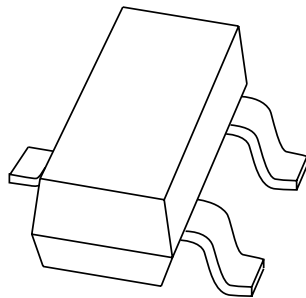


# DATA SHEET



**PMBD353**

Schottky barrier double diode

Product specification  
Supersedes data of 1996 Mar 20

1999 May 25

Schottky barrier double diode

PMBD353

FEATURES

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

APPLICATIONS

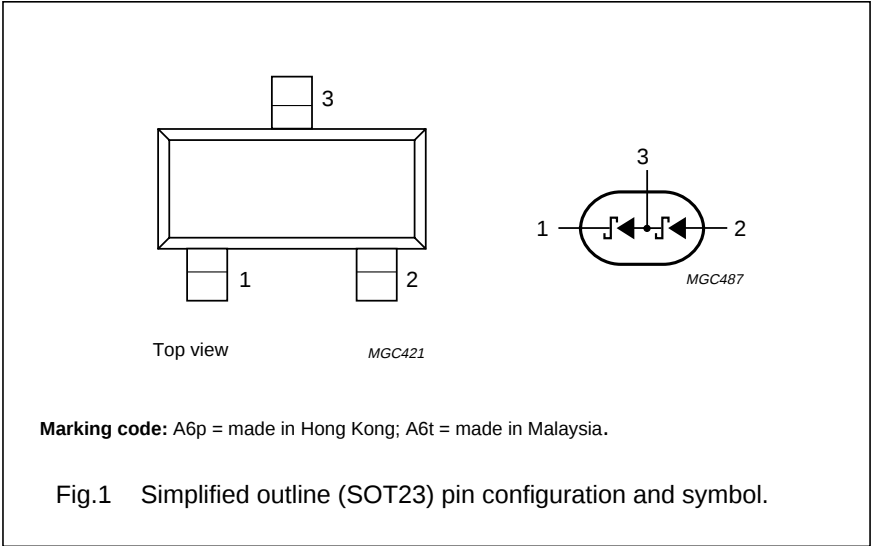
- UHF mixer
- Sampling circuits
- Modulators
- Phase detection.

PINNING

| PIN | DESCRIPTION                     |
|-----|---------------------------------|
| 1   | k <sub>1</sub>                  |
| 2   | a <sub>2</sub>                  |
| 3   | a <sub>1</sub> , k <sub>2</sub> |

DESCRIPTION

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



LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

| 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   |

## Schottky barrier double diode

## PMBD353

**ELECTRICAL CHARACTERISTICS**

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

| SYMBOL           | PARAMETER         | CONDITIONS                                                                        | MAX.              | UNIT           |
|------------------|-------------------|-----------------------------------------------------------------------------------|-------------------|----------------|
| <b>Per diode</b> |                   |                                                                                   |                   |                |
| $V_F$            | forward voltage   | see Fig.2<br>$I_F = 0.1\text{ mA}$<br>$I_F = 1\text{ mA}$<br>$I_F = 10\text{ mA}$ | 350<br>450<br>600 | mV<br>mV<br>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             |

**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     | 500   | K/W  |

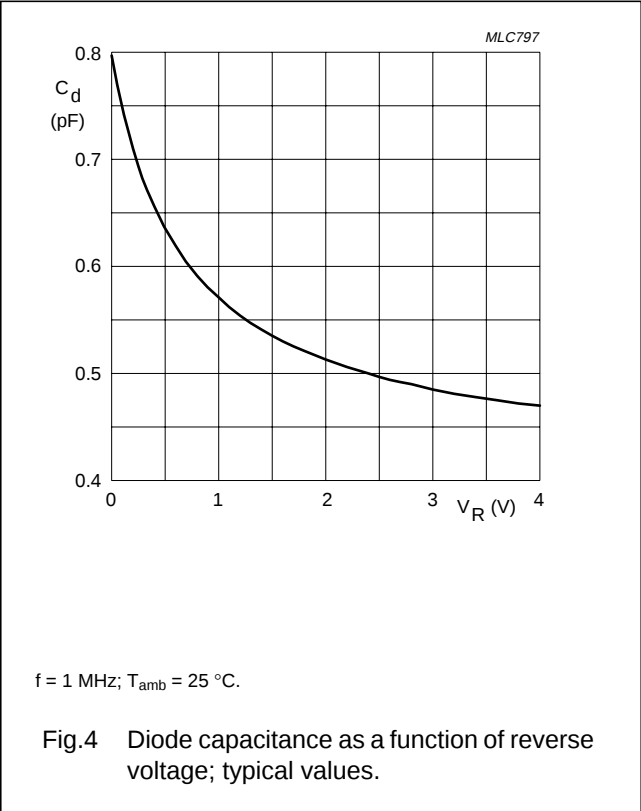
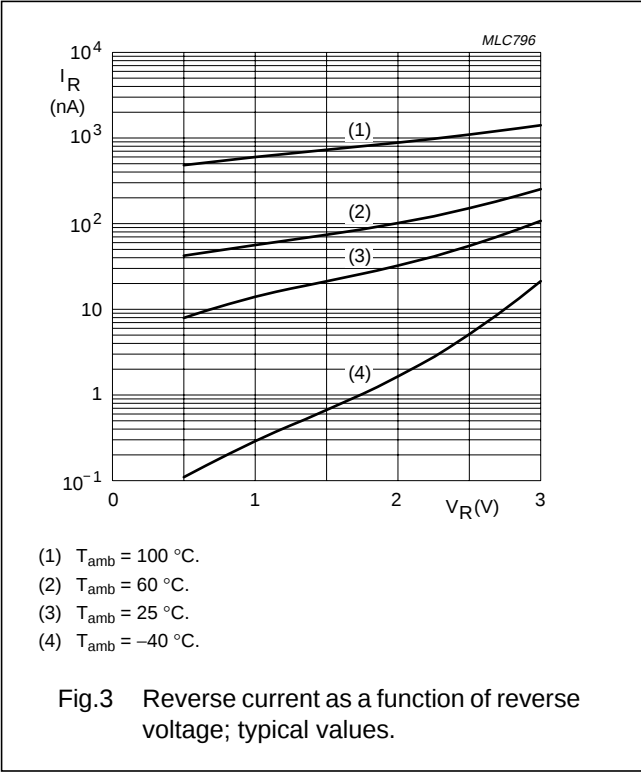
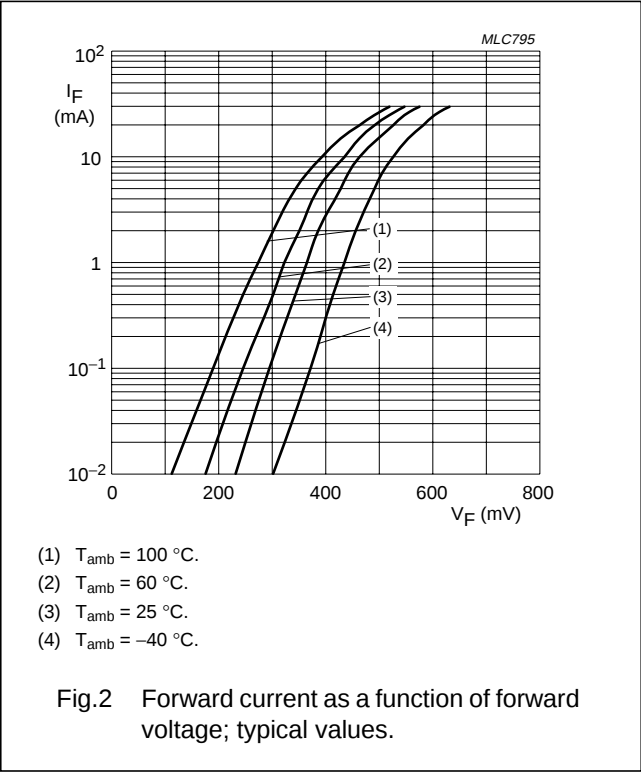
**Note**

1. Refer to SOT23 standard mounting conditions.

Schottky barrier double diode

PMBD353

GRAPHICAL DATA



Schottky barrier double diode

PMBD353

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT23



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Schottky barrier double diode

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PMBD353

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**DEFINITIONS**

| <b>Data sheet status</b>                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Objective specification                                                                                                                                                                                                                                                                                                                                                                                                                                   | This data sheet contains target or goal specifications for product development.       |
| Preliminary specification                                                                                                                                                                                                                                                                                                                                                                                                                                 | This data sheet contains preliminary data; supplementary data may be published later. |
| Product specification                                                                                                                                                                                                                                                                                                                                                                                                                                     | This data sheet contains final product specifications.                                |
| <b>Limiting values</b>                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                       |
| Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability. |                                                                                       |
| <b>Application information</b>                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                       |
| Where application information is given, it is advisory and does not form part of the specification.                                                                                                                                                                                                                                                                                                                                                       |                                                                                       |

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Schottky barrier double diode

PMBD353

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