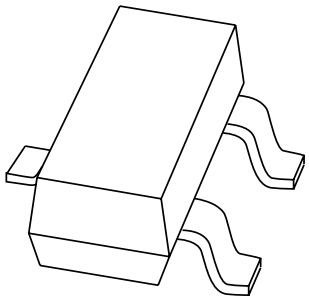
DATA SHEET



PMBD353
Schottky barrier double diode

Product specification
Supersedes data of 1999 May 25

2001 Oct 15

Philips
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Schottky barrier double diode PMBD353

FEATURES

- Low forward voltage
- Small SMD package
- Low 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(1)
PMBD353	∗4F

Note

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

PINNING

PIN	DESCRIPTION
1	cathode k_1
2	anode a_2
3	common connection a_1, k_2

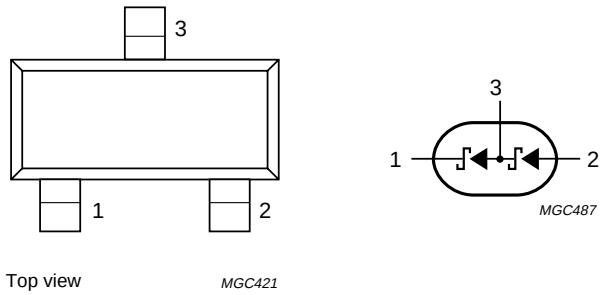


Fig.1 Simplified outline (SOT23) pin configuration and symbol.

LIMITING VALUES

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

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
Per diode				
V_R	continuous reverse voltage	–	4	V
I_F	continuous forward current	–	30	mA
T_{stg}	storage temperature	−65	+150	°C
T_j	junction temperature	–	100	°C

ELECTRICAL CHARACTERISTICS

T_{amb} = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
Per diode				
V_F	forward voltage	see Fig.2		
		I_F = 0.1 mA	350	mV
		I_F = 1 mA	450	mV
		I_F = 10 mA	600	mV
I_R	reverse current	V_R = 3 V; note 1; see Fig.3	0.25	μA
C_d	diode capacitance	f = 1 MHz; V_R = 0; see Fig.4	1	pF

Note

1. Pulse test: t_p = 300 μs; δ = 0.02.

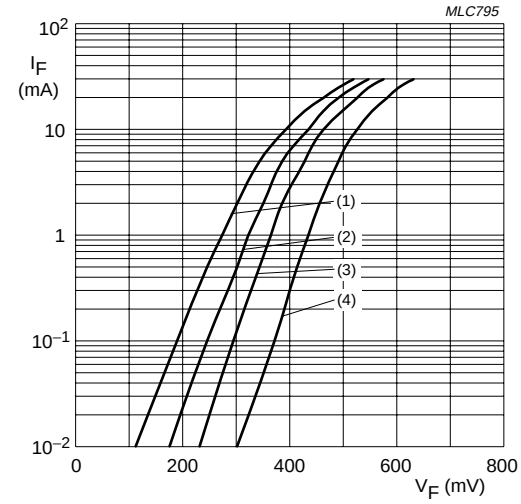
THERMAL CHARACTERISTICS

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

Note

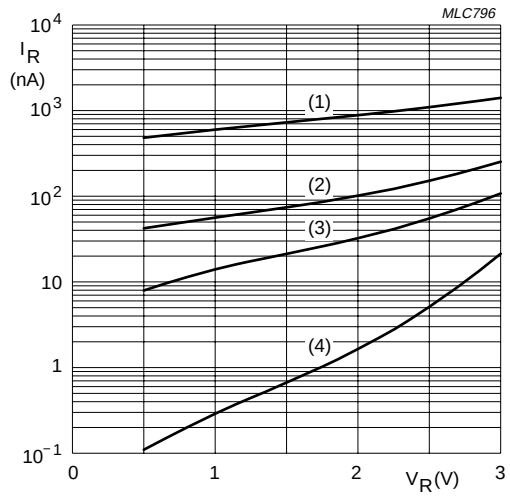
1. Refer to SOT23 standard mounting conditions.

GRAPHICAL DATA



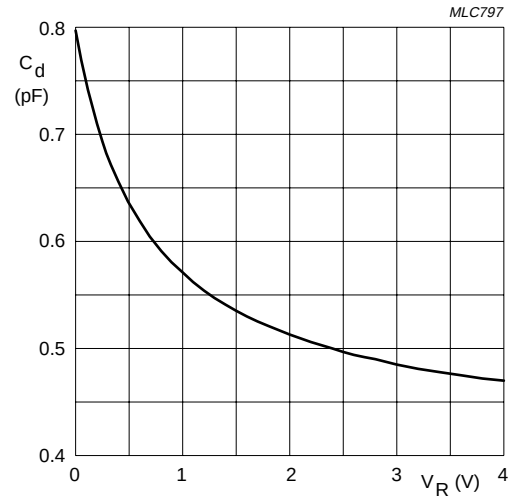
(1) T_{amb} = 100 °C.
(2) T_{amb} = 60 °C.
(3) T_{amb} = 25 °C.
(4) T_{amb} = –40 °C.

Fig.2 Forward current as a function of forward voltage; typical values.



(1) T_{amb} = 100 °C.
(2) T_{amb} = 60 °C.
(3) T_{amb} = 25 °C.
(4) T_{amb} = –40 °C.

Fig.3 Reverse current as a function of reverse voltage; typical values.

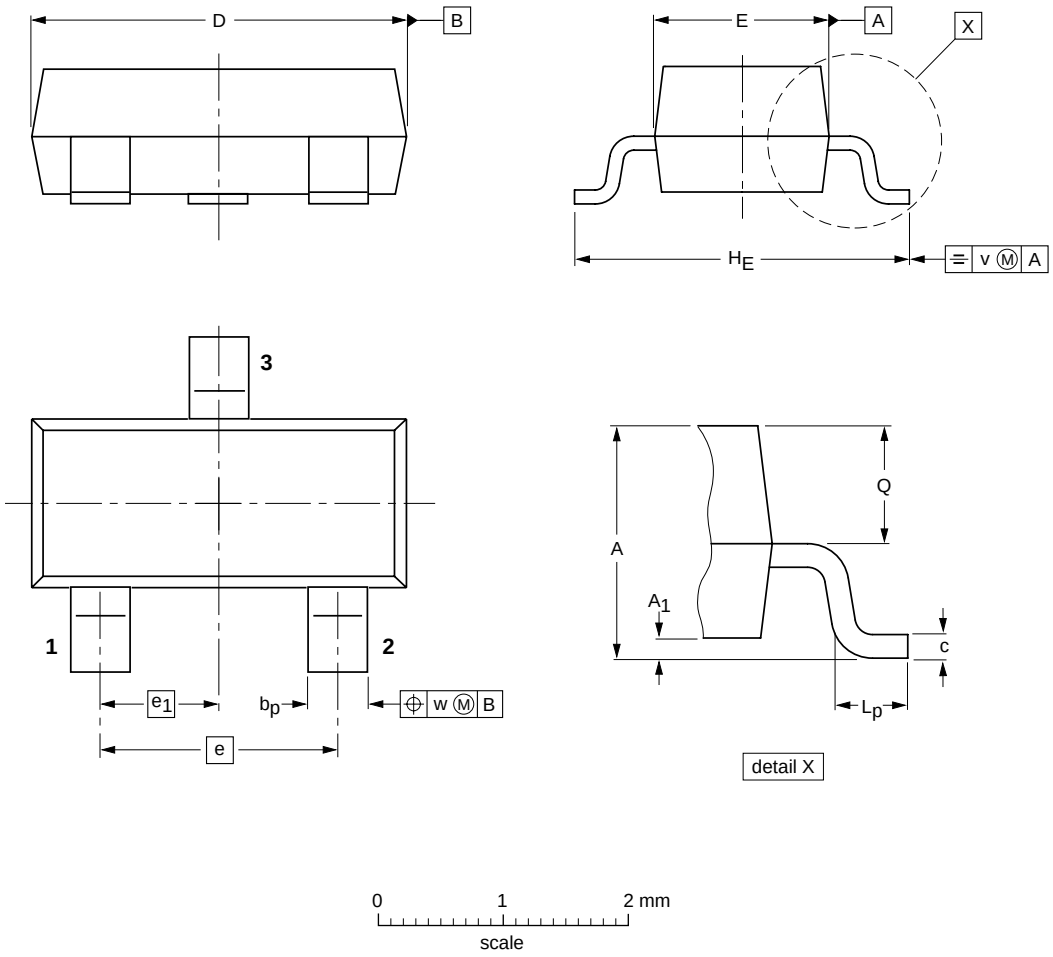


f = 1 MHz; T_{amb} = 25 °C.

Fig.4 Diode capacitance as a function of reverse voltage; typical values.

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT23**



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1 max.	b_p	c	D	E	e	e_1	H_E	L_p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT23		TO-236AB				~~97-02-28~~ 99-09-13

DATA SHEET STATUS

DATA SHEET STATUS[1]	PRODUCT STATUS[2]	DEFINITIONS
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