

# Schottky Dual Diode

## **PBYR220CT**

20V / 2A

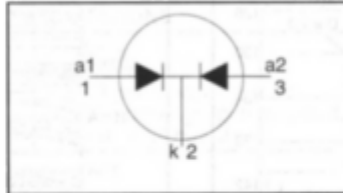
# DATASHEET

OEM – Philips

Source: Philips Databook 1999

**Rectifier diodes  
Schottky barrier**
**PBYR225CT series**
**FEATURES**

- Low forward volt drop
- Fast switching
- Reverse surge capability
- High thermal cycling performance
- low profile surface mounting package

**SYMBOL**

**QUICK REFERENCE DATA**

$$V_R = 20 \text{ V} / 25 \text{ V}$$

$$I_{O(AV)} = 2 \text{ A}$$

$$V_F \leq 0.33 \text{ V}$$

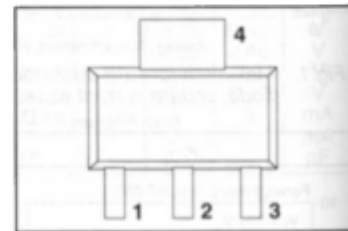
**GENERAL DESCRIPTION**

Dual, common cathode schottky rectifier diodes in a plastic envelope. Intended for use as output rectifiers in low voltage, high frequency switched mode power supplies.

The PBYR225CT series is supplied in the surface mounting SOT223 package.

**PINNING**

PIN	DESCRIPTION
1	anode 1
2	cathode
3	anode 2
tab	cathode

**SOT223**

**LIMITING VALUES**

Limiting values in accordance with the Absolute Maximum System (IEC 134)

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.		UNIT
				PBYR2		
$V_{RRM}$	Peak repetitive reverse voltage		-	20CT 20	25CT 25	V
$V_{RWM}$	Working peak reverse voltage		-	20	25	V
$V_R$	Continuous reverse voltage	$T_{sp} \leq 97 \text{ }^\circ\text{C}$	-	20	25	V
$I_{O(AV)}$	Average rectified output current (both diodes conducting)	square wave; $\delta = 0.5$ ; $T_{sp} \leq 136 \text{ }^\circ\text{C}$	-	2		A
$I_{FRM}$	Repetitive peak forward current per diode	square wave; $\delta = 0.5$ ; $T_{sp} \leq 136 \text{ }^\circ\text{C}$	-	2		A
$I_{FSM}$	Non-repetitive peak forward current per diode	$t = 10 \text{ ms}$	-	6		A
		$t = 8.3 \text{ ms}$	-	6.6		A
$I_{RRM}$	Peak repetitive reverse surge current per diode	sinusoidal; $T_j = 125 \text{ }^\circ\text{C}$ prior to surge; with reapplied $V_{RRM(max)}$ pulse width and repetition rate limited by $T_{jmax}$	-	1		A
$T_j$	Operating junction temperature per diode		-	150		$^\circ\text{C}$
$T_{stg}$	Storage temperature		- 40	150		$^\circ\text{C}$

**THERMAL RESISTANCES**

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$R_{th(j-sp)}$	Thermal resistance junction to solder point	one or both diodes conducting	-	-	15	K/W
$R_{th(j-a)}$	Thermal resistance junction to ambient	pcb mounted, minimum footprint	-	156	-	K/W
		pcb mounted, pad area as in fig.1	-	70	-	K/W

Rectifier diodes  
Schottky barrier

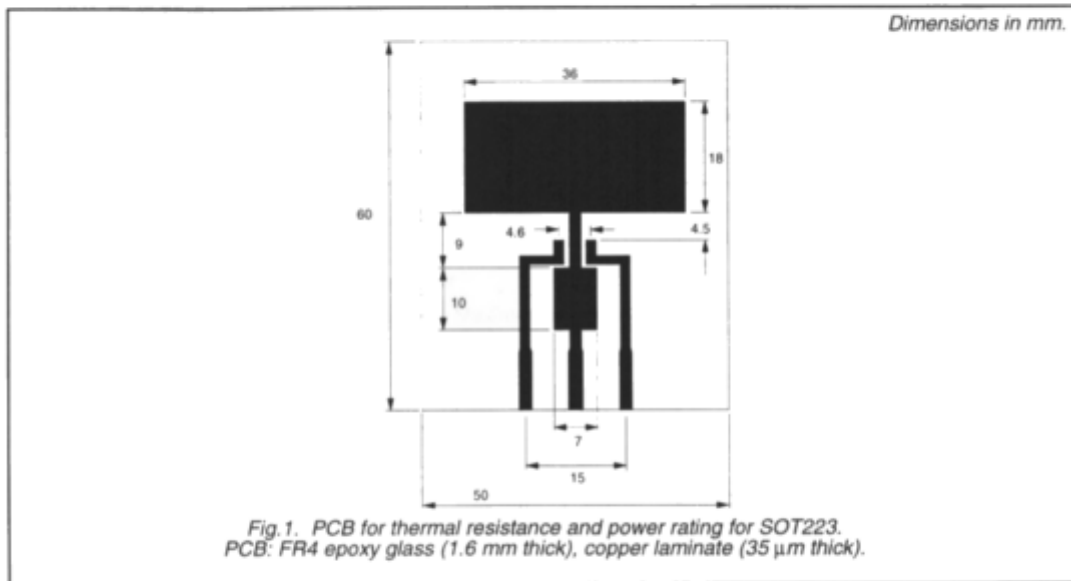
PBYR225CT series

### ELECTRICAL CHARACTERISTICS

characteristics are per diode at  $T_j = 25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$V_F$	Forward voltage	$I_F = 1\text{ A}; T_j = 125^\circ\text{C}$	-	0.28	0.33	V
		$I_F = 2\text{ A}$	-	0.42	0.51	V
$I_R$	Reverse current	$V_R = V_{RWM}$	-	0.05	3	mA
		$V_R = V_{RWM}; T_j = 100^\circ\text{C}$	-	5	10	mA
$C_j$	Junction capacitance	$V_R = 5\text{ V}; f = 1\text{ MHz}; T_j = 25^\circ\text{C to } 125^\circ\text{C}$	-	160	-	pF

### PRINTED CIRCUIT BOARD



Rectifier diodes  
Schottky barrier

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