

Silicon Schottky Diode

BYV10-40

40V/1A

DATASHEET

OEM – Philips

Source: Philips Databook 1999

Schottky barrier diodes

BYV10 series

FEATURES

- Low switching losses
- Fast recovery time
- Guard ring protected
- Hermetically sealed leaded glass package.

APPLICATIONS

- Low power, switched-mode power supplies
- Rectifying
- Polarity protection.

DESCRIPTION

The BYV10-20 to BYV10-40 types are Schottky barrier diodes fabricated in planar technology, and encapsulated in SOD81 hermetically sealed glass packages incorporating Implotec™⁽¹⁾ technology.

(1) Implotec is a trademark of Philips.

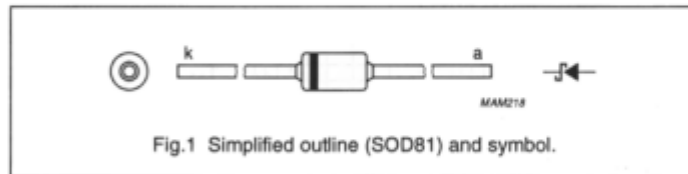


Fig.1 Simplified outline (SOD81) and symbol.

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{RRM}	repetitive peak reverse voltage				
	BYV10-20		–	20	V
	BYV10-30		–	30	V
	BYV10-40		–	40	V
$I_{F(AV)}$	average forward current	note 1	–	1	A
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–	125	°C

Note

1. Refer to SOD81 standard mounting conditions.

Schottky barrier diodes

BYV10 series

ELECTRICAL CHARACTERISTICS

$T_{amb} = 25\text{ °C}$; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V_F	forward voltage	$I_F = 0.1\text{ A}$	–	–	390	mV
		$I_F = 1\text{ A}$	–	–	550	mV
		$I_F = 3\text{ A}$	–	–	850	mV
I_R	reverse current	$V_R = V_{RRMmax}$; note 1	–	–	1	mA
C_d	diode capacitance	$V_R = 0\text{ V}$; $f = 1\text{ MHz}$	–	220	–	pF

Note

1. Pulsed 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	100	K/W

Note

1. Refer to SOD81 standard mounting conditions.