

# Silicon Diode

## **BYD32G**

400V/760mA

# DATASHEET

OEM – Philips

Source: Philips Databook 1999

## Fast soft-recovery controlled avalanche rectifiers

## BYD32 series

### FEATURES

- Glass passivated
- High maximum operating temperature
- Low leakage current
- Excellent stability
- Guaranteed avalanche energy absorption capability
- Available in ammo-pack.

### DESCRIPTION

Cavity free cylindrical glass SOD 120 package through Implotec™(1) technology. This package is

hermetically sealed and fatigue free as coefficients of expansion of all used parts are matched.

(1) Implotec is a trademark of Philips.

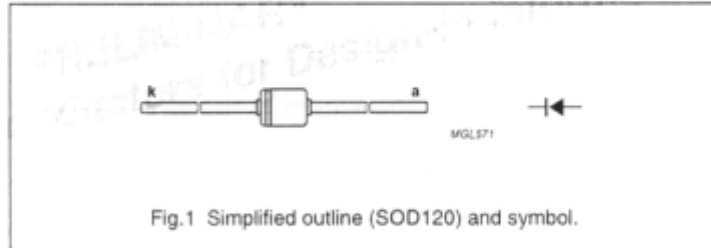


Fig.1 Simplified outline (SOD120) and symbol.

### LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{RRM}$	repetitive peak reverse voltage				
	BYD32D		–	200	V
	BYD32G		–	400	V
	BYD32J		–	600	V
$V_R$	continuous reverse voltage				
	BYD32D		–	200	V
	BYD32G		–	400	V
	BYD32J		–	600	V
$I_{F(AV)}$	average forward current	$T_{amb} = 25\text{ °C}$ ; printed-circuit board mounting, pitch 5 mm, see Fig.6; averaged over any 20 ms period; see Fig.2	–	0.76	A
$I_{FSM}$	non-repetitive peak forward current	$t = 10\text{ ms}$ half sine wave; $T_j = 25\text{ °C}$ ; $V_R = V_{RRMmax}$	–	15	A
$T_{stg}$	storage temperature		–65	+175	°C
$T_j$	junction temperature	see Fig.3	–65	+175	°C

### ELECTRICAL CHARACTERISTICS

$T_j = 25\text{ °C}$  unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
$V_F$	forward voltage	$I_F = 1\text{ A}$ ; see Fig.4	1.3	V
$I_R$	reverse current	$V_R = V_{RRMmax}$	1	$\mu\text{A}$
		$V_R = V_{RRMmax}$ ; $T_j = 165\text{ °C}$ ; see Fig.5	100	$\mu\text{A}$
$t_{rr}$	reverse recovery time	when switched from $I_F = 0.5\text{ A}$ to $I_R = 1\text{ A}$ ; measured at $I_R = 0.25\text{ A}$ ; see Fig.7	250	ns

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**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	150	K/W

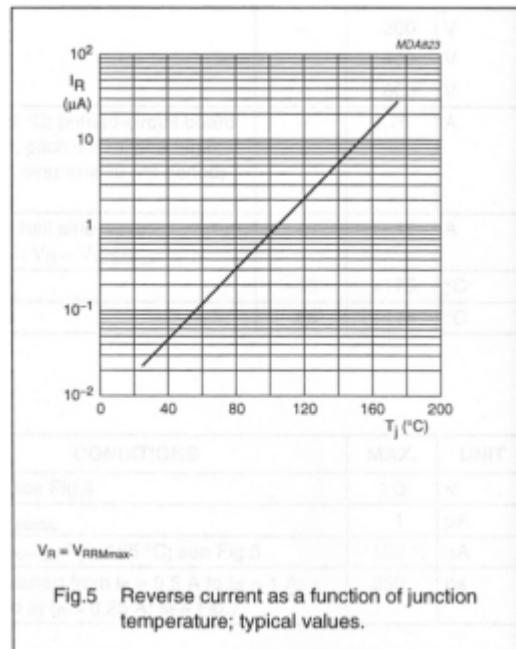
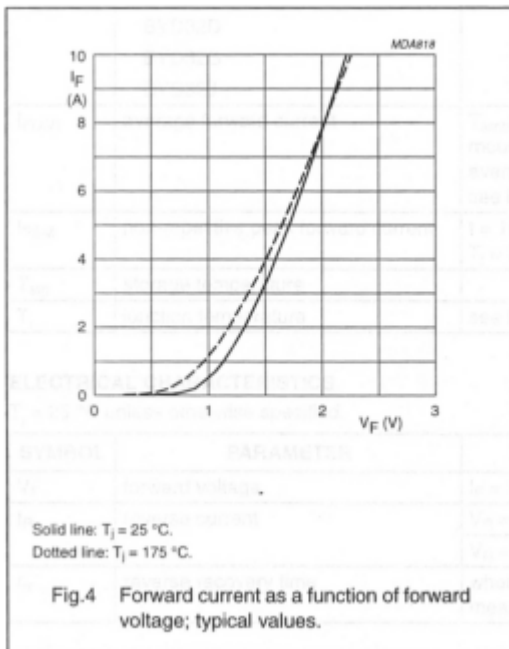
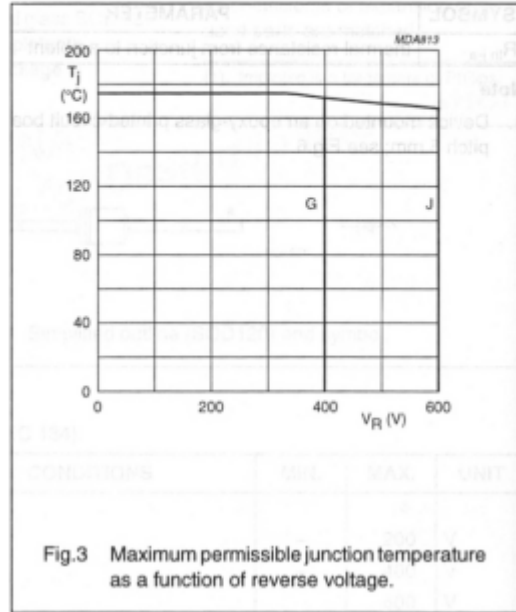
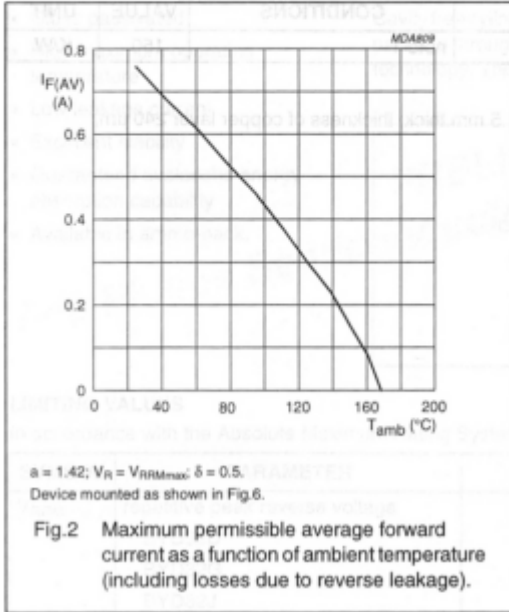
**Note**

1. Device mounted on an epoxy-glass printed-circuit board, 1.5 mm thick; thickness of copper layer  $\geq 40\ \mu\text{m}$ , pitch 5 mm; see Fig.6.

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GRAPHICAL DATA



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