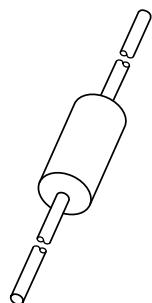


# DATA SHEET



## **BYX135GPL** High-voltage car ignition diode

Product specification  
Supersedes data of 2000 Jul 17

2001 Oct 02

**High-voltage car ignition diode****BYX135GPL****FEATURES**

- Plastic package
- Glass passivated
- High maximum operating temperature
- Low leakage current
- Excellent stability
- Guaranteed avalanche energy absorption capability.

**APPLICATIONS**

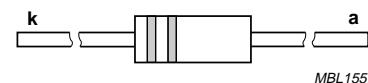
- Car ignition systems
- Automotive applications with extreme temperature requirements.

**DESCRIPTION**

Plastic package, using glass passivation and a high temperature alloyed construction.

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

The package is designed to be used in an insulating medium such as resin, oil or SF6 gas.



Cathode indicated by a green band.

Fig.1 Simplified outline (SOD125A) and symbol.

**LIMITING VALUES**

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{RRM}$	repetitive peak reverse voltage		–	5	kV
$V_{RWM}$	crest working reverse voltage		–	5	kV
$I_{F(AV)}$	average forward current		–	50	mA
$I_{FRM}$	repetitive peak forward current		–	500	mA
$I_{RSM}$	non-repetitive peak reverse current	$t = 100 \mu s$ triangular pulse; $T_{j(max)}$ prior to surge	–	50	mA
$T_{stg}$	storage temperature		–65	+175	°C
$T_j$	junction temperature	continuous	–	175	°C

**CHARACTERISTICS**

$T_j = 25^\circ C$  unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_F$	forward voltage	$I_F = 10 \text{ mA}$	6.25	8.75	V
$V_{(BR)R}$	reverse avalanche breakdown voltage	$I_R = 100 \mu \text{A}$	7.0	9.5	kV
$I_R$	reverse current	$V_R = V_{RWMmax}$ ; $T_j = 175^\circ C$	–	30	$\mu \text{A}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th j-a}$	thermal resistance from junction to ambient	$T_{amb} = T_{leads}$ ; lead length = 10 mm	90	K/W

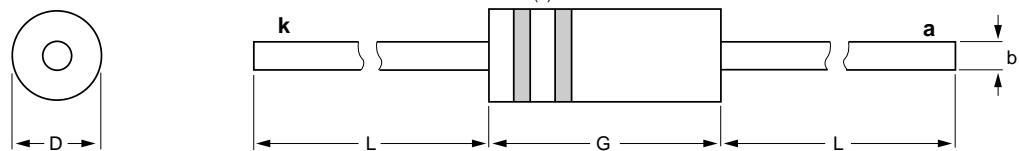
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## PACKAGE OUTLINE

Hermetically sealed plastic package; axial leaded; 2 leads

SOD125A



## DIMENSIONS (mm are the original dimensions)

UNIT	b	D	G	L min.
mm	0.8 2.4	2.6 2.4	6.7 6.3	31

0 2.5 5 mm  
scale

## Note

1. The marking bands indicate the cathode.

OUTLINE VERSION	REFERENCES			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ		
SOD125A					00-03-06

## High-voltage car ignition diode

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## DATA SHEET STATUS

DATA SHEET STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	DEFINITIONS
Objective data	Development	This data sheet contains data from the objective specification for product development. Philips Semiconductors reserves the right to change the specification in any manner without notice.
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**NOTES**

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