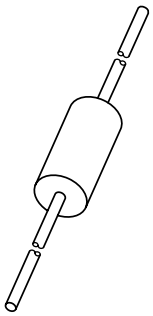
DATA SHEET



BYX134GPS
High-voltage car ignition diode

Product specification
Supersedes data of 2000 Jan 13

2001 Oct 01

Philips
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High-voltage car ignition diode BYX134GPS

FEATURES

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

APPLICATIONS

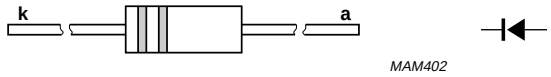
- Car ignition systems
- Automotive applications with extreme temperature requirements.

DESCRIPTION

Rugged glass package, using a high temperature alloyed construction.

The SOD118A 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 blue band.

Fig.1 Simplified outline (SOD118A) 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		–	4	kV
V_{RWM}	crest working reverse voltage		–	4	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 μs 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

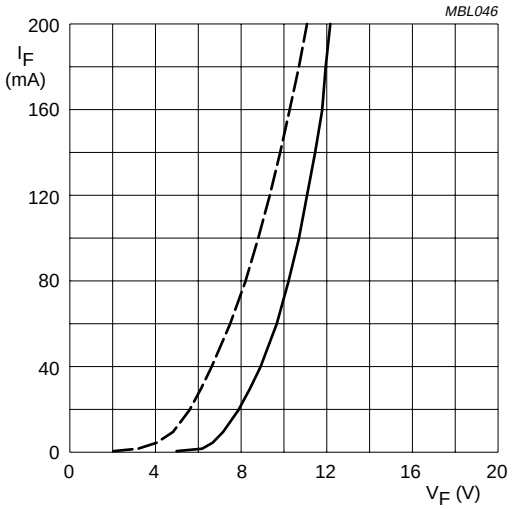
T_j = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_F	forward voltage	I_F = 10 mA	5	7	V
$V_{(BR)R}$	reverse avalanche breakdown voltage	I_R = 100 μA	5.5	7.5	kV
I_R	reverse current	$V_R = V_{RWMmax}$; T_j = 175 °C	–	30	μA

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-}a}$	thermal resistance from junction to ambient	$T_{amb} = T_{leads}$; lead length = 10 mm; in oil	125	K/W

GRAPHICAL DATA

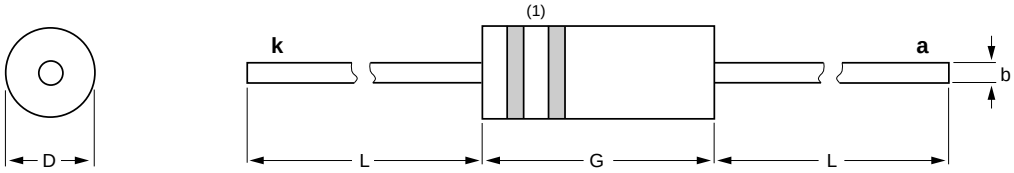


Dotted line: T_j = 175 °C.
Solid line: T_j = 25 °C.

Fig.2 Forward current as a function of maximum forward voltage.

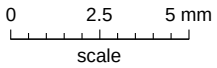
PACKAGE OUTLINE

Hermetically sealed plastic package; axial leaded; 2 leads **SOD118A**



DIMENSIONS (mm are the original dimensions)

UNIT	b	D	G	L min.
mm	0.5	2.6 2.4	6.7 6.3	31



Note

1. The marking bands indicate the cathode.

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOD118A						98-05-28

DATA SHEET STATUS

DATA SHEET STATUS[1]	PRODUCT STATUS[2]	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.
Preliminary data	Qualification	This data sheet contains data from the preliminary specification. Supplementary data will be published at a later date. Philips Semiconductors reserves the right to change the specification without notice, in order to improve the design and supply the best possible product.
Product data	Production	This data sheet contains data from the product specification. Philips Semiconductors reserves the right to make changes at any time in order to improve the design, manufacturing and supply. Changes will be communicated according to the Customer Product/Process Change Notification (CPCN) procedure SNW-SQ-650A.

Notes

1. Please consult the most recently issued data sheet before initiating or completing a design.
2. The product status of the device(s) described in this data sheet may have changed since this data sheet was published. The latest information is available on the Internet at URL http://www.semiconductors.philips.com.

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Limiting values definition — Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 60134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.

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