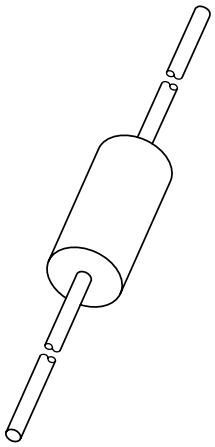
DATA SHEET



BYX134GP
High-voltage car ignition diodes

Product specification

1998 Dec 04

Philips
Semiconductors

PHILIPS

High-voltage car ignition diodes BYX134GP

FEATURES

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

APPLICATIONS

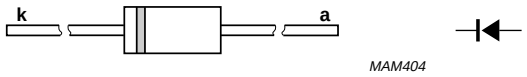
- Car ignition systems
- Automotive applications with extreme temperature requirements.

DESCRIPTION

Rugged glass package, using a high temperature alloyed construction.

The SOD107A 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.



MAM404

Cathode indicated by light blue band.

Fig.1 Simplified outline (SOD107A) 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		–	4	kV
V_{RWM}	crest working reverse voltage		–	4	kV
$I_{F(AV)}$	average forward current		–	50	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.

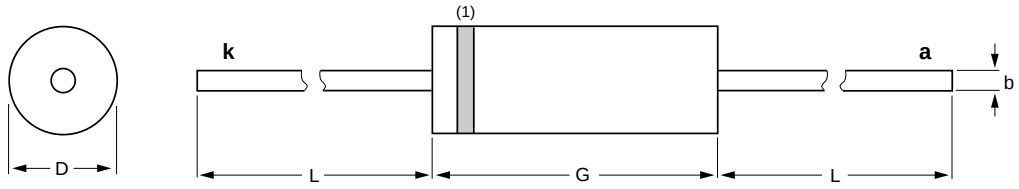
SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_F	forward voltage	I_F = 10 mA	5	7	V
$V_{(BR)R}$	reverse avalanche breakdown voltage	I_R = 100 μA	5.5	7.5	kV
I_R	reverse current	$V_R = V_{RWMmax}$; T_j = 175 °C	–	30	μA

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	100	K/W

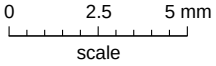
PACKAGE OUTLINE

Hermetically sealed plastic package; axial leaded; 2 leads **SOD107A**



DIMENSIONS (mm are the original dimensions)

UNIT	b	D	G	L min.
mm	0.6	3.1 2.9	8.5 7.5	30



Note

1. The marking band indicates the cathode.

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOD107A						98-08-04

DEFINITIONS

Data Sheet Status	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
Limiting values	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). 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.	
Application information	
Where application information is given, it is advisory and does not form part of the specification.	

LIFE SUPPORT APPLICATIONS

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Philips customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Philips for any damages resulting from such improper use or sale.

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