Silicon Diode

BYX134GP

4kV/50mA

DATASHEET

OEM – Philips

Source: Philips Databook 1999

Datasheet Rev. 1.3 – 04/19 – data without warranty / liability

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.

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