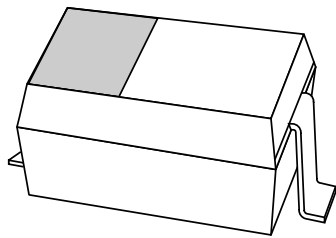


# DATA SHEET



**BAP51-03**

General purpose PIN diode

Preliminary specification  
Supersedes data of 1999 Apr 01

1999 May 10

# General purpose PIN diode

# BAP51-03

## FEATURES

- Low diode capacitance
- Low diode forward resistance.

## APPLICATIONS

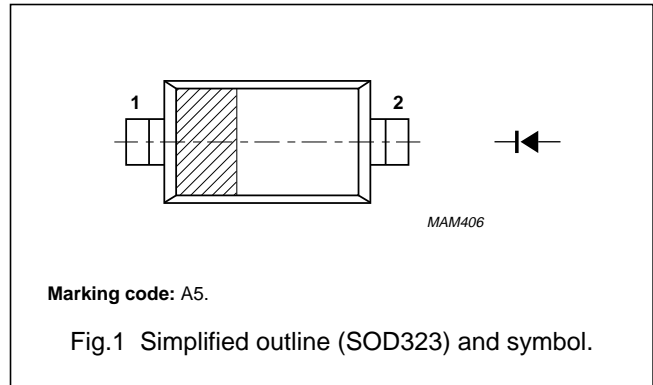
- General RF applications.

## DESCRIPTION

General purpose PIN diode in a SOD323 small plastic SMD package.

## PINNING

PIN	DESCRIPTION
1	cathode
2	anode



## LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_R$	continuous reverse voltage		–	60	V
$I_F$	continuous forward current		–	60	mA
$P_{tot}$	total power dissipation	$T_S = 90\text{ °C}$	–	500	mW
$T_{stg}$	storage temperature		–65	+150	°C
$T_j$	junction temperature		–65	+150	°C

General purpose PIN diode

BAP51-03

**ELECTRICAL CHARACTERISTICS**

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$V_F$	forward voltage	$I_F = 50\text{ mA}$	–	0.95	1.1	V
$V_R$	reverse voltage	$I_R = 10\text{ }\mu\text{A}$	50	–	–	V
$I_R$	reverse current	$V_R = 50\text{ V}$	–	–	100	nA
$C_d$	diode capacitance	$V_R = 0; f = 1\text{ MHz}$	–	0.4	–	pF
		$V_R = 1\text{ V}; f = 1\text{ MHz}$	–	0.3	0.55	pF
		$V_R = 5\text{ V}; f = 1\text{ MHz}$	–	0.2	0.35	pF
$r_D$	diode forward resistance	$I_F = 0.5\text{ mA}; f = 100\text{ MHz}; \text{note 1}$	–	5.5	9	$\Omega$
		$I_F = 1\text{ mA}; f = 100\text{ MHz}; \text{note 1}$	–	3.6	6.5	$\Omega$
		$I_F = 10\text{ mA}; f = 100\text{ MHz}; \text{note 1}$	–	1.5	2.5	$\Omega$

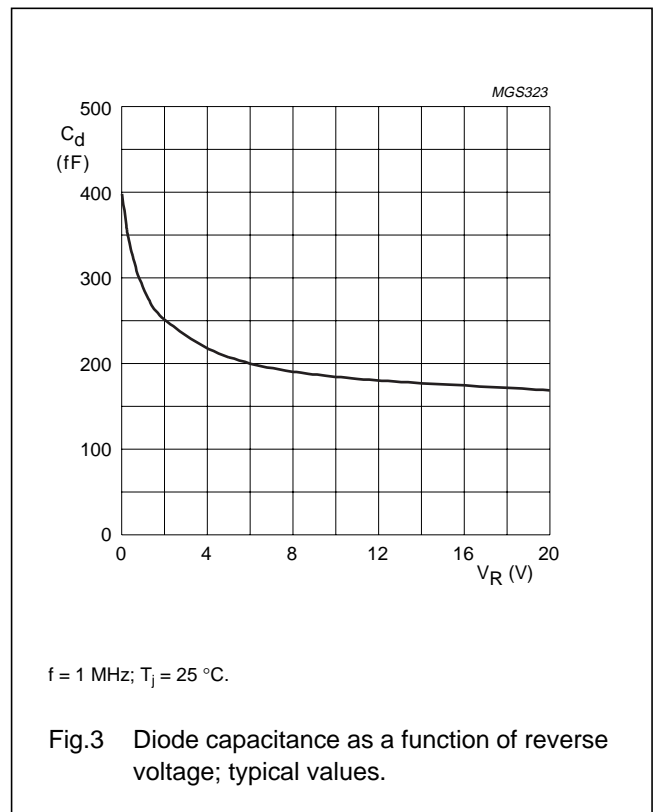
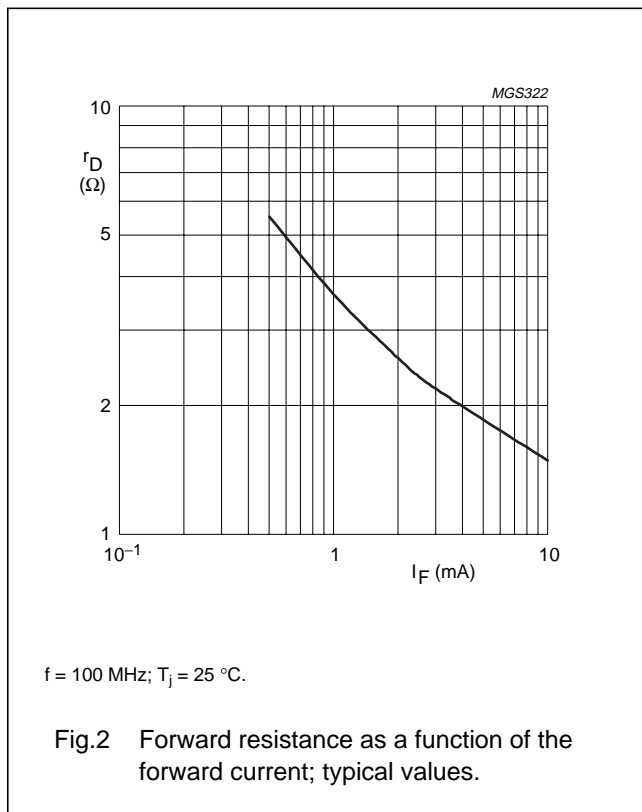
**Note**

1. Guaranteed on AQL basis: inspection level S4, AQL 1.0.

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-s}$	thermal resistance from junction to soldering point	85	K/W

**GRAPHICAL DATA**



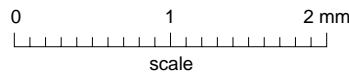
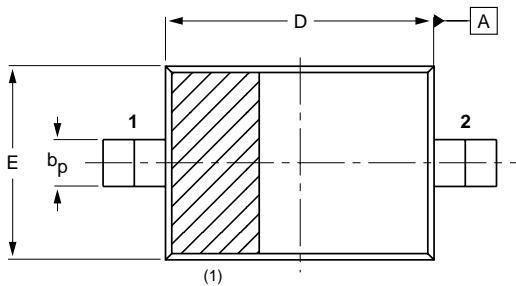
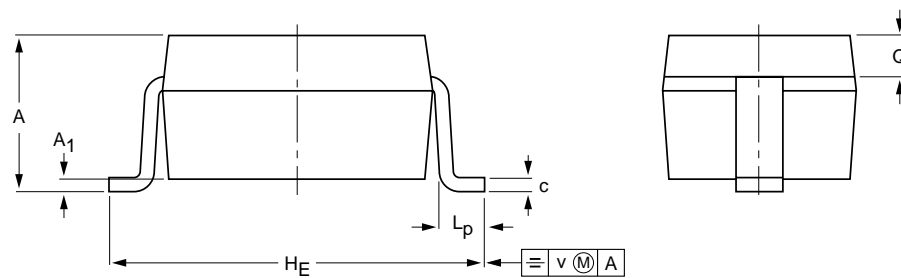
General purpose PIN diode

BAP51-03

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub> max.	b <sub>p</sub>	c	D	E	H <sub>E</sub>	L <sub>p</sub>	Q	v
mm	1.1 0.8	+0.05 -0.05	0.40 0.25	0.25 0.10	1.8 1.6	1.35 1.15	2.7 2.3	0.45 0.15	0.25 0.15	0.2

Note

1. The marking bar indicates the cathode.

OUTLINE VERSION	REFERENCES			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ		
SOD323					98-09-14

## General purpose PIN diode

BAP51-03

**DEFINITIONS**

<b>Data sheet status</b>	
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.
<b>Limiting values</b>	
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.	
<b>Application information</b>	
Where application information is given, it is advisory and does not form part of the specification.	

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General purpose PIN diode

BAP51-03

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**NOTES**

General purpose PIN diode

BAP51-03

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**NOTES**

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