

## General purpose PIN diode

### FEATURES

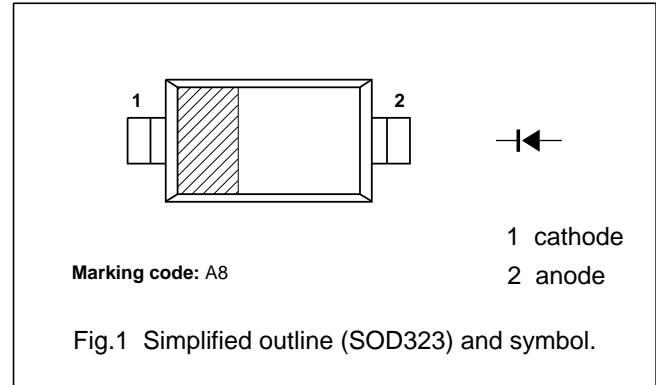
- Low diode capacitance
- Low diode forward resistance.

### APPLICATIONS

- General RF applications.

### DESCRIPTION

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



### LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_R$	continuous reverse voltage		–	50	V
$I_F$	continuous forward current		–	50	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

### ELECTRICAL CHARACTERISTICS

$T_j = 25\text{ °C}$  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	$I_F = 0.5\text{ mA}; f = 100\text{ MHz}; \text{note 1}$	–	25	40	$\Omega$
		$I_F = 1\text{ mA}; f = 100\text{ MHz}; \text{note 1}$	–	14	25	$\Omega$
		$I_F = 10\text{ mA}; f = 100\text{ MHz}; \text{note 1}$	–	3	5	$\Omega$

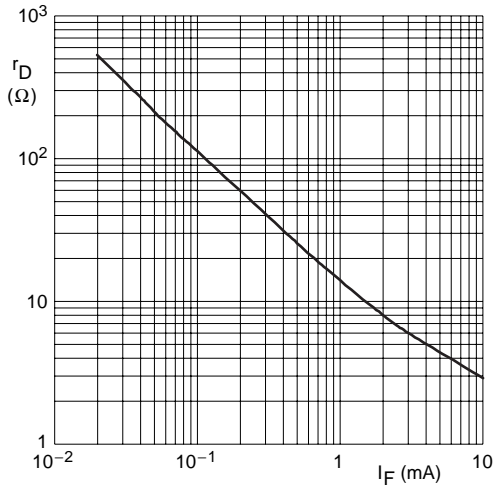
### Note

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

### THERMAL CHARACTERISTICS

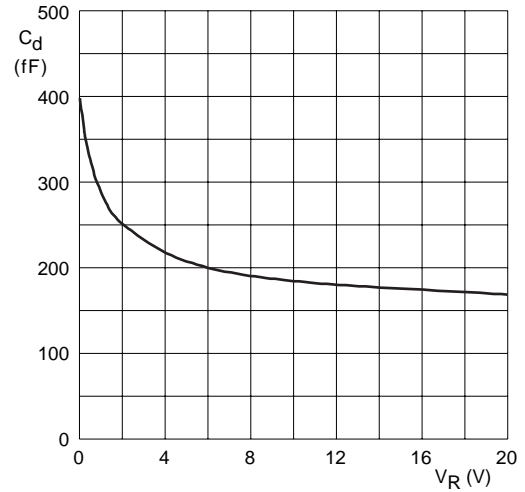
SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-s}$	thermal resistance from junction to soldering point	85	K/W

## GRAPHICAL DATA



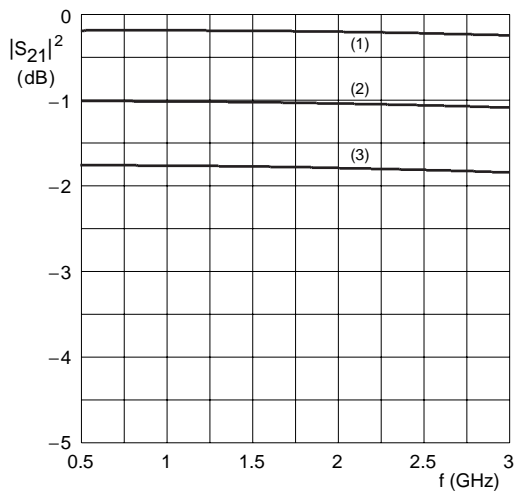
$f = 100 \text{ MHz}; T_j = 25 \text{ }^\circ\text{C}.$

Fig.2 Forward resistance as a function of forward current; typical values.



$f = 1 \text{ MHz}; T_j = 25 \text{ }^\circ\text{C}.$

Fig.3 Diode capacitance as a function of reverse voltage; typical values.

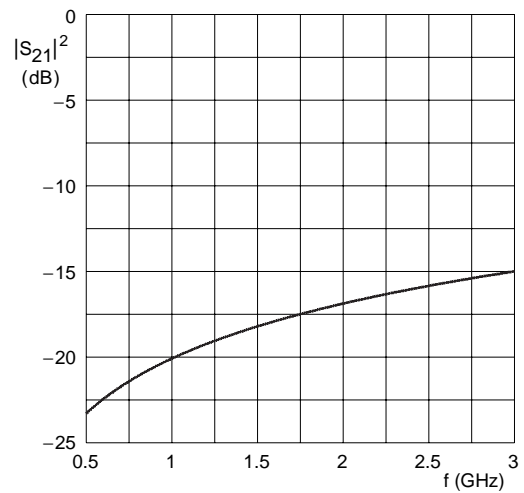


(1)  $I_F = 10 \text{ mA}.$       (2)  $I_F = 1 \text{ mA}.$       (3)  $I_F = 0.5 \text{ mA}.$

Diode inserted in series with a  $50 \text{ } \Omega$  stripline circuit and biased via the analyzer Tee network.

$T_{\text{amb}} = 25 \text{ }^\circ\text{C}.$

Fig.4 Insertion loss ( $|S_{21}|^2$ ) of the diode as a function of frequency; typical values.



Diode zero biased and inserted in series with a  $50 \text{ } \Omega$  stripline circuit.

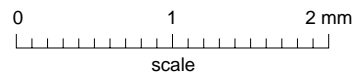
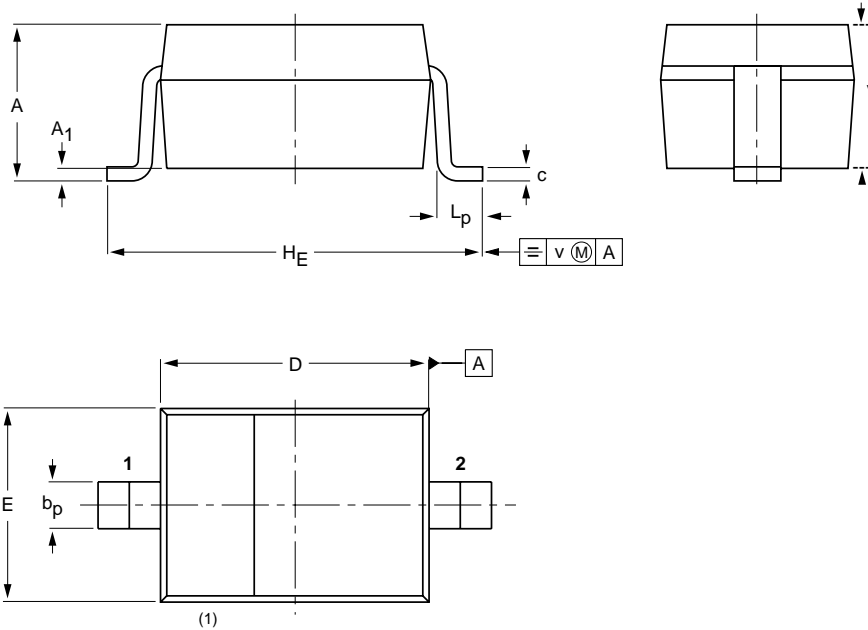
$T_{\text{amb}} = 25 \text{ }^\circ\text{C}.$

Fig.5 Isolation ( $|S_{21}|^2$ ) of the diode as a function of frequency; typical values.

## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD323



### DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub>	b <sub>p</sub>	c	D	E	H <sub>E</sub>	L <sub>p</sub>	v	
mm	1.0	0.10	0.35	0.15	1.8	1.40	2.7	0.40	0.90	
	---	-0.00	0.25	0.08	1.6	1.20	2.5	0.25	0.80	

### Note

1. The marking bar indicates the cathode.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Diodes - General Purpose, Power, Switching category:](#)*

*Click to view products by [Shikues manufacturer:](#)*

Other Similar products are found below :

[MCL4151-TR3](#) [MMBD3004S-13-F](#) [RD0306T-H](#) [RD0506LS-SB-1H](#) [RGP30G-E373](#) [DSE010-TR-E](#) [BAQ333-TR](#) [BAQ335-TR](#) [BAQ33-GS18](#) [BAS1602VH6327XT](#) [BAV17-TR](#) [BAV19-TR](#) [BAV301-TR](#) [BAW27-TAP](#) [HSC285TRF-E](#) [NSVBAV23CLT1G](#) [NTE525](#) [1SS181-TP](#) [1SS184-TP](#) [1SS193,LF](#) [1SS193-TP](#) [1SS400CST2RA](#) [SBAV99LT3G](#) [SDAA13](#) [LL4448-GS18](#) [SHN2D02FUTW1T1G](#) [LS4150GS18](#) [LS4151GS08](#) [SMMD7000LT3G](#) [FC903-TR-E](#) [1N4449](#) [1N4934-E3/73](#) [1SS226-TP](#) [APT100DL60HJ](#) [RFUH20TB3S](#) [RGP30G-E354](#) [RGP30M-E3/73](#) [D291S45T](#) [MCL4151-TR](#) [BAS 16-02V H6327](#) [BAS 21U E6327](#) [BAS 28 E6327](#) [BAS33-TAP](#) [BAS 70-02V H6327](#) [BAV300-TR](#) [BAV303-TR3](#) [BAW27-TR](#) [BAW56DWQ-7-F](#) [BAW56M3T5G](#) [BAW75-TAP](#)