

UHF variable capacitance diode

BB405B

FEATURES

- Excellent linearity
- Matched to 3%
- Hermetically sealed leaded glass SOD68 (DO-34) package
- C28: 2 pF; ratio: 8.3
- Low series resistance.

APPLICATIONS

- Electronic tuning in UHF television tuners
- VCO.

DESCRIPTION

The BB405B is a variable capacitance diode, fabricated in planar technology, and encapsulated in the hermetically sealed leaded glass SOD68 (DO-34) package.

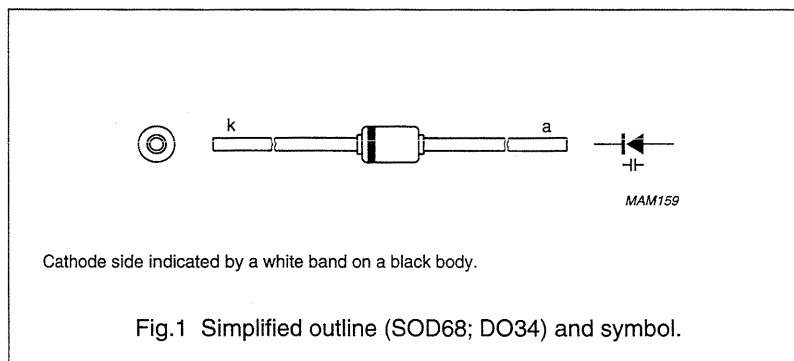
ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_R	reverse current	$V_R = 28\text{ V}$; see Fig.3	–	–	10	nA
		$V_R = 28\text{ V}$; $T_j = 85\text{ }^\circ\text{C}$; see Fig.3	–	–	200	nA
r_s	diode series resistance	$f = 470\text{ MHz}$; note 1	–	–	0.75	Ω
C_d	diode capacitance	$V_R = 1\text{ V}$; $f = 1\text{ MHz}$; see Figs 2 and 4	–	–	18	pF
		$V_R = 3\text{ V}$; $f = 1\text{ MHz}$; see Figs 2 and 4	–	11	–	pF
		$V_R = 28\text{ V}$; $f = 1\text{ MHz}$; see Figs 2 and 4	1.8	–	2.2	pF
$\frac{C_{d(1V)}}{C_{d(28V)}}$	capacitance ratio	$f = 1\text{ MHz}$	7.6	–	–	
$\frac{\Delta C_d}{C_d}$	capacitance matching	$V_R = 0.5\text{ to }28\text{ V}$	–	–	3	%

Note

1. V_R is the value at which $C_d = 9\text{ pF}$.



LIMITING VALUES

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

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
V_R	continuous reverse voltage	–	30	V
I_F	continuous forward current	–	20	mA
T_{stg}	storage temperature	–55	+150	$^\circ\text{C}$
T_j	operating junction temperature	–55	+100	$^\circ\text{C}$

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GRAPHICAL DATA

