

Band-switching diode

FEATURES

- Ultra small plastic SMD package
- Low diode capacitance: max. 1.05 pF
- Low diode forward resistance: max. 0.7 Ω
- Small inductance.

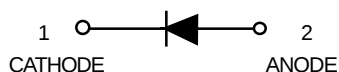
APPLICATIONS

- Low loss band-switching in VHF television tuners
- Surface mount band-switching circuits.

DESCRIPTION

The BA891 is a planar, high performance band-switching diode in the ultra small SOD523 SMD plastic package.

BA 891

SOD523 SC-79


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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_R	continuous reverse voltage		–	35	V
I_F	continuous forward current		–	100	mA
P_{tot}	total power dissipation	$T_s = 90^\circ\text{C}$	–	715	mW
T_{stg}	storage temperature		-65	+150	$^\circ\text{C}$
T_j	junction temperature		-65	+150	$^\circ\text{C}$

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

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
V_F	forward voltage	$I_F = 10\text{ mA}$	–	1	V
I_R	reverse current	$V_R = 30\text{ V}$	–	20	nA
C_d	diode capacitance	$f = 1\text{ MHz}$; note 1; see Fig.1			
		$V_R = 1\text{ V}$	0.8	1.05	pF
		$V_R = 3\text{ V}$	0.65	0.9	pF
r_D	diode forward resistance	$f = 100\text{ MHz}$; note 1; see Fig.2			
		$I_F = 3\text{ mA}$	0.45	0.7	Ω
		$I_F = 10\text{ mA}$	0.36	0.5	Ω
L_s	series inductance		0.6	–	nH

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

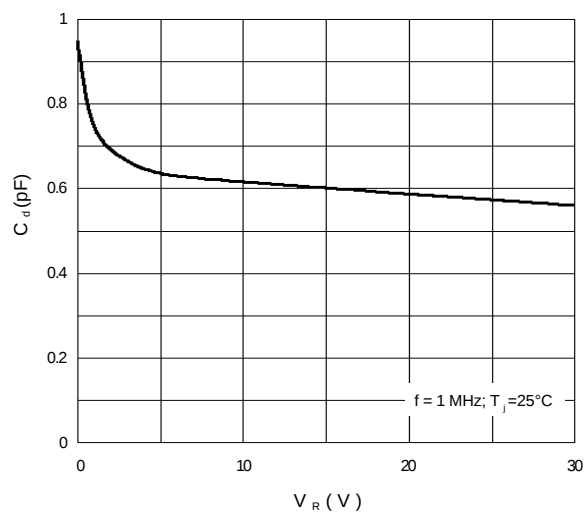
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Fig.1 Diode capacitance as a function of reverse voltage; typical values.

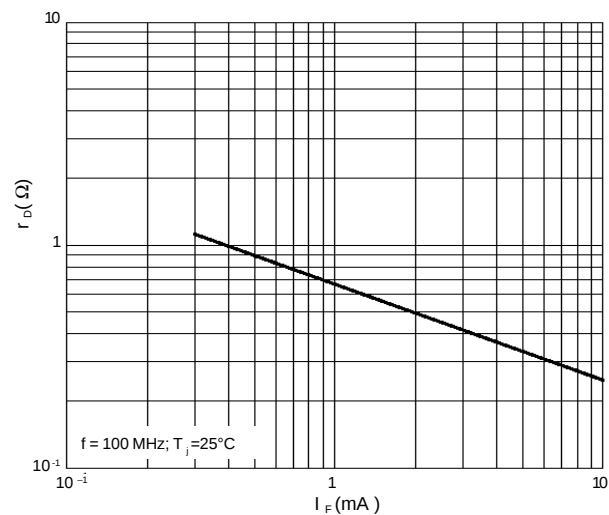


Fig.2 Diode forward resistance as a function of forward current; typical values.