

Band-switching diode

FEATURES

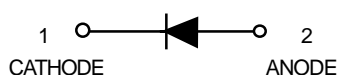
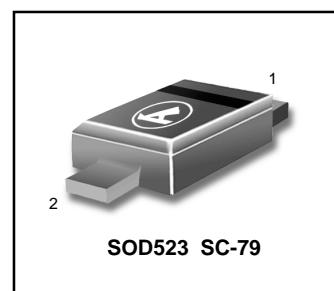
- Small plastic SMD package
- Low diode capacitance
- Low diode forward resistance
- Small inductance.

APPLICATIONS

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

DESCRIPTION

Planar, high performance band-switch diode in a small SMD plastic package (SOD523).

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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	MIN	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;				
		$V_R = 1\text{ V}$	–	0.92	1.4	pF
		$V_R = 3\text{ V}$	0.6	0.85	1.1	pF
r_D	diode forward resistance	$f = 100\text{ MHz}$; note 1;				
		$I_F = 3\text{ mA}$	–	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

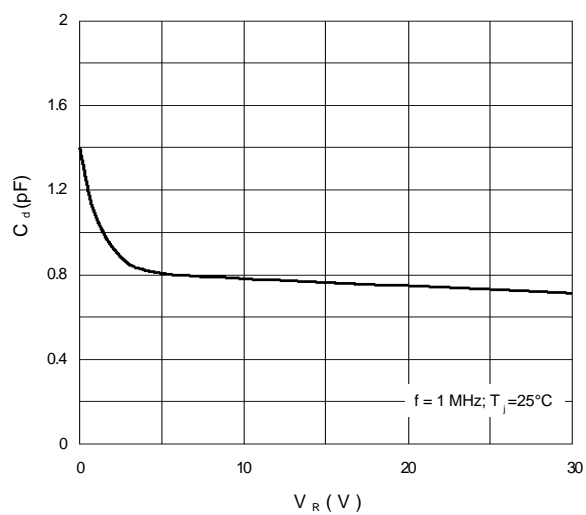
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Fig.1 Diode capacitance as a function of reverse voltage; typical values.

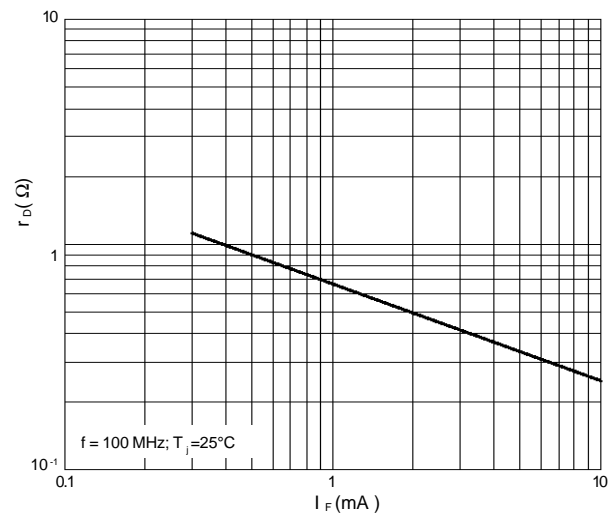


Fig.2 Diode forward resistance as a function of forward current; typical values.