

# DATA SHEET



## **BA682; BA683** Band-switching diodes

Product specification  
Supersedes data of April 1992

1996 Mar 13

## Band-switching diodes

## BA682; BA683

## FEATURES

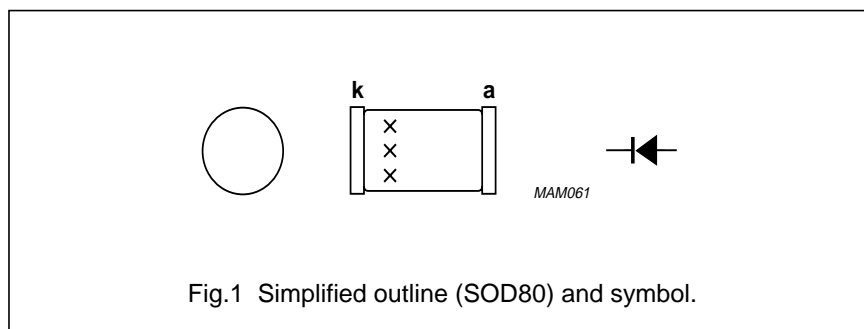
- Continuous reverse voltage:  
max. 35 V
- Continuous forward current:  
max. 100 mA
- Low diode capacitance:  
max. 1.5 pF
- Low diode forward resistance:  
max. 0.7 to 1.2  $\Omega$ .

## APPLICATION

- Band-switching in VHF television tuners.

## DESCRIPTION

Planar high performance band-switching diodes in a glass SOD80 SMD package.



## LIMITING VALUES

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

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
$V_R$	continuous reverse voltage	–	35	V
$I_F$	continuous forward current	–	100	mA
$T_{stg}$	storage temperature	–65	+150	$^{\circ}\text{C}$
$T_j$	junction temperature	–	150	$^{\circ}\text{C}$

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
$V_F$	forward voltage	$I_F = 100\text{ mA}$ ; see Fig.2	1.0	V
$I_R$	reverse current	see Fig.3 $V_R = 20\text{ V}$ $V_R = 20\text{ V}$ ; $T_j = 75\text{ }^{\circ}\text{C}$	50 1	nA $\mu\text{A}$
$C_d$	diode capacitance	$f = 1\text{ MHz}$ ; $V_R = 1\text{ V}$ ; see Fig.4	1.5	pF
$C_d$	diode capacitance BA682 BA683	$f = 1\text{ MHz}$ ; $V_R = 3\text{ V}$ ; see Fig.4	1.25 1.20	pF pF
$r_D$	diode forward resistance BA682 BA683	$I_F = 3\text{ mA}$ ; $f = 200\text{ MHz}$ ; see Fig.5	0.7 1.2	$\Omega$ $\Omega$
$r_D$	diode forward resistance BA682 BA683	$I_F = 10\text{ mA}$ ; $f = 200\text{ MHz}$ ; see Fig.5	0.5 0.9	$\Omega$ $\Omega$

Band-switching diodes

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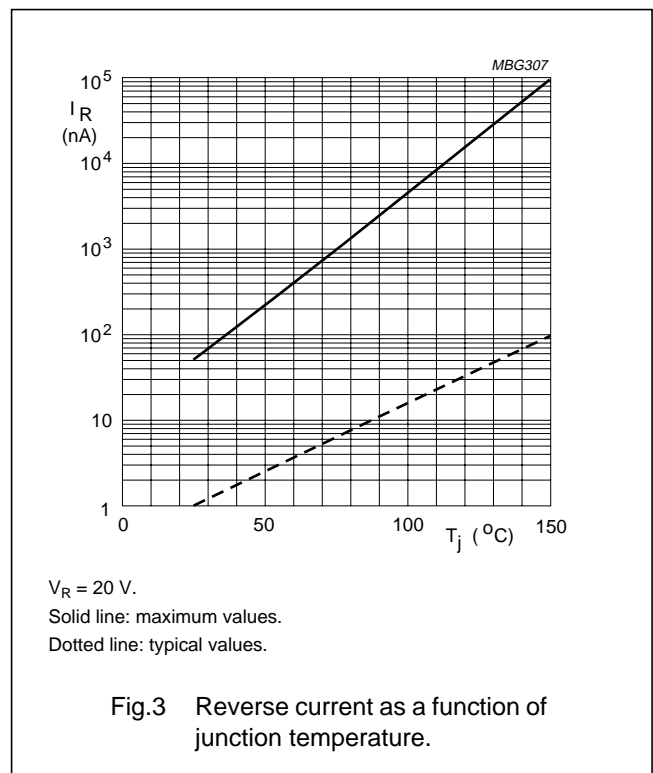
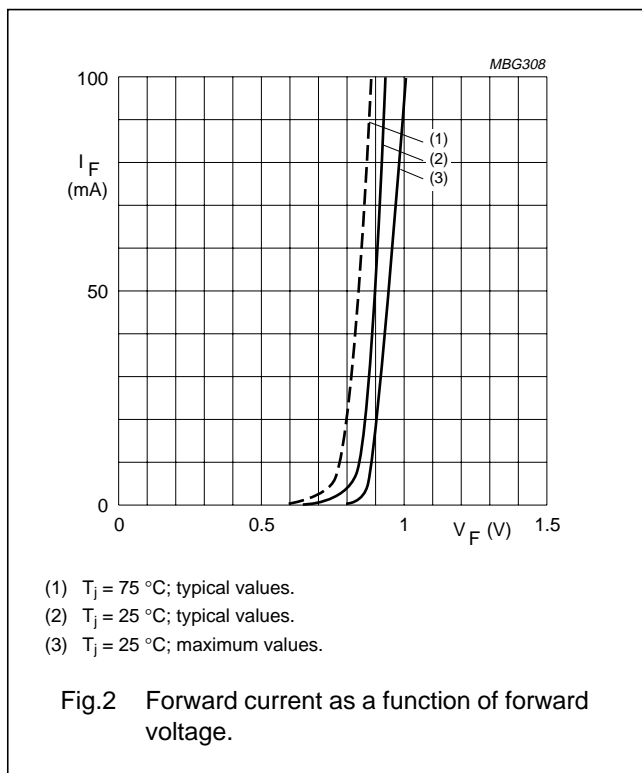
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-tp}$	thermal resistance from junction to tie-point		300	K/W
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	600	K/W

Note

1. Device mounted on a FR4 printed-circuit board.

GRAPHICAL DATA



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