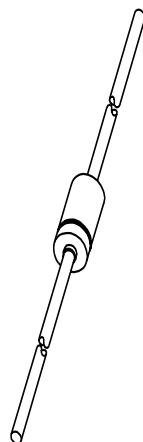


# DATA SHEET



## **BA423A** AM band-switching diode

Product specification  
Supersedes data of March 1982

1996 Mar 13

## AM band-switching diode

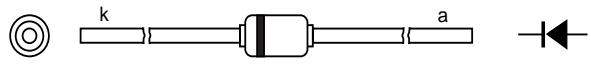
BA423A

## FEATURES

- Continuous reverse voltage: max. 20 V
- Continuous forward current: max. 50 mA
- Low diode capacitance: max. 2.5 pF
- Low diode forward resistance: max. 1.2 Ω.

## DESCRIPTION

Planar band-switching diode in a hermetically sealed glass SOD68 (DO-34) package.



## APPLICATION

- Band switching in AM radio receivers.

The diodes are type branded.

Fig.1 Simplified outline (SOD68; DO-34) and symbol.

## LIMITING VALUES

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

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
$V_R$	continuous reverse voltage	–	20	V
$I_F$	continuous forward current	–	50	mA
$T_{stg}$	storage temperature	–65	+150	°C
$T_j$	junction temperature	–	150	°C

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
$V_F$	forward voltage	$I_F = 50 \text{ mA}$ ; see Fig.2	0.9	V
$I_R$	reverse current	see Fig.3 $V_R = 20 \text{ V}$ $V_R = 20 \text{ V}; T_j = 125^\circ\text{C}$	100 5	nA $\mu\text{A}$
$C_d$	diode capacitance	$f = 1 \text{ MHz}$ ; $V_R = 3 \text{ V}$ ; see Fig.4	2.5	pF
$r_D$	diode forward resistance	$I_F = 10 \text{ mA}$ ; $f = 1 \text{ MHz}$ ; see Fig.5	1.2	$\Omega$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th j\text{-tp}}$	thermal resistance from junction to tie-point	lead length 10 mm	240	K/W
$R_{th j\text{-a}}$	thermal resistance from junction to ambient	lead length 10 mm; note 1	500	K/W

## Note

1. Device mounted on a FR4 printed-circuit board without metallization pad.

## AM band-switching diode

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## GRAPHICAL DATA

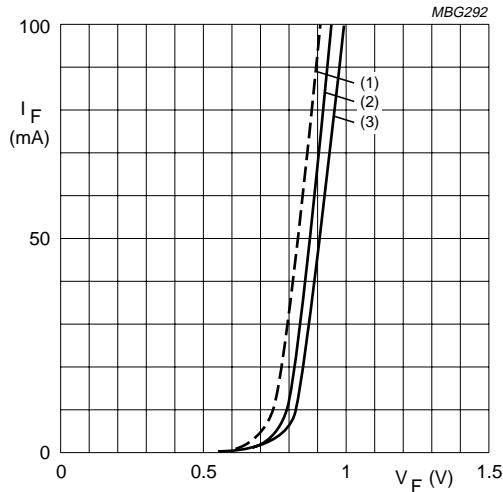


Fig.2 Forward current as a function of forward voltage.

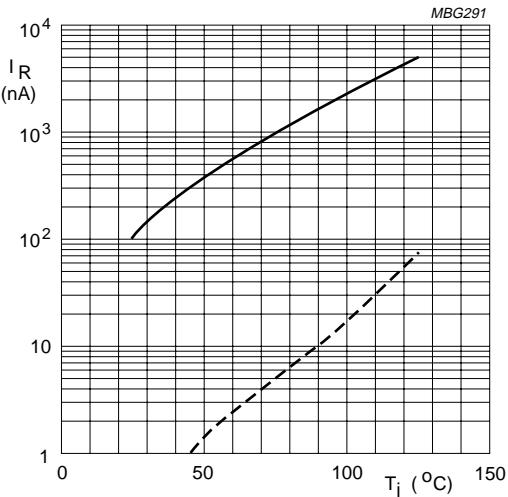


Fig.3 Reverse current as a function of junction temperature.

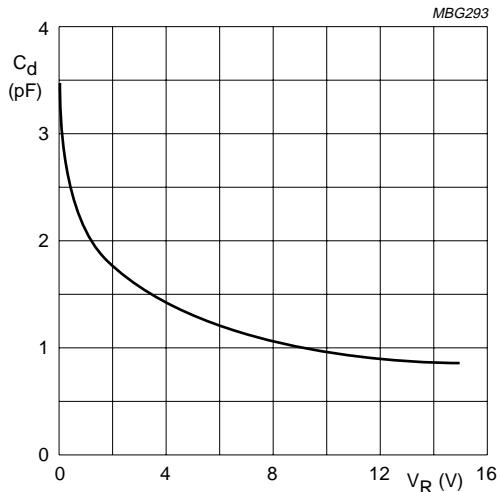
 $f = 1\text{ MHz}; T_j = 25^\circ\text{C}$ .

Fig.4 Diode capacitance as a function of reverse voltage; typical values.

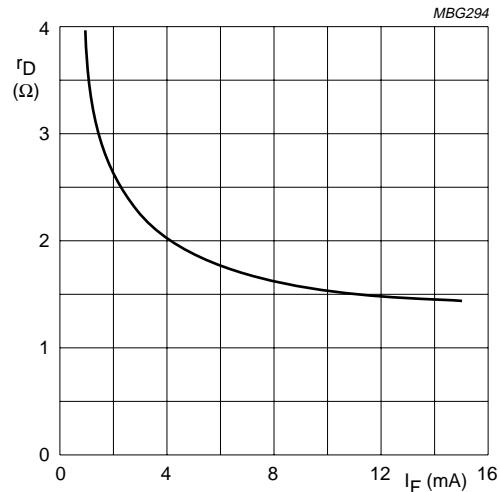
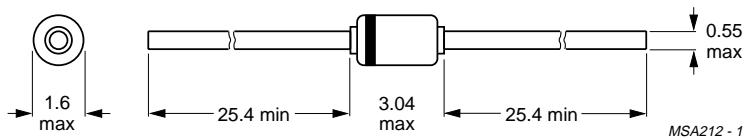
 $f = 1\text{ MHz}; T_j = 25^\circ\text{C}$ .

Fig.5 Diode forward resistance as a function of forward current; typical values.

## AM band-switching diode

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## PACKAGE OUTLINE



Dimensions in mm.

The marking band indicates the cathode.

Fig.6 SOD68; DO-34.

## DEFINITIONS

Data Sheet Status	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
Limiting values	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.	
Application information	
Where application information is given, it is advisory and does not form part of the specification.	

## LIFE SUPPORT APPLICATIONS

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