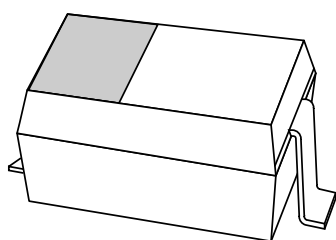


DATA SHEET



BA592 Band-switching diode

Preliminary specification
File under Discrete Semiconductors, SC01

1998 May 07

Band-switching diode

BA592

FEATURES

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

APPLICATIONS

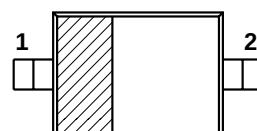
- Low loss band-switching in VHF television tuners
- Surface mount band-switching circuits.

DESCRIPTION

Planar, high performance band-switch diode in a small SMD plastic package (SOD323).

PINNING SOD323

PIN	DESCRIPTION
1	cathode
2	anode



Top view

Marking code: A2.

Fig.1 Simplified outline.

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	$T_S = 90\text{ °C}$	–	500	mW
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–65	+150	°C

Band-switching diode

BA592

ELECTRICAL CHARACTERISTICS

T_j = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V _F	forward voltage	I _F = 10 mA	–	–	1	V
I _R	reverse current	V _R = 20 V	–	–	20	nA
C _d	diode capacitance	V _R = 1 V; f = 1 MHz; note 1	–	0.92	1.4	pF
		V _R = 3 V; f = 1 MHz; note 1	0.6	0.85	1.1	pF
r _D	diode forward resistance	I _F = 3 mA; f = 100 MHz; note 1	–	0.45	0.7	Ω
		I _F = 10 mA; f = 100 MHz; note 1	–	0.36	0.5	Ω
1/g _p	reverse resistance	V _R = 1 V; f = 100 MHz; note 1	–	100	–	kΩ
L _S	series inductance		–	2	–	nH

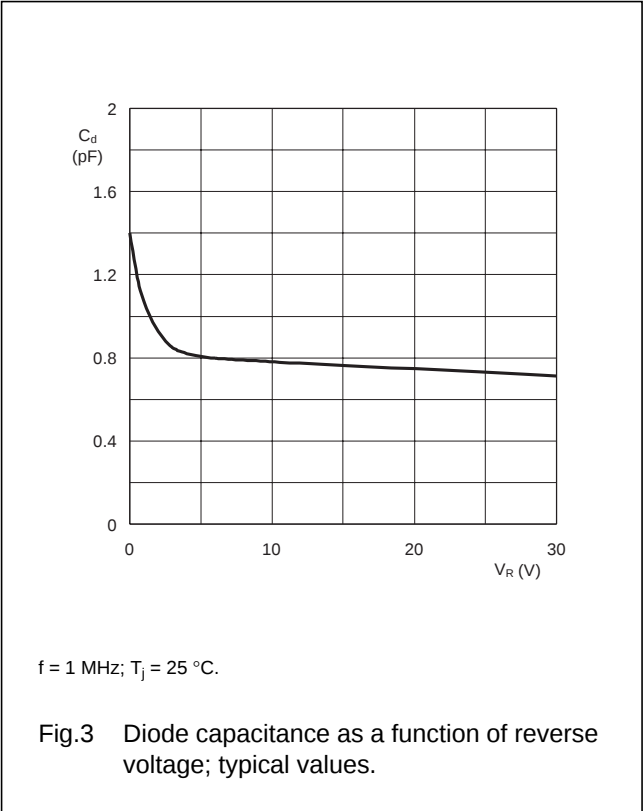
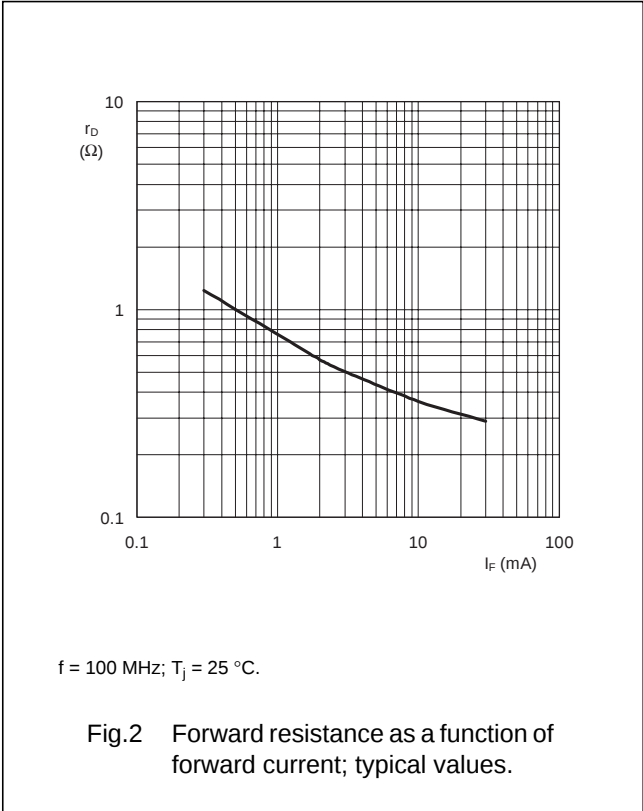
Note

1. Guaranteed on AQL basis: inspection level S4, AQL 1.0.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-s}	thermal resistance from junction to soldering point		120	K/W

GRAPHICAL DATA



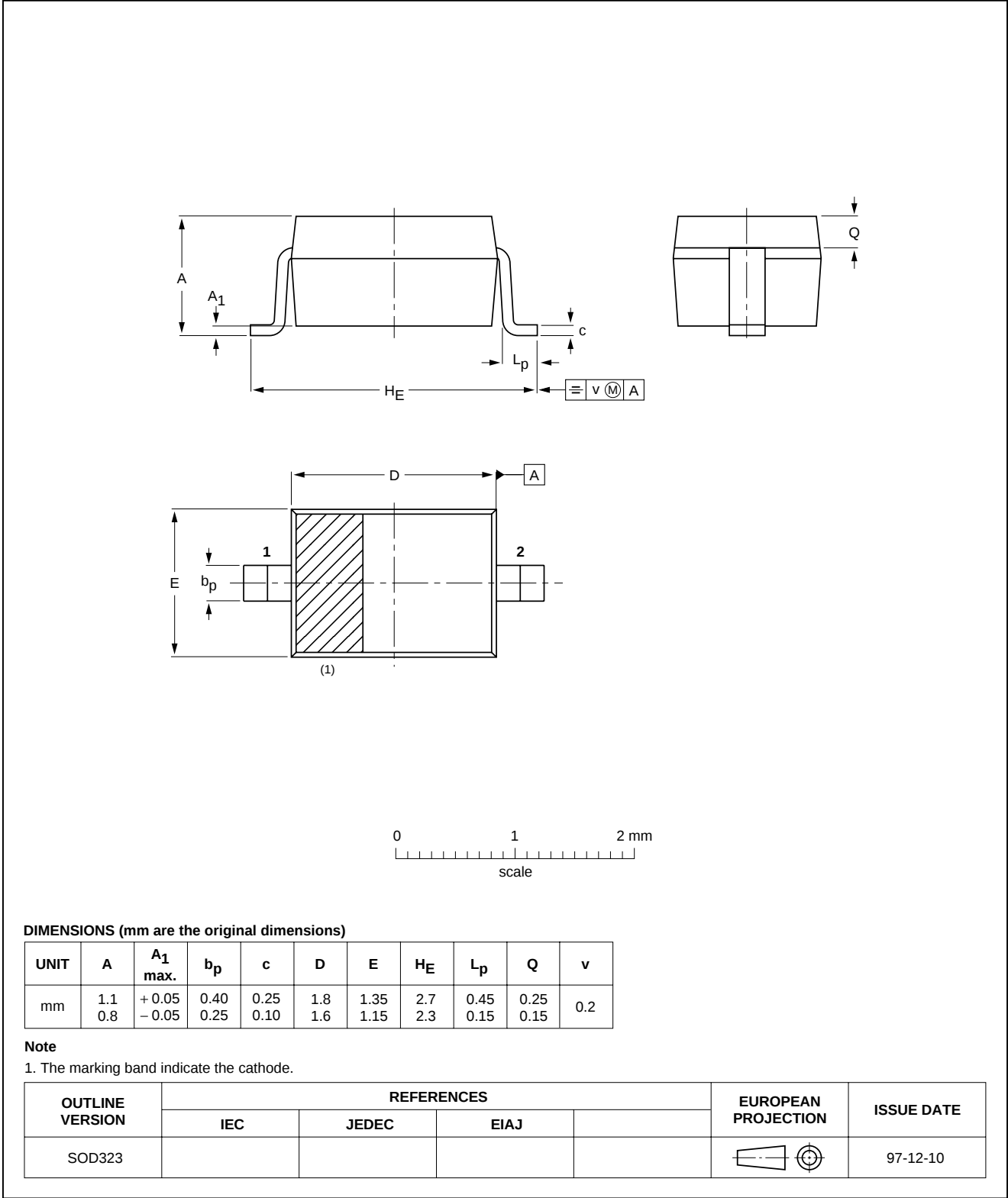
Band-switching diode

BA592

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD323



Band-switching diode**BA592**

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

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Philips customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Philips for any damages resulting from such improper use or sale.

Band-switching diode

BA592

NOTES

Band-switching diode

BA592

NOTES

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