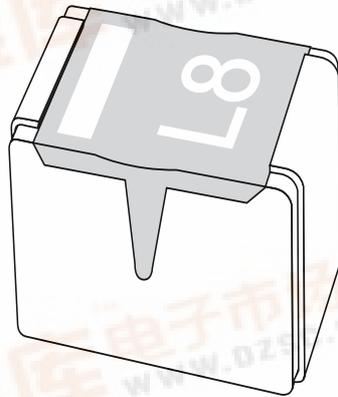


DISCRETE SEMICONDUCTORS

DATA SHEET



BA792

Band-switching diode

Product specification

1996 Mar 13

Band-switching diode

BA792

FEATURES

- Ceramic SMD package
- Low diode capacitance:
max. 1.1 pF
- Low diode forward resistance:
max. 0.7 Ω.

APPLICATIONS

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

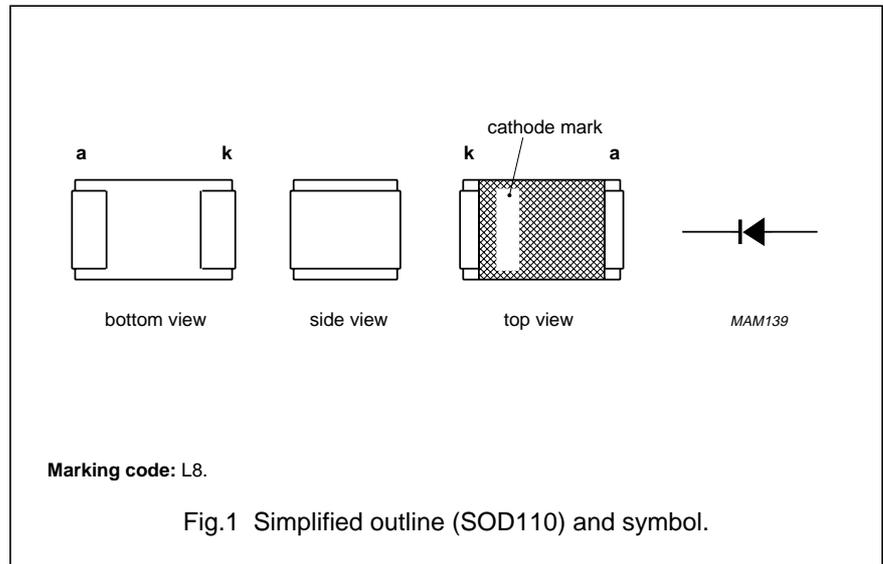
DESCRIPTION

Planar, high performance band-switching diode in a small ceramic SOD110 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	°C
T_j	junction temperature	–	150	°C



Band-switching diode

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

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
V_F	forward voltage	$I_F = 100\text{ mA}$	1.1	V
I_R	reverse current	$V_R = 20\text{ V}$	10	nA
		$V_R = 20\text{ V}; T_{amb} = 75\text{ }^\circ\text{C}$	1	μA
C_d	diode capacitance	$V_R = 3\text{ V}; f = 1\text{ to }100\text{ MHz}; \text{note } 1$	1.1	pF
r_D	diode forward resistance	$I_F = 3\text{ mA}; f = 200\text{ MHz}; \text{note } 1$	0.7	Ω

Note

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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	315	K/W

Note

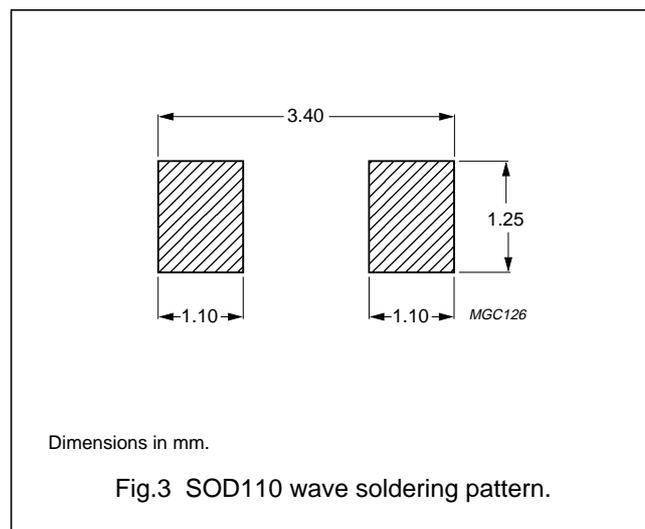
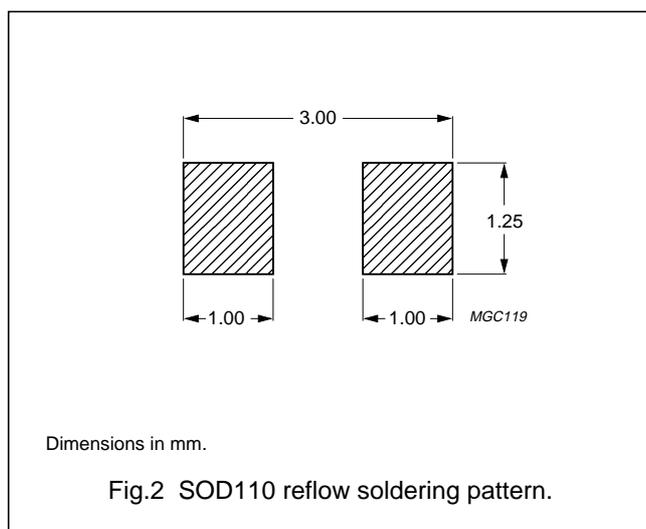
1. Device mounted on a printed-circuit board measuring $11 \times 25 \times 1.6\text{ mm}$.

MOUNTING**Reflow soldering**

Follow standard reflow soldering techniques to ensure correct application of solder paste and placement of the SOD110 package (see Fig.2).

Wave soldering

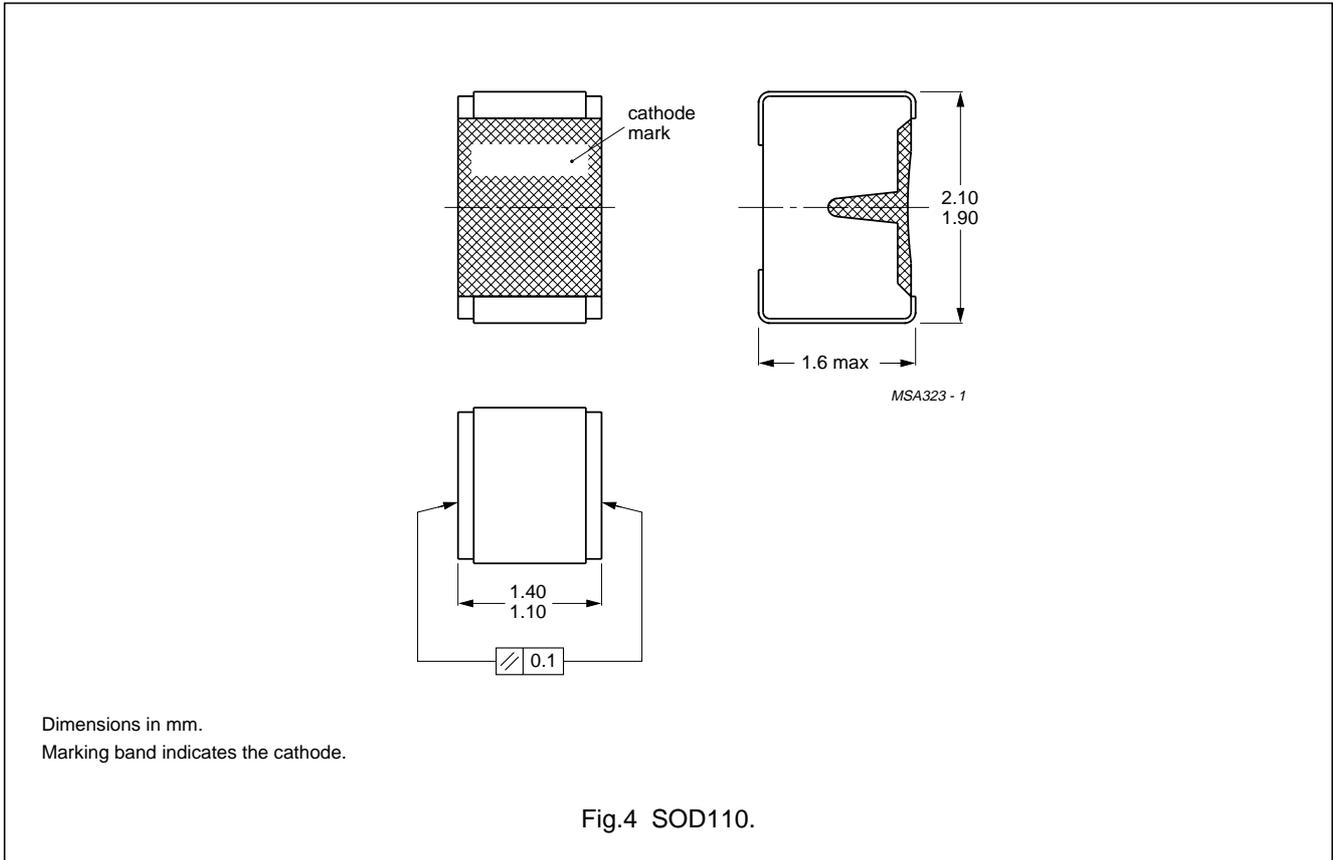
Before wave soldering, attach SOD110 packages to the printed-circuit boards using a small dot of thermo-setting epoxy or UV-curing adhesive centred between the soldering lands (see Fig.3).



Band-switching diode

BA792

PACKAGE OUTLINE



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

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NOTES

Band-switching diode

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NOTES

Band-switching diode

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NOTES

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Printed in The Netherlands

113061/1100/01/pp8
Document order number:

Date of release: 1996 Mar 13
9397 750 00734