

# DATA SHEET

## **BA792** Band-switching diode

Product specification  
File under Discrete Semiconductors, SC01

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  $\Omega$ .

## APPLICATIONS

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

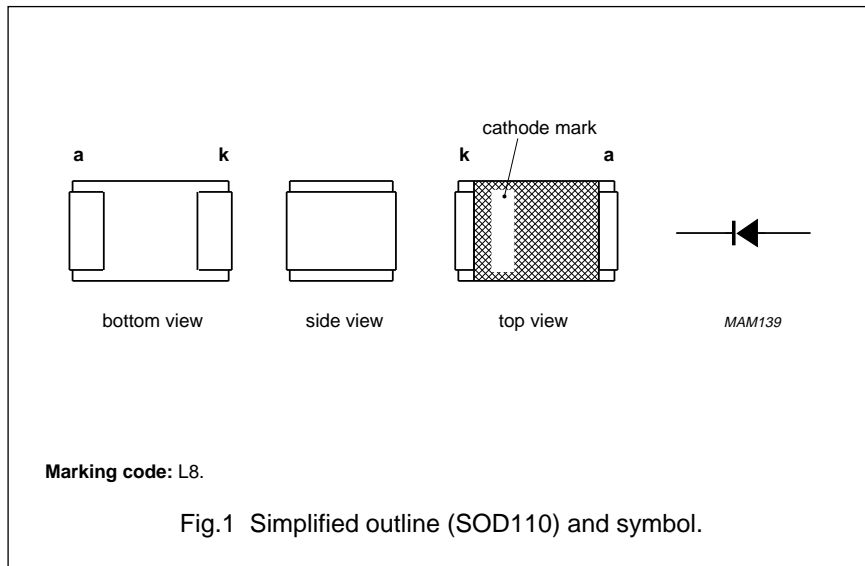
## DESCRIPTION

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	$^{\circ}\text{C}$
$T_j$	junction temperature	–	150	$^{\circ}\text{C}$



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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	$\mu\text{A}$
$C_d$	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	$\Omega$

### 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  $11 \times 25 \times 1.6\text{ mm}$ .

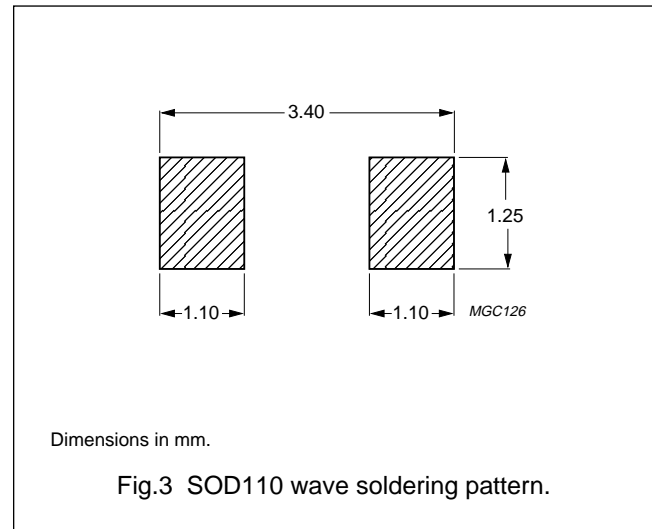
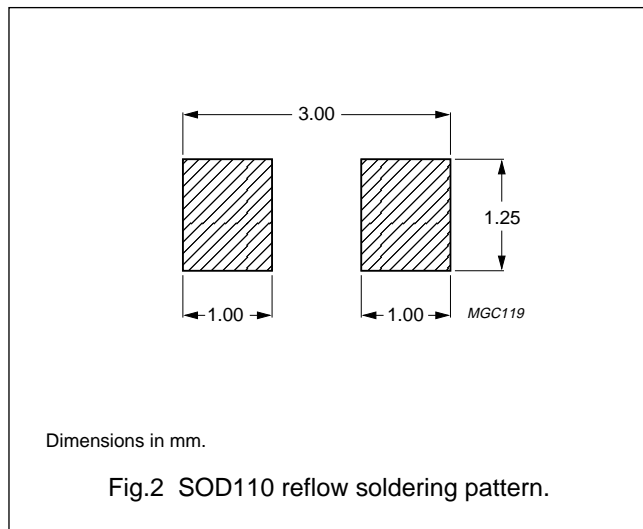
## MOUNTING

### 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

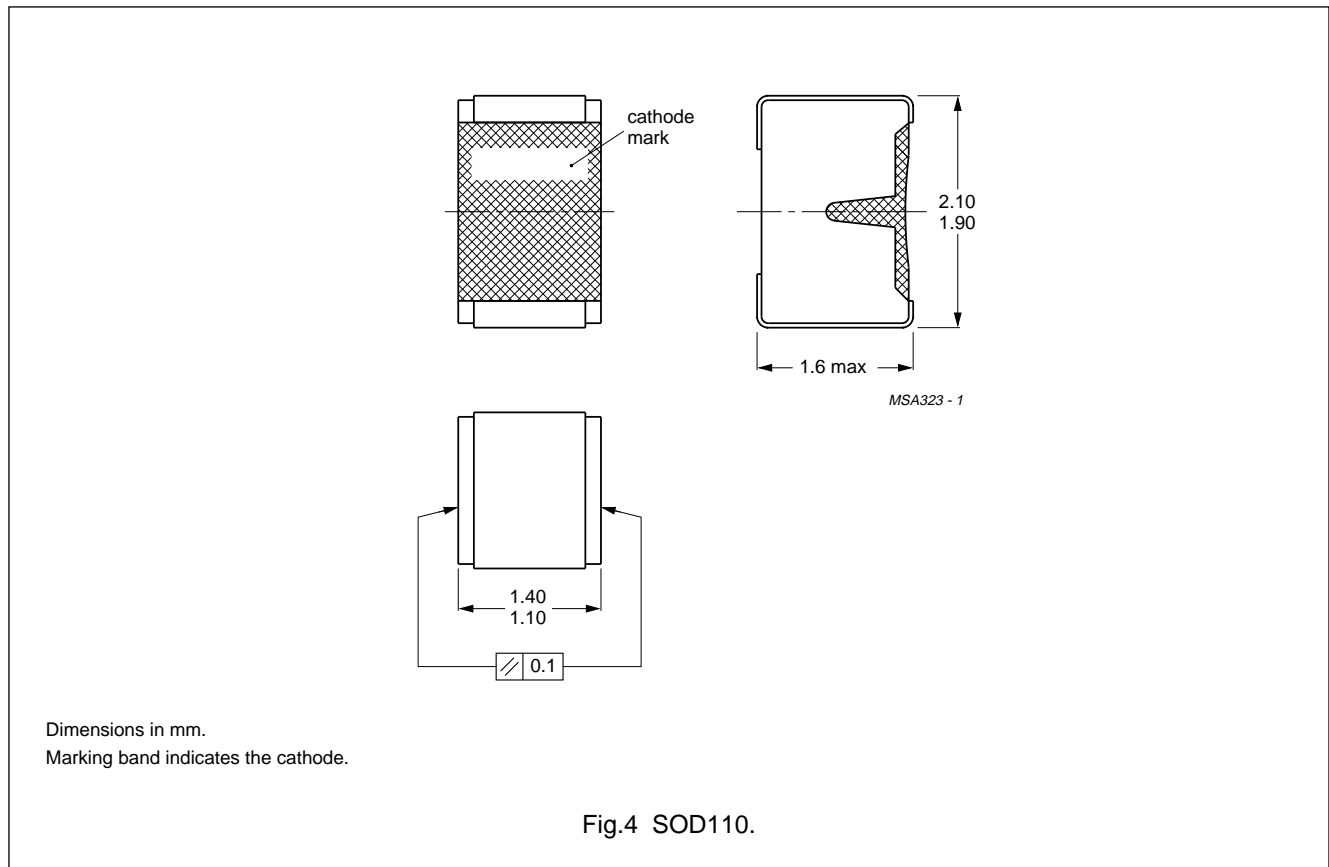
Before wave soldering, attach SOD110 packages to the printed-circuit boards using a small dot of thermo-setting epoxy or UV-curing adhesive centred between the soldering lands (see Fig.3).



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## PACKAGE OUTLINE



## DEFINITIONS

<b>Data sheet status</b>	
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.
<b>Limiting values</b>	
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.	
<b>Application information</b>	
Where application information is given, it is advisory and does not form part of the specification.	

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**NOTES**

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**NOTES**

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