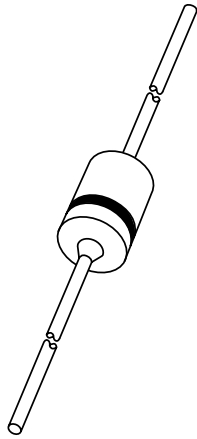


# DATA SHEET



## **BAW62** High-speed diode

Product data sheet  
Supersedes data of April 1996

1996 Sep 17

# High-speed diode

# BAW62

## FEATURES

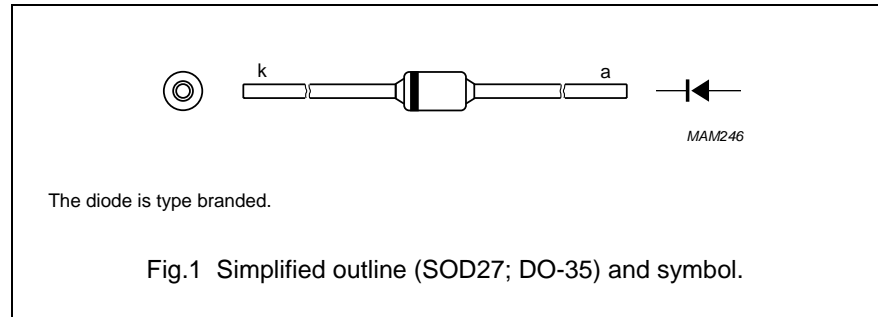
- Hermetically sealed leaded glass SOD27 (DO-35) package
- High switching speed: max. 4 ns
- Continuous reverse voltage: max. 75 V
- Repetitive peak reverse voltage: max. 75 V
- Repetitive peak forward current: max. 450 mA.

## APPLICATIONS

- High-speed switching
- Fast logic applications.

## DESCRIPTION

The BAW62 is a high-speed switching diode fabricated in planar technology, and encapsulated in the hermetically sealed leaded glass SOD27 (DO-35) package.



## LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{RRM}$	repetitive peak reverse voltage		–	75	V
$V_R$	continuous reverse voltage		–	75	V
$I_F$	continuous forward current	see Fig.2; note 1	–	250	mA
$I_{FRM}$	repetitive peak forward current		–	450	mA
$I_{FSM}$	non-repetitive peak forward current	square wave; $T_j = 25\text{ °C}$ prior to surge; see Fig.4 $t = 1\ \mu\text{s}$ $t = 1\ \text{ms}$ $t = 1\ \text{s}$	–	4 1 0.5	A A A
$P_{tot}$	total power dissipation	$T_{amb} = 25\text{ °C}$ ; note 1	–	350	mW
$T_{stg}$	storage temperature		–65	+200	°C
$T_j$	junction temperature		–	200	°C

## Note

1. Device mounted on an FR4 printed circuit-board; lead length 10 mm.

## High-speed diode

## BAW62

**ELECTRICAL CHARACTERISTICS**T<sub>j</sub> = 25 °C; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V <sub>F</sub>	forward voltage	see Fig.3			
		I <sub>F</sub> = 5 mA	620	750	mV
		I <sub>F</sub> = 100 mA	–	1000	mV
		I <sub>F</sub> = 100 mA; T <sub>j</sub> = 100 °C	–	930	mV
I <sub>R</sub>	reverse current	see Fig.5			
		V <sub>R</sub> = 20 V	–	25	nA
		V <sub>R</sub> = 50 V	–	200	nA
		V <sub>R</sub> = 75 V	–	5	μA
		V <sub>R</sub> = 20 V; T <sub>j</sub> = 150 °C	–	50	μA
		V <sub>R</sub> = 75 V; T <sub>j</sub> = 150 °C	–	100	μA
C <sub>d</sub>	diode capacitance	f = 1 MHz; V <sub>R</sub> = 0; see Fig.6	–	2	pF
t <sub>rr</sub>	reverse recovery time	when switched from I <sub>F</sub> = 10 mA to I <sub>R</sub> = 10 mA; R <sub>L</sub> = 100 Ω; measured at I <sub>R</sub> = 1 mA; see Fig.7	–	4	ns
V <sub>fr</sub>	forward recovery voltage	when switched from I <sub>F</sub> = 50 mA; t <sub>r</sub> = 20 ns; see Fig.8	–	2.5	V

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R <sub>th j-tp</sub>	thermal resistance from junction to tie-point	lead length 10 mm	240	K/W
R <sub>th j-a</sub>	thermal resistance from junction to ambient	lead length 10 mm; note 1	500	K/W

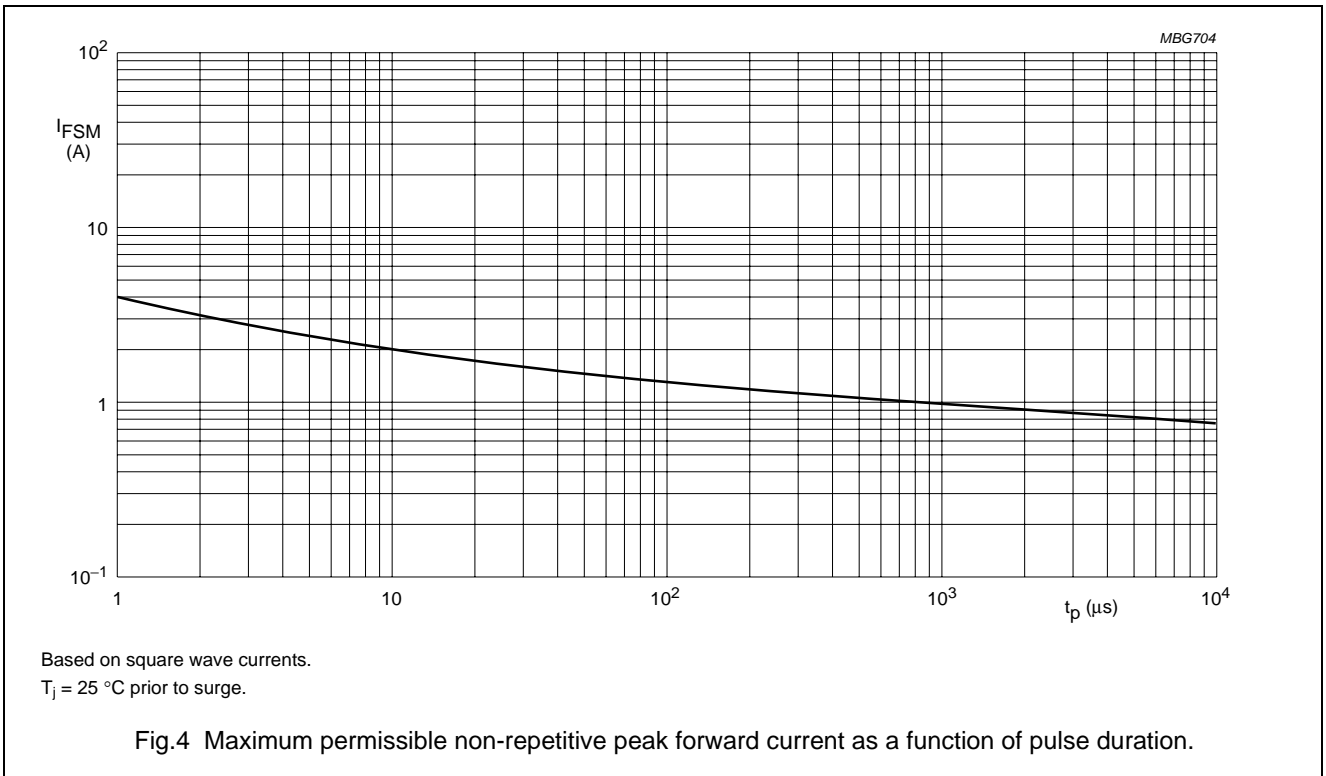
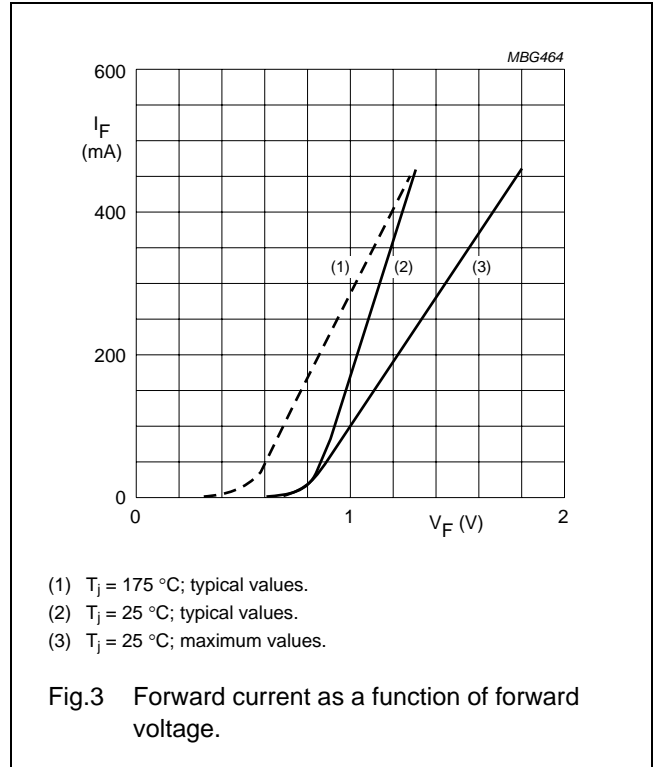
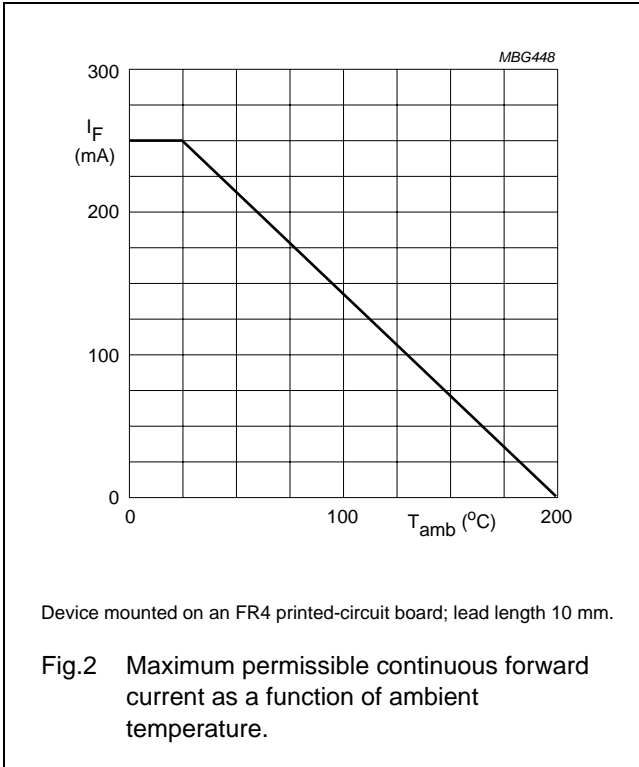
**Note**

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

High-speed diode

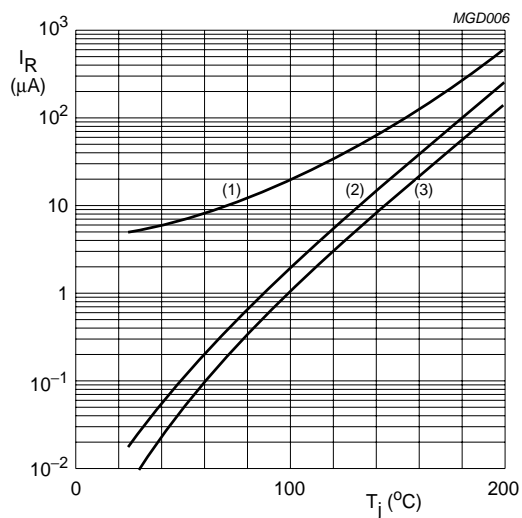
BAW62

GRAPHICAL DATA



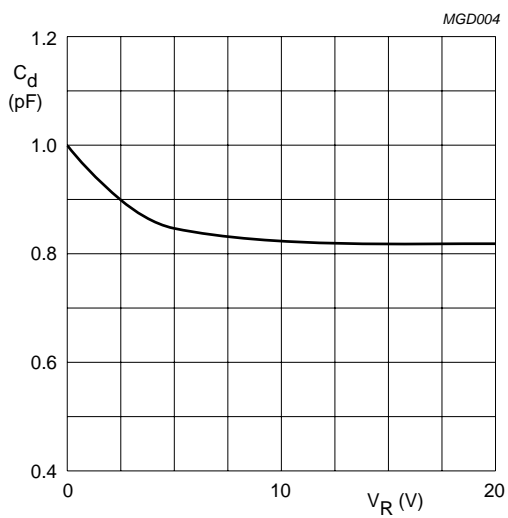
High-speed diode

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- (1)  $V_R = 75$  V; maximum values.
- (2)  $V_R = 75$  V; typical values.
- (3)  $V_R = 20$  V; typical values.

Fig.5 Reverse current as a function of junction temperature.

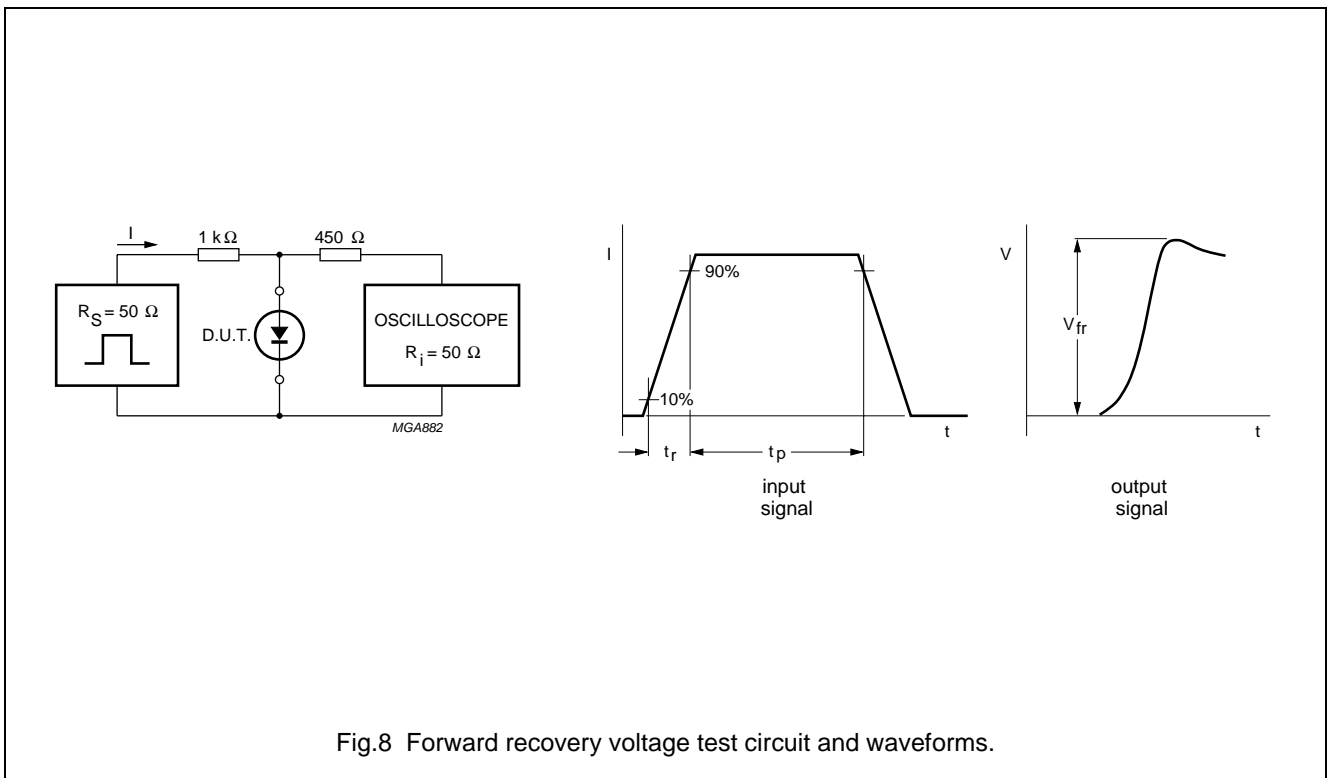
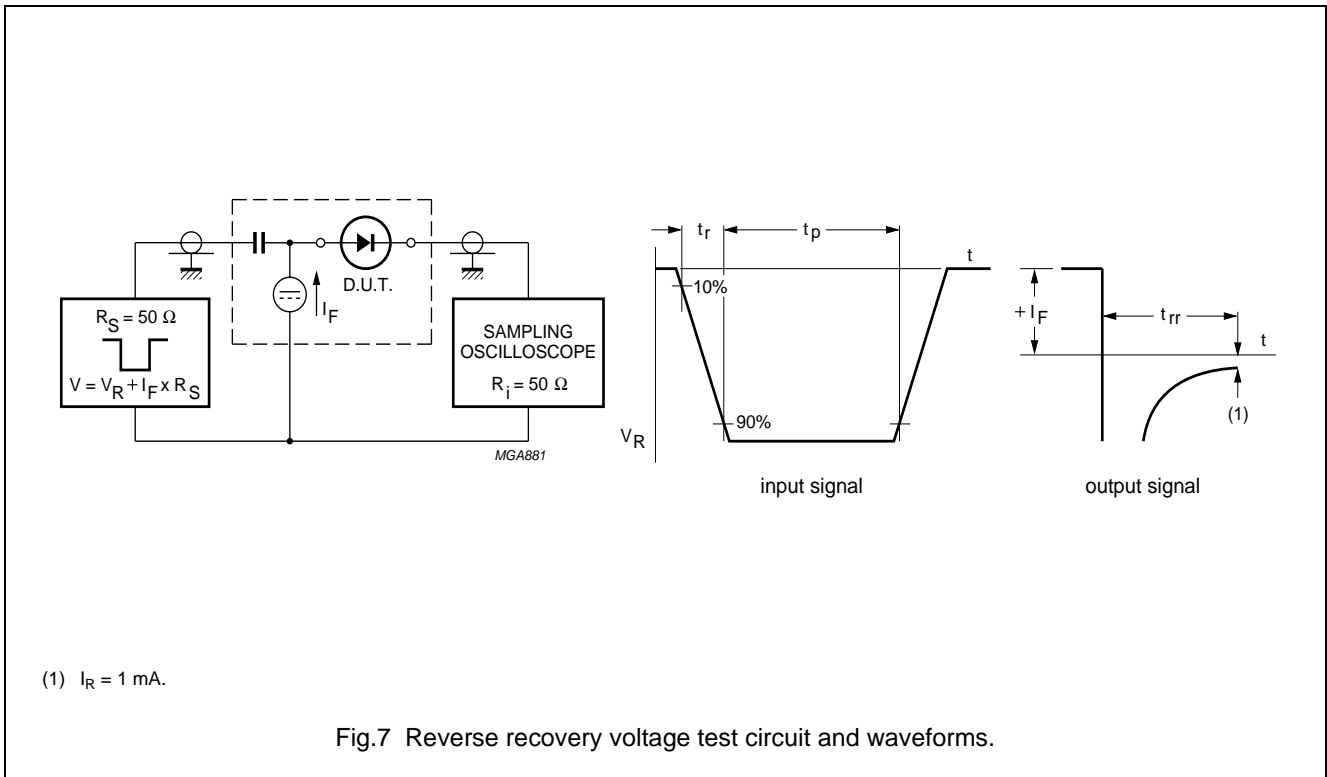


$f = 1$  MHz;  $T_j = 25$  °C.

Fig.6 Diode capacitance as a function of reverse voltage; typical values.

High-speed diode

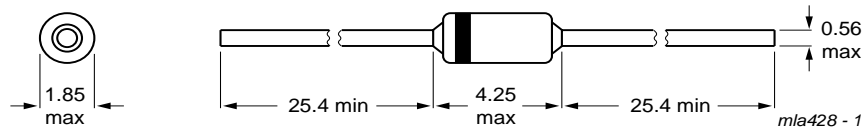
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High-speed diode

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PACKAGE OUTLINE



Dimensions in mm.

Fig.9 SOD27 (DO-35).

## High-speed diode

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## DATA SHEET STATUS

DOCUMENT STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	DEFINITION
Objective data sheet	Development	This document contains data from the objective specification for product development.
Preliminary data sheet	Qualification	This document contains data from the preliminary specification.
Product data sheet	Production	This document contains the product specification.

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