

High-speed diode

BAW62

FEATURES

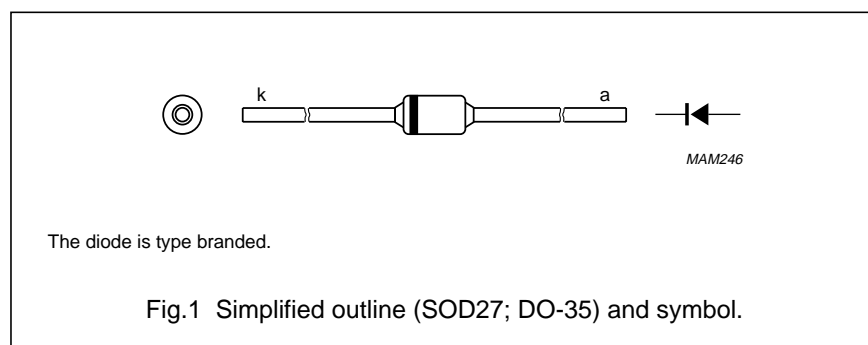
- Hermetically sealed leaded glass SOD27 (DO-35) package
- High switching speed: max. 4 ns
- Continuous reverse voltage: max. 75 V
- Repetitive peak reverse voltage: max. 75 V
- Repetitive peak forward current: max. 450 mA.

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 $t = 1\text{ }\mu\text{s}$ $t = 1\text{ ms}$ $t = 1\text{ s}$	— — —	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.

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_F	forward voltage	see Fig.3 $I_F = 5\text{ mA}$ $I_F = 100\text{ mA}$ $I_F = 100\text{ mA}; T_j = 100\text{ }^{\circ}\text{C}$	620 — —	750 1000 930	mV mV mV
I_R	reverse current	see Fig.5 $V_R = 20\text{ V}$ $V_R = 50\text{ V}$ $V_R = 75\text{ V}$ $V_R = 20\text{ V}; T_j = 150\text{ }^{\circ}\text{C}$ $V_R = 75\text{ V}; T_j = 150\text{ }^{\circ}\text{C}$	— — — — —	25 200 5 50 100	nA nA μA μA μA
C_d	diode capacitance	$f = 1\text{ MHz}; V_R = 0$; see Fig.6	—	2	pF
t_{rr}	reverse recovery time	when switched from $I_F = 10\text{ mA}$ to $I_R = 10\text{ mA}$; $R_L = 100\text{ }\Omega$; measured at $I_R = 1\text{ mA}$; see Fig.7	—	4	ns
V_{fr}	forward recovery voltage	when switched from $I_F = 50\text{ mA}$; $t_r = 20\text{ ns}$; see Fig.8	—	2.5	V

THERMAL CHARACTERISTICS

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

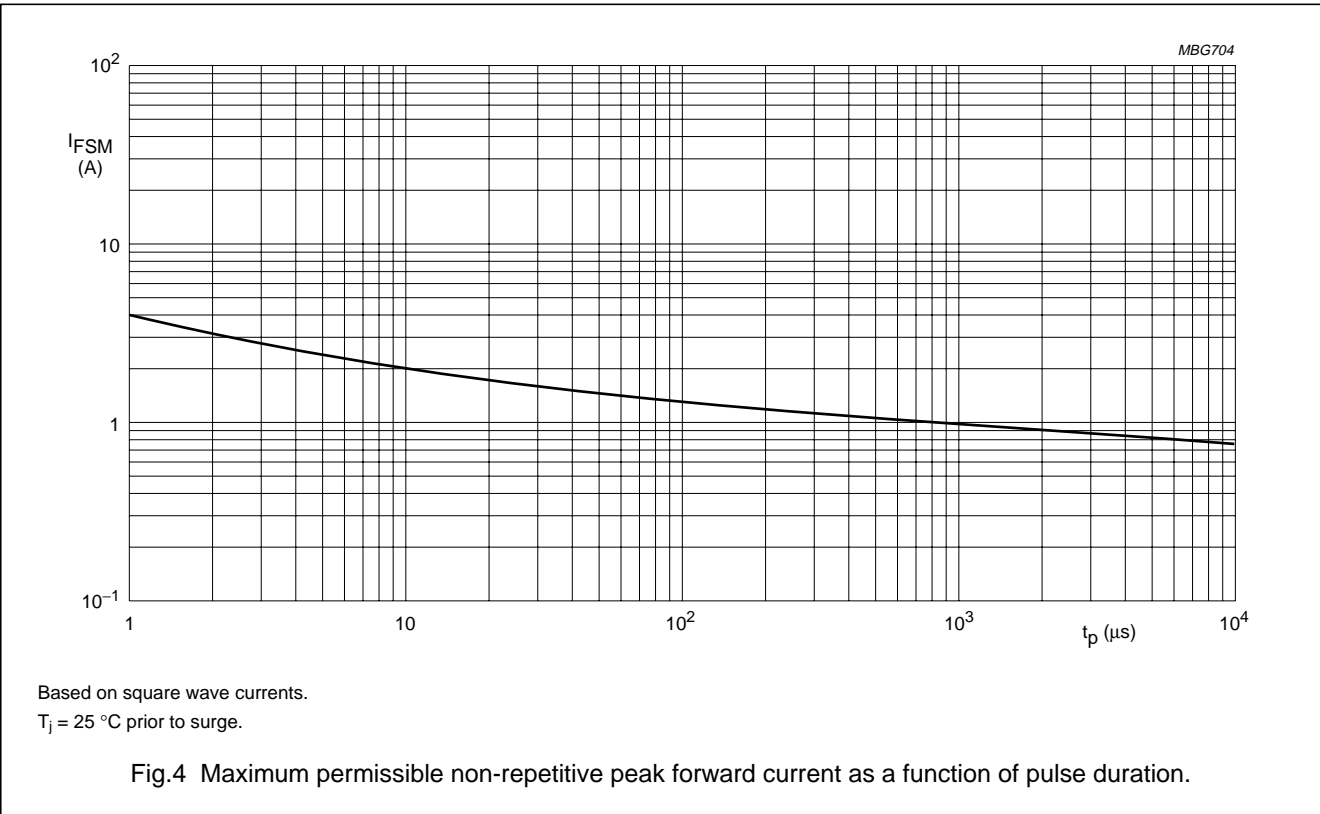
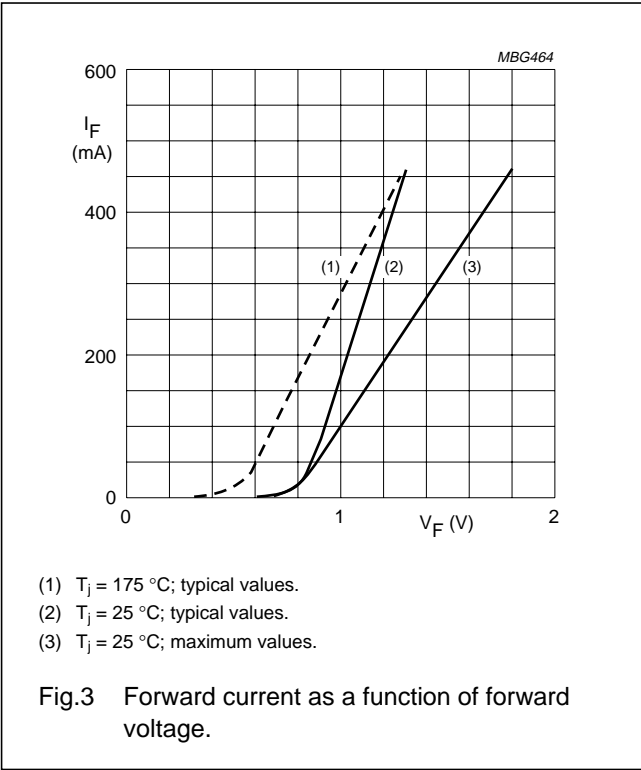
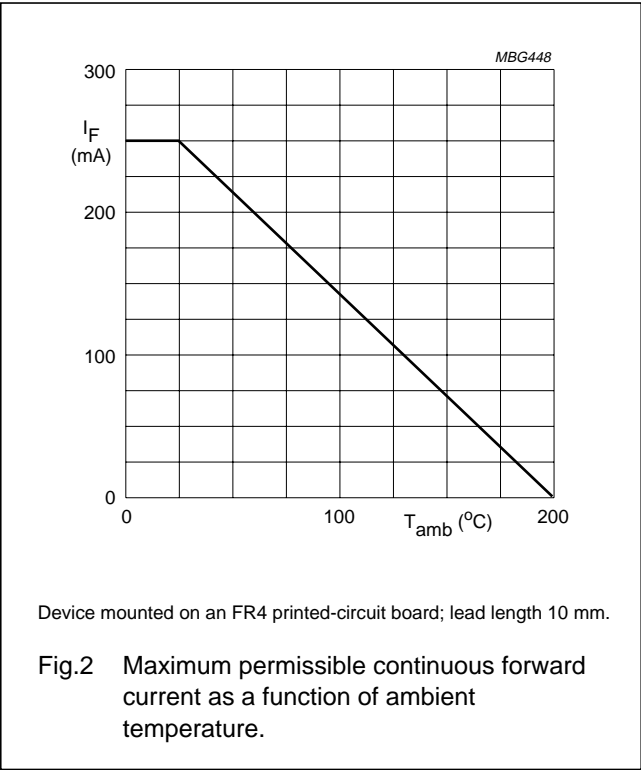
Note

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

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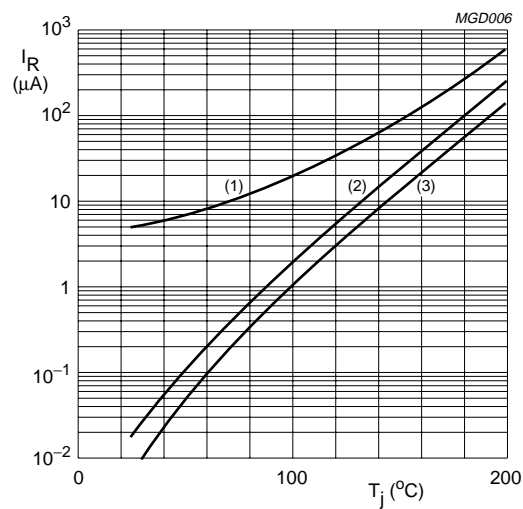
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GRAPHICAL DATA



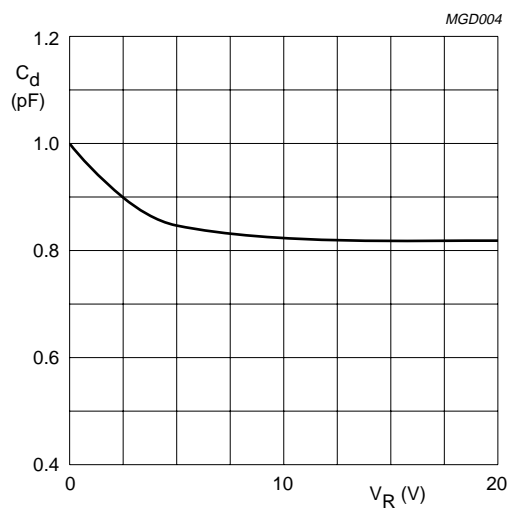
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- (1) $V_R = 75 V$; maximum values.
- (2) $V_R = 75 V$; typical values.
- (3) $V_R = 20 V$; typical values.

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



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

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