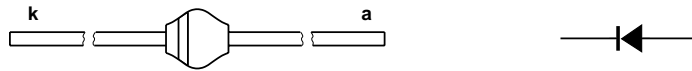


BY448

FEATURES

- Glass passivated
- High maximum operating temperature
- Low leakage current
- Excellent stability
- Available in ammo-pack.



MAM047

APPLICATIONS

- Damper diode in high frequency horizontal deflection circuits up to 16 kHz.

Fig.1 Simplified outline (SOD57) and symbol.

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{RSM}	non-repetitive peak reverse voltage		–	1650	V
V_{RRM}	repetitive peak reverse voltage		–	1650	V
V_R	continuous reverse voltage		–	1500	V
I_{FWM}	working peak forward current	$T_{amb} = 50\text{ °C}$; PCB mounting (see Fig 4); see Fig.2	–	4	A
I_{FRM}	repetitive peak forward current		–	8	A
I_{FSM}	non-repetitive peak forward current	$t = 10\text{ ms}$ half sinewave; $T_j = T_{j\text{ max}}$ prior to surge; $V_R = V_{RRM\text{ max}}$	–	30	A
T_{stg}	storage temperature		–65	+175	°C
T_j	junction temperature		–65	+150	°C

ELECTRICAL CHARACTERISTICS

$T_j = 25\text{ °C}$; unless otherwise specified.

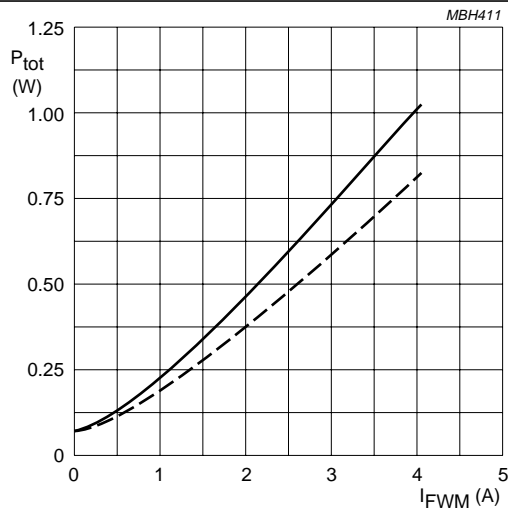
SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
V_F	forward voltage	$I_F = 3\text{ A}$; $T_j = T_{j\text{ max}}$; see Fig.3	1.45	V
		$I_F = 3\text{ A}$; see Fig.3	1.60	V
I_R	reverse current	$V_R = V_{R\text{ max}}$; $T_j = 150\text{ °C}$	150	μA
t_{rr}	reverse recovery time	when switched from $I_F = 0.5\text{ A}$ to $I_R = 1\text{ A}$; measured at $I_R = 0.25\text{ A}$; see Fig.6	1	μs
t_{fr}	forward recovery time	when switched to $I_F = 4\text{ A}$ in 50 ns; $T_j = T_{j\text{ max}}$; see Fig.7	1	μs

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-tp}}$	thermal resistance from junction to tie-point	lead length = 10 mm	46	K/W
$R_{th\ j\text{-a}}$	thermal resistance from junction to ambient	note 1	100	K/W
		mounted as shown in Fig.5	55	K/W

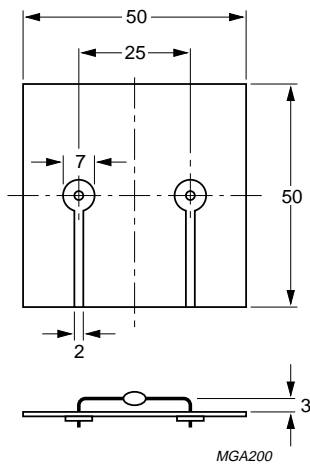
Note

1. Device mounted on an epoxy-glass printed-circuit board, 1.5 mm thick; thickness of Cu-layer $\geq 40\text{ }\mu\text{m}$, see Fig.4. For more information please refer to the "General Part of associated Handbook".



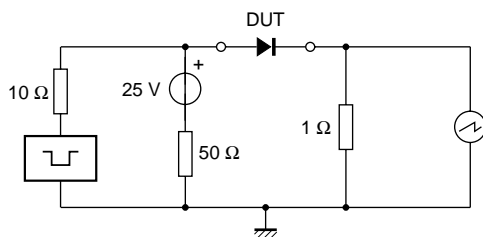
Solid line: basic high-voltage E/W modulator circuit; see Fig.8.
 Dotted line: basic conventional horizontal deflection circuit; see Fig.9.
 Curves include power dissipation due to switching losses.

Fig.2 Maximum total power dissipation as a function of the working peak forward current.



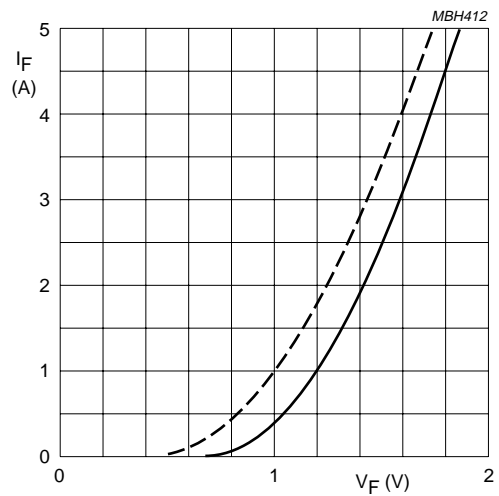
Dimensions in mm.

Fig.4 Device mounted on a printed-circuit board.



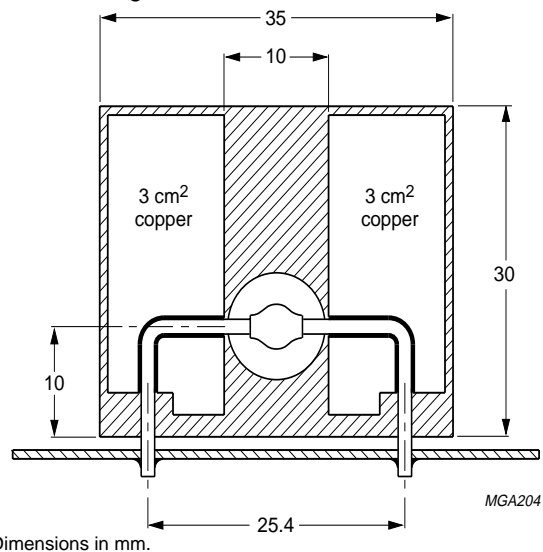
Input impedance oscilloscope: 1 MΩ, 22 pF; $t_r \leq 7$ ns.
 Source impedance: 50 Ω; $t_r \leq 15$ ns.

Fig.6 Test circuit and reverse recovery time waveform and definition.



Dotted line: $T_j = 150$ °C.
 Solid line: $T_j = 25$ °C.

Fig.3 Forward current as a function of forward voltage; maximum values.



Dimensions in mm.

Fig.5 Mounting with additional printed circuit board for heat sink purposes.

