
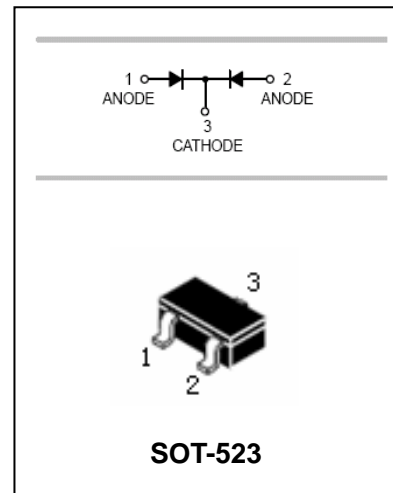


## High-speed double Diode

## BAV70T

### FEATURES

- Very small plastic SMD package.
- High switching speed:max.4ns.  Lead-free
- Continuous reverse voltage:max.75V.
- Repetitive peak reverse voltage:max.85V.
- Repetitive peak forward current:max.500 mA.



### APPLICATIONS

- High-speed switching in e.g. surface mounted circuits.

### ORDERING INFORMATION

Type No.	Marking	Package Code
BAV70T	JJ	SOT-523

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units	
V <sub>RRM</sub>	Peak repetitive reverse voltage	85	V	
V <sub>R</sub>	Continuous reverse voltage	75	V	
I <sub>FM</sub>	Forward continuous current(MAX.)	single diode loaded Both diodes loaded	150 75	mA
I <sub>FRM</sub>	Repetitive peak forward current	500	mA	
I <sub>FSM</sub>	Non-repetitive peak forward surge current	@t=1.0μs @t=1.0ms @t=1.0s	4 1 0.5	A
P <sub>tot</sub>	Total power dissipation T <sub>S</sub> =90°C;one diode loaded	170	mW	
T <sub>j</sub> ,T <sub>stg</sub>	Junction and Storage Temperature	-65 to +150	°C	

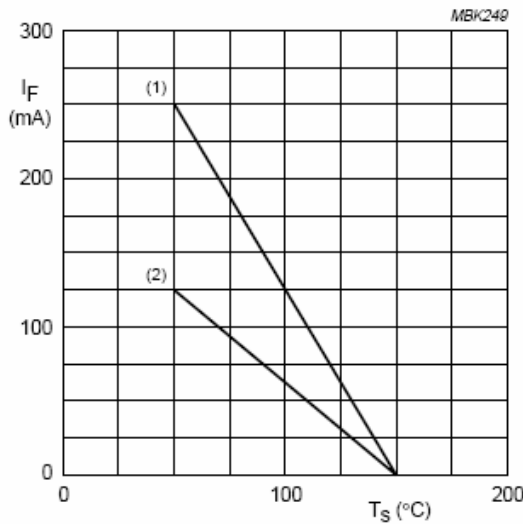
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**ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

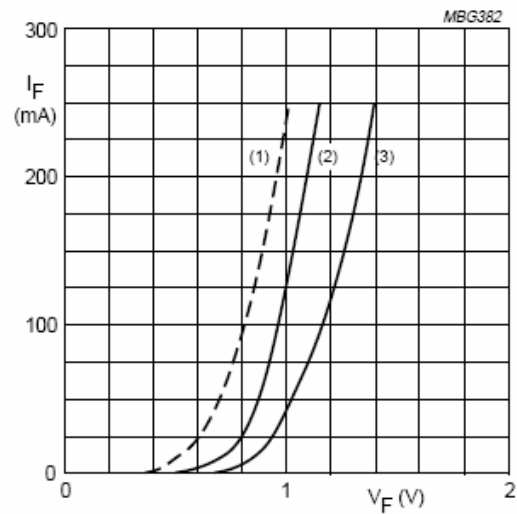
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Leakage current	$I_R$	$V_R=25V$		30	nA
		$V_R=75V$		2	$\mu A$
		$V_R=25V, T_j=150^\circ C$		60	$\mu A$
		$V_R=75V, T_j=150^\circ C$		100	$\mu A$
Forward voltage	$V_F$	$I_F=1mA$		0.715	V
		$I_F=10mA$		0.855	
		$I_F=50mA$		1	
		$I_F=150mA$		1.25	
Diode capacitance	$C_d$	$V_R=0V, f=1MHz$		1.5	pF
Forward recovery voltage	$V_{ff}$	$I_F=10mA, t_r=20ns$		1.75	V
Reverse recovery Time	$t_{rr}$	$I_F=I_R=10mA, I_{rr}=0.1 \cdot I_R, R_L=100\Omega$		4	ns

**TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**



- (1) One diode loaded.
- (2) Both diodes loaded.

Fig.2 Maximum permissible continuous forward current per diode as a function of soldering point temperature.

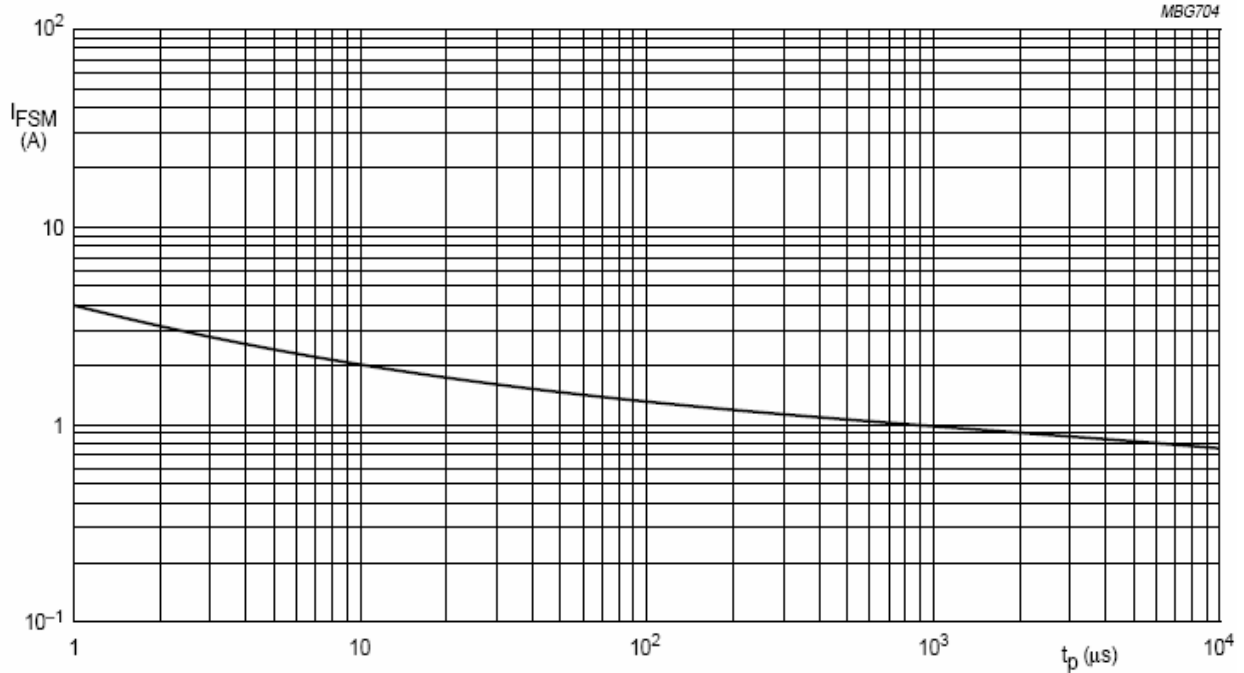


- (1)  $T_j = 150^\circ C$ ; typical values.
- (2)  $T_j = 25^\circ C$ ; typical values.
- (3)  $T_j = 25^\circ C$ ; maximum values.

Fig.3 Forward current as a function of forward voltage.

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Based on square wave currents.  
 $T_j = 25\text{ }^\circ\text{C}$  prior to surge.

Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

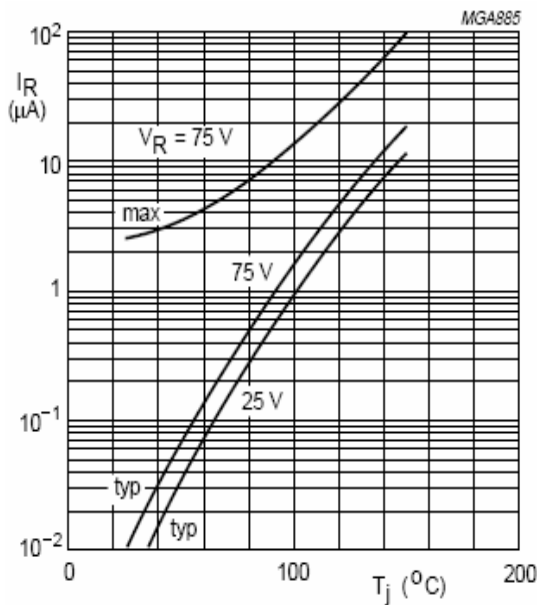
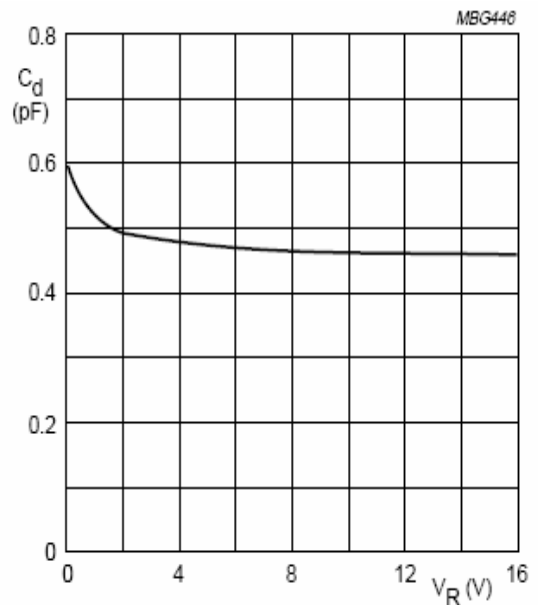


Fig.5 Reverse current as a function of junction temperature.



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

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



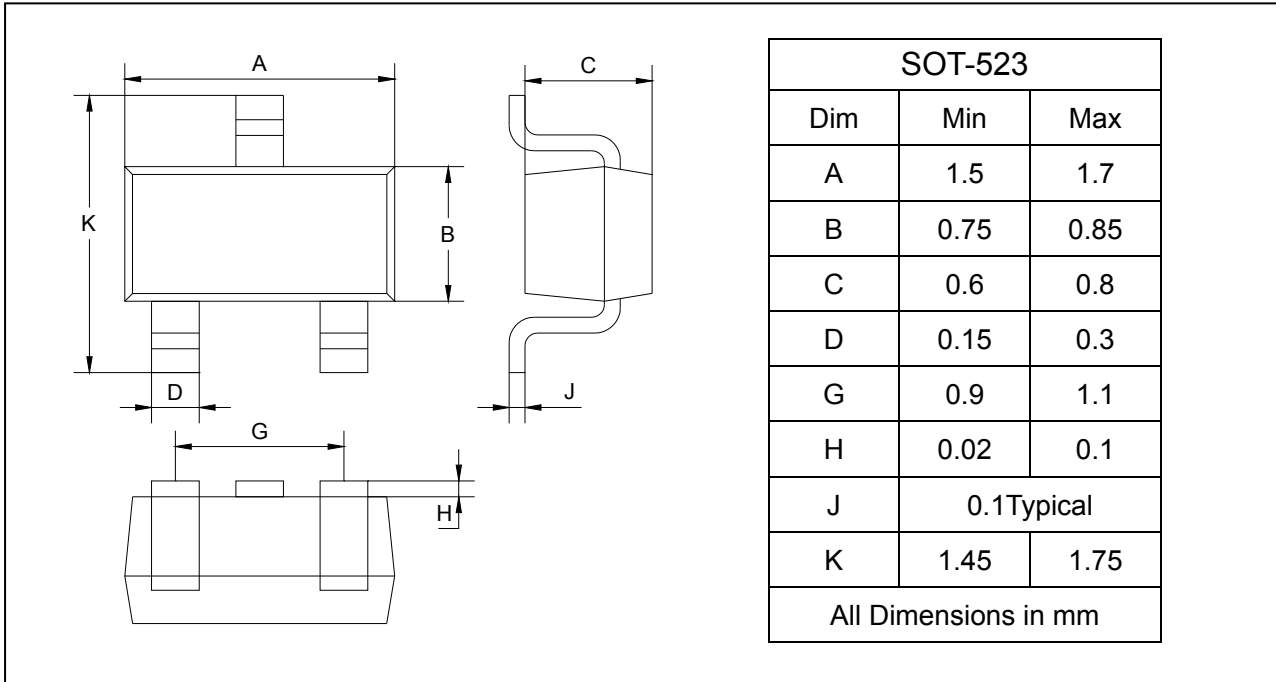
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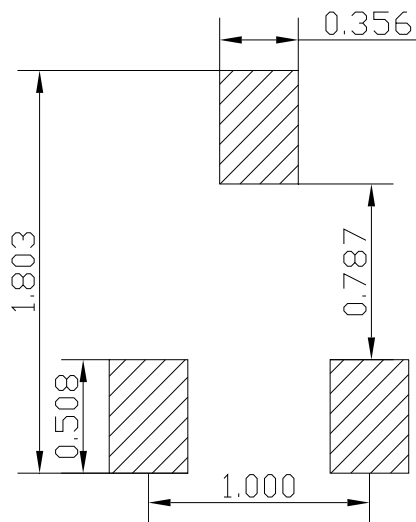
**PACKAGE OUTLINE**

Plastic surface mounted package

SOT-523



**SOLDERING FOOTPRINT**



Unit : mm

**PACKAGE INFORMATION**

Device	Package	Shipping
BAV70T	SOT-523	3000/Tape&Reel