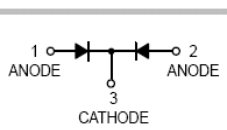
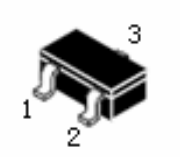
High-speed double Diode **BAV70T**

FEATURES

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

Lead-free





SOT-523

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℃ unless otherwise specified

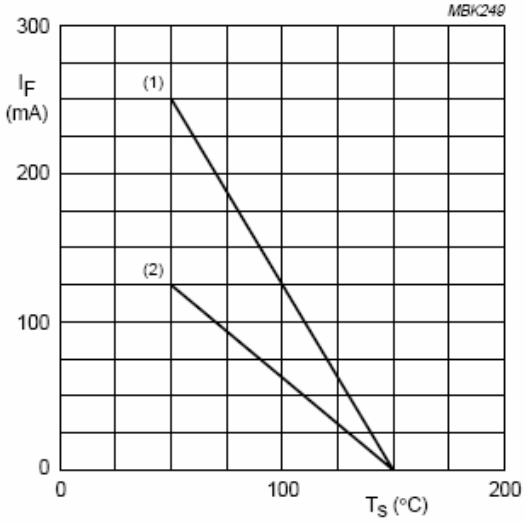
Symbol	**Parameter**	**Value**	**Units**
V_{RRM}	Peak repetitive reverse voltage	85	V
V_R	Continuous reverse voltage	75	V
I_{FM}	Forward continuous current(MAX.) single diode loaded Both diodes loaded	150 75	mA
I_{FRM}	Repetitive peak forward current	500	mA
I_{FSM}	Non-repetitive peak forward surge current @t=1.0μs @t=1.0ms @t=1.0s	 4 1 0.5	A
P_{tot}	Total power dissipation T_S=90℃;one diode loaded	170	mW
T_j,T_{stg}	Junction and Storage Temperature	-65 to +150	℃

High-speed double Diode **BAV70T**

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

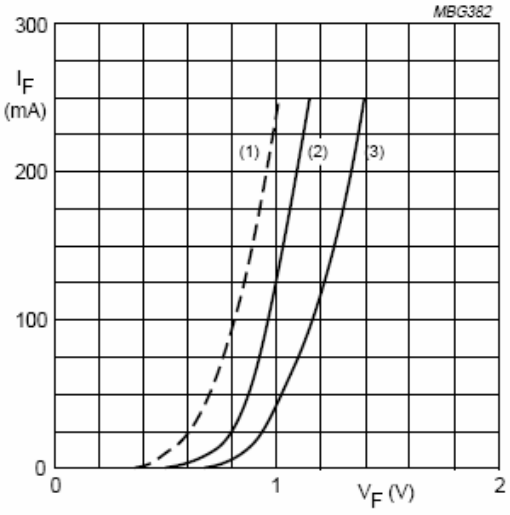
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Leakage current	I_R	V_R=25V V_R=75V V_R=25V,T_j=150℃ V_R=75V,T_j=150℃		30 2 60 100	nA μA μA μA
Forward voltage	V_F	I_F=1mA I_F=10mA I_F=50mA I_F=150mA		0.715 0.855 1 1.25	V
Diode capacitance	C_d	V_R=0V,f=1MHz		1.5	pF
Forward recovery voltage	V_{ff}	I_F=10mA,t_r=20ns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

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified



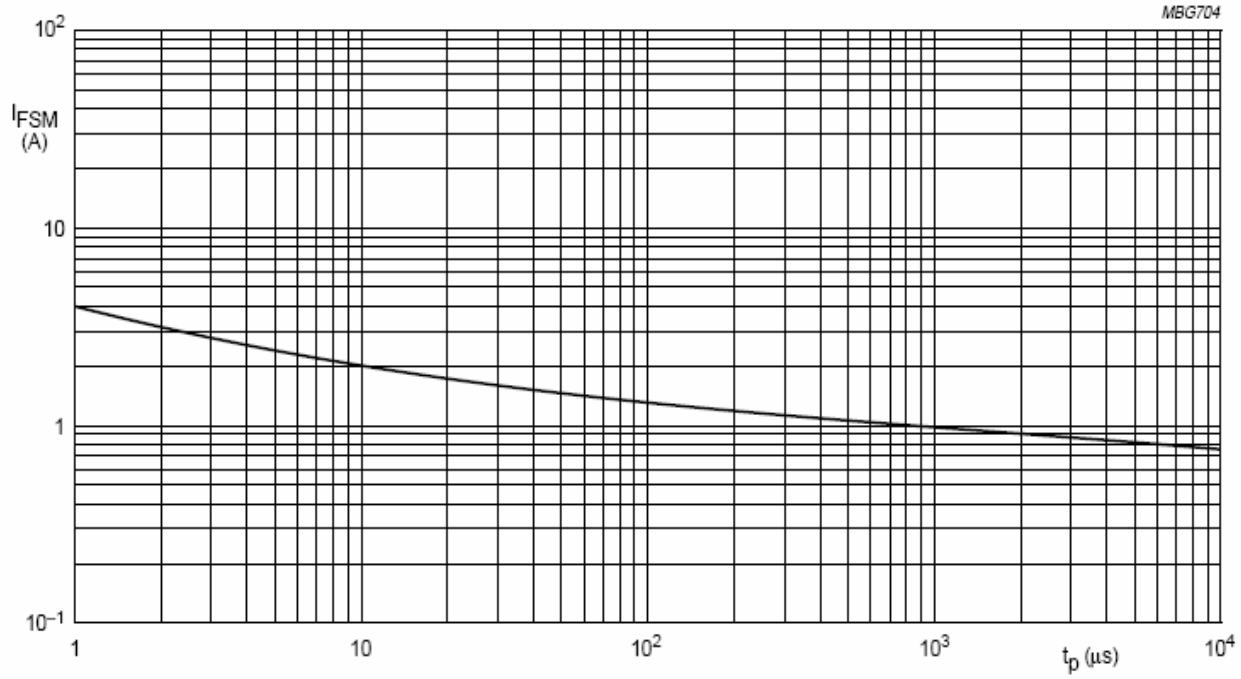
(1) One diode loaded.
(2) Both diodes loaded.

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



(1) T_j = 150 °C; typical values.
(2) T_j = 25 °C; typical values.
(3) T_j = 25 °C; maximum values.

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



Based on square wave currents.
T_j = 25 °C prior to surge.

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

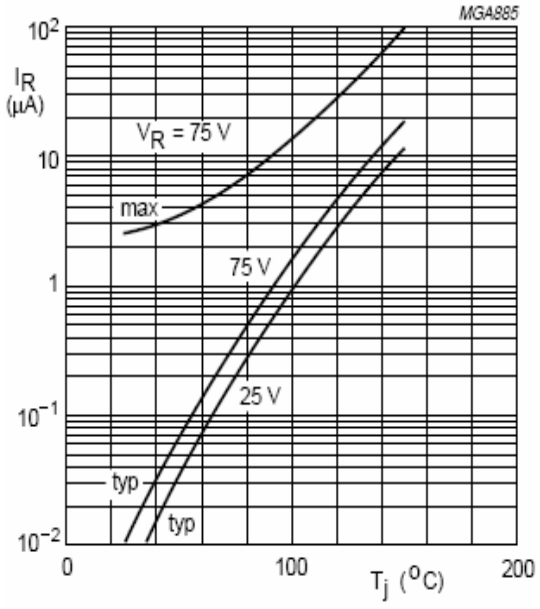
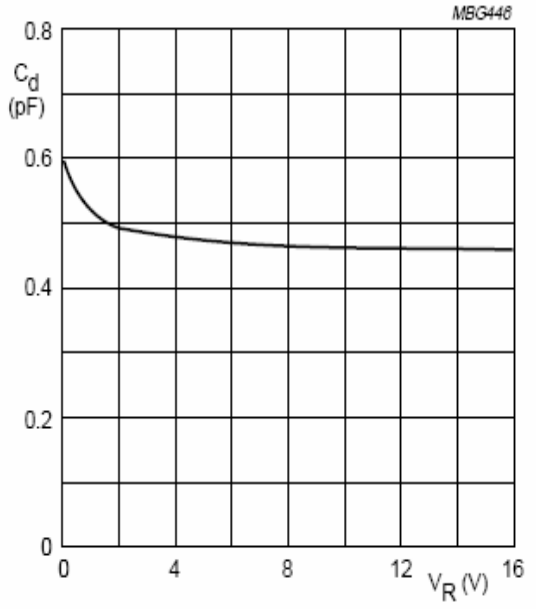


Fig.5 Reverse current as a function of junction temperature.



f = 1 MHz; T_j = 25 °C.

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

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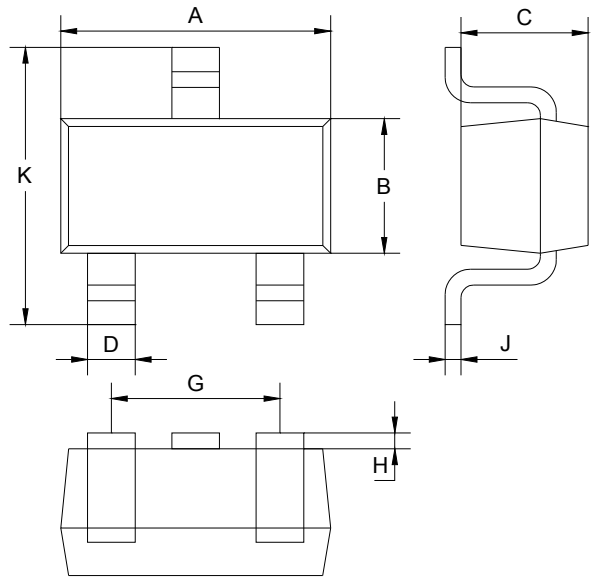
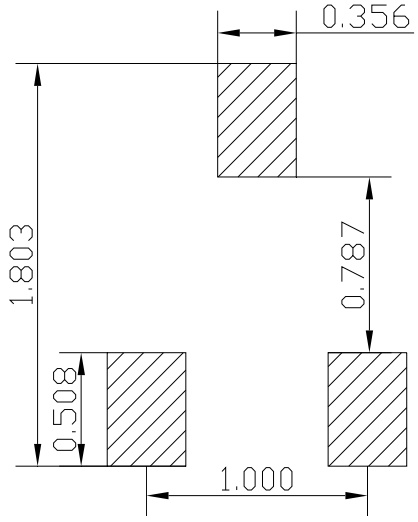
PACKAGE OUTLINE

Plastic surface mounted package SOT-523



SOT-523		
Dim	Min	Max
A	1.5	1.7
B	0.75	0.85
C	0.6	0.8
D	0.15	0.3
G	0.9	1.1
H	0.02	0.1
J	0.1Typical	
K	1.45	1.75
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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