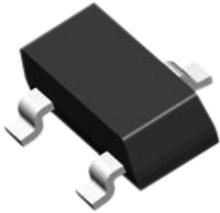


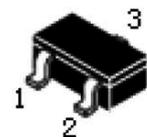
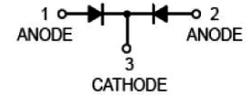
# High-Speed Double Diode

**multicomp** PRO



## Features:

- Very Small Plastic SMD Package
- High Switching Speed : 4ns (Max.)
- Continuous Reverse Voltage : 75V (Max.)
- Repetitive Peak Reverse Voltage : 85V (Max.)
- Repetitive Peak Forward Current : 500mA (Max.)



**SOT-523**

## Applications:

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

## Max. Rating @ TA = 25°C unless otherwise specified

Parameter	Symbol	Limits	Unit
Peak repetitive reverse voltage	$V_{RRM}$	85	V
Continuous reverse voltage	$V_R$	75	V
RMS reverse voltage	$V_{R(RMS)}$	53	V
Forward continuous current (Max.)	$I_{FM}$	150 75	mA
Repetitive peak forward current	$I_{FRM}$	500	mA
Non-repetitive peak forward surge current	$I_{FSM}$	4 1 0.5	A
Total power dissipation Ts = 90°C; one diode loaded	$P_{tot}$	170	mW
Junction and storage temperature	$T_J, T_{STG}$	-65 to +150	°C

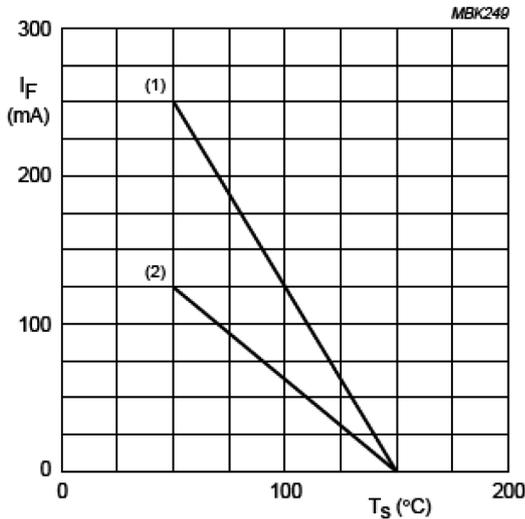
## Electrical Characteristics @ TA = 25°C unless otherwise specified

Parameter	Symbol	Conditions	Min.	Max.	Unit
Leakage current	$I_R$	$V_R = 25V$ $V_R = 75V$ $V_R = 25V, T_J = 150^\circ C$ $V_R = 75V, T_J = 150^\circ C$	-	30 2 60 100	nA $\mu A$ $\mu A$ $\mu A$
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	$t_{rr}$	$I_F = I_R = 10mA,$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	4	ns

Newark.com/multicomp-pro  
Farnell.com/multicomp-pro  
Element14.com/multicomp-pro

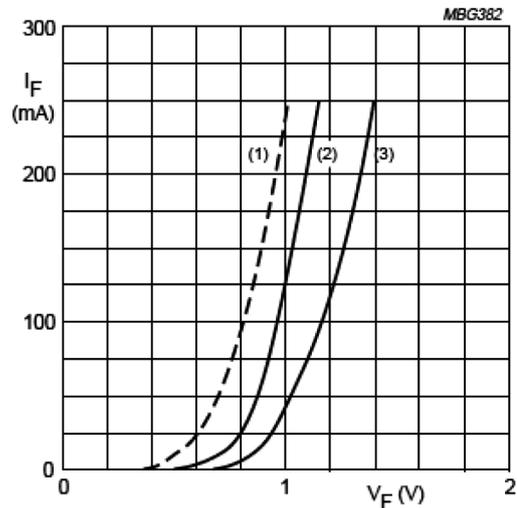
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## Typical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified



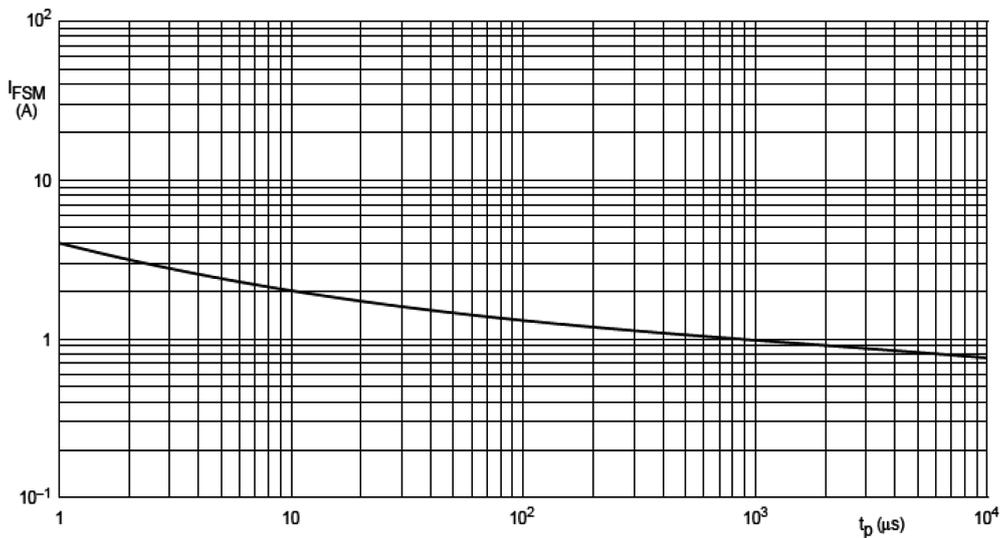
- (1) One diode loaded.
- (2) Both diodes loaded.

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



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

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



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

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

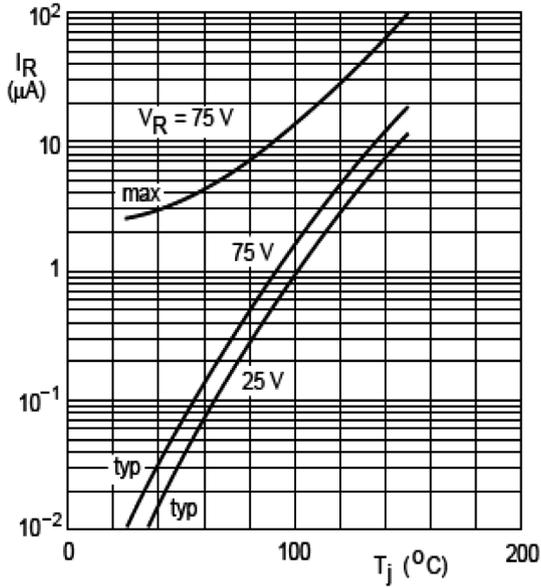
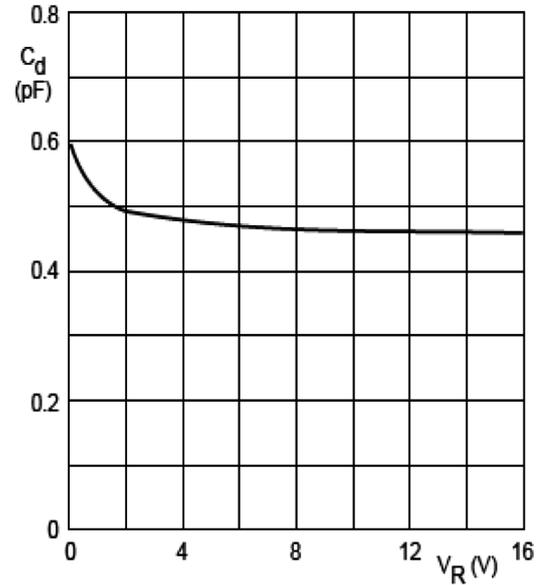


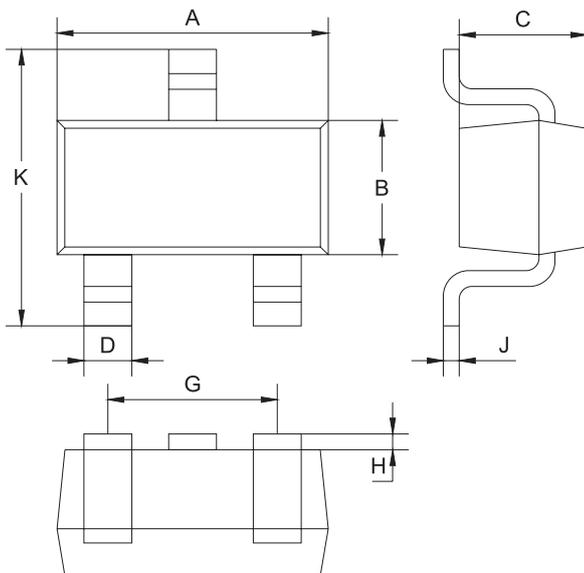
Fig.5 Reverse current as a function of junction temperature.



f = 1 MHz; T<sub>j</sub> = 25 °C.

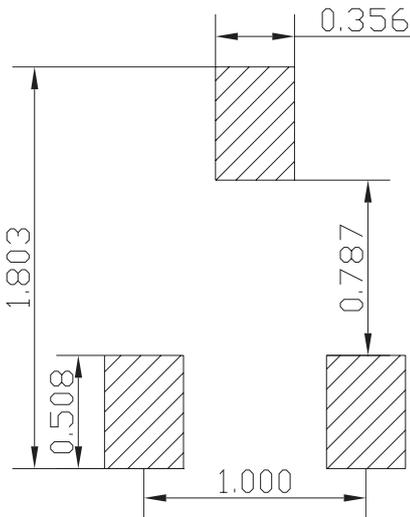
Fig.6 Diode capacitance as a function of reverse voltage; typical values.

## Plastic surface mounted package



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-7-F	SOT-523	3,000 / Tape & Reel

## Part Number Table

Description	Part Number
High-speed double Diode	BAV70T-7-F

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