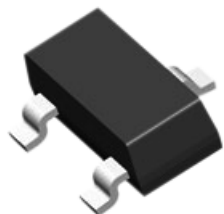


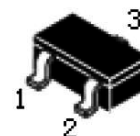
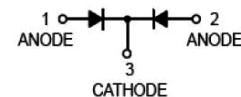
High-Speed Double Diode

multicompPRO



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 @ T_A = 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.) Single diode loaded Both diodes loaded	I _{FM}	150 75	mA
Repetitive peak forward current	I _{FRM}	500	mA
Non-repetitive peak forward surge current @t = 1μs @t = 1ms @t = 1s	I _{FSM}	4 1 0.5	A
Total power dissipation T _s = 90°C; one diode loaded	P _{tot}	170	mW
Junction and storage temperature	T _j , T _{STG}	-65 to +150	°C

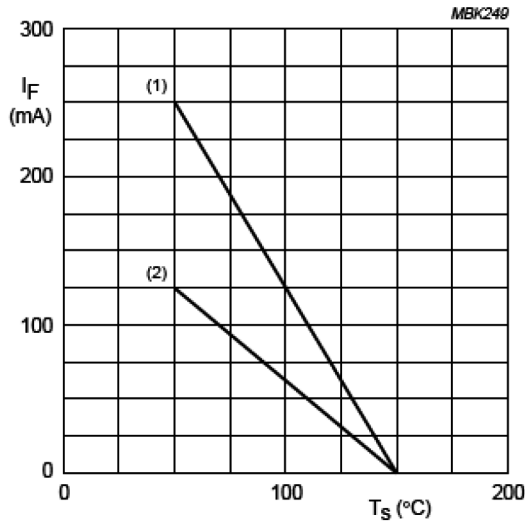
Electrical Characteristics @ T_A = 25°C unless otherwise specified

Parameter	Symbol	Conditions	Min.	Max.	Unit
Leakage current	I _R	V _R = 25V V _R = 75V V _R = 25V, T _j = 150°C V _R = 75V, T _j = 150°C	-	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

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

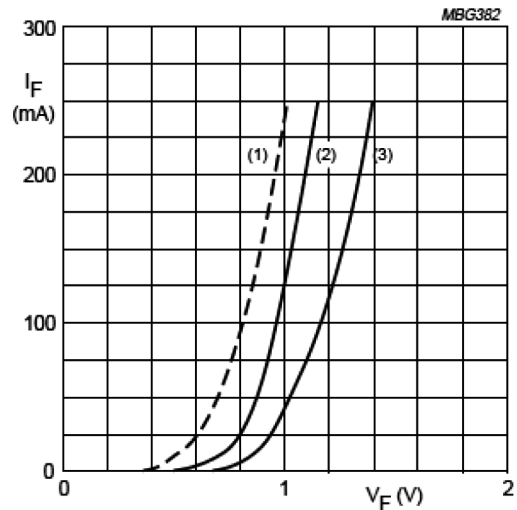
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Typical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified



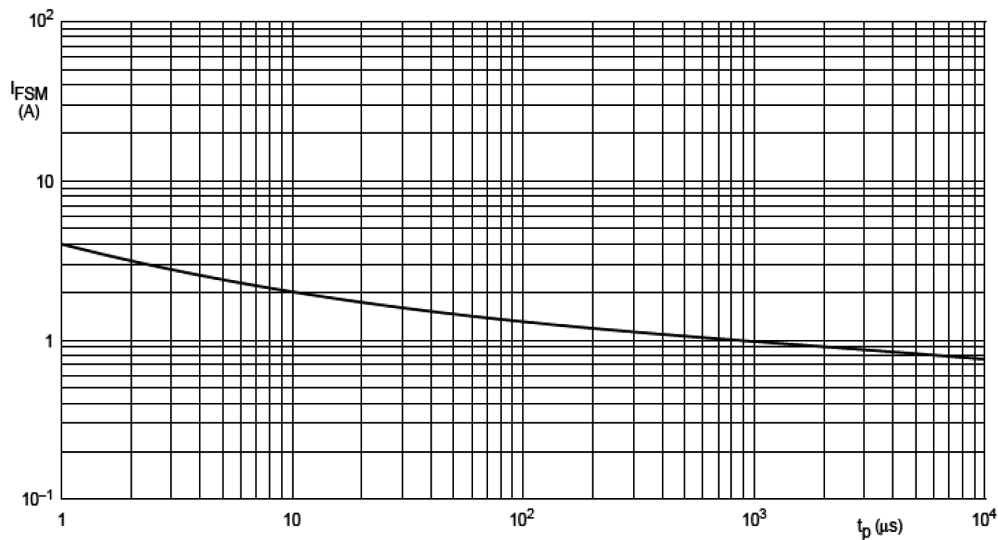
- (1) One diode loaded.
- (2) Both diodes loaded.

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.

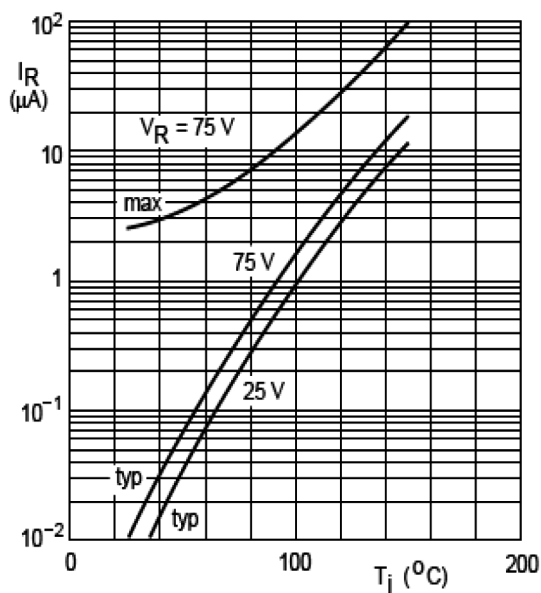
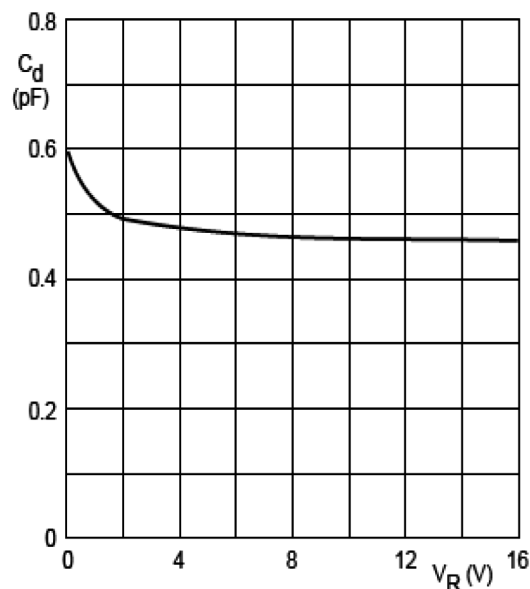


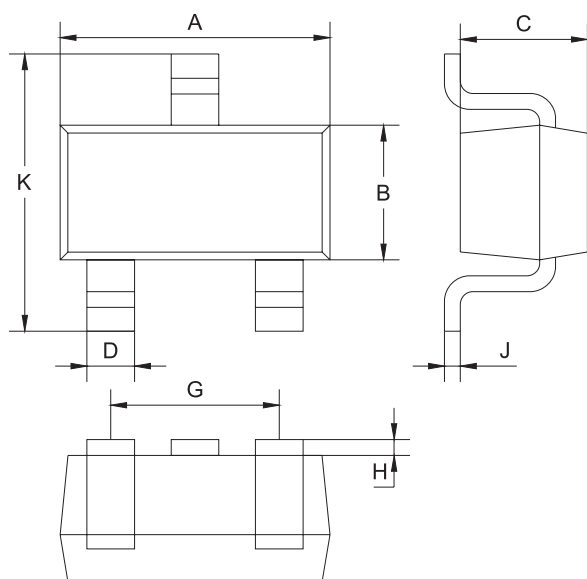
Fig.5 Reverse current as a function of junction temperature.



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

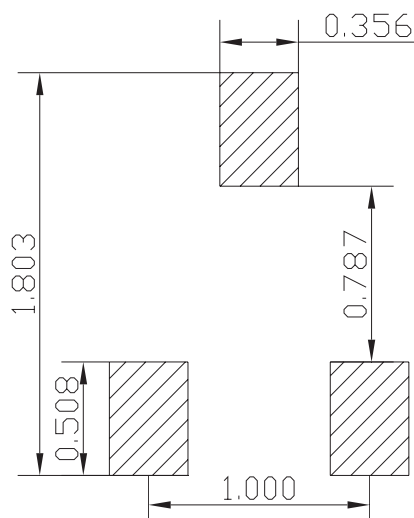
Fig.6 Diode capacitance as a function of reverse voltage; typical values.

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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