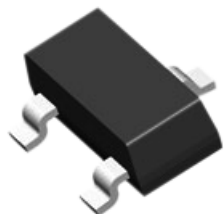
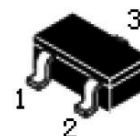
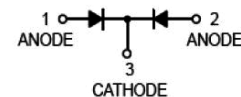


High-Speed Double Diode



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

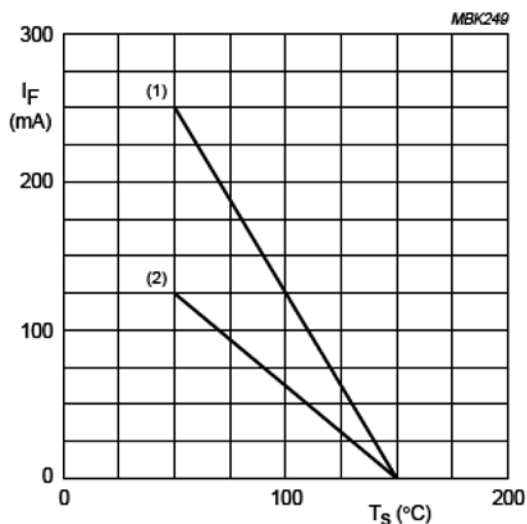
Parameter	Symbol	Limits	Unit
Peak repetitive reverse voltage	V _{RRM}	85	V
Continuous reverse voltage	V _R	75	V
RMS reverse voltage	V _{R(RMS)}	53	V
Forward continuous current (Max.) Single diode loaded Both diodes loaded	I _{FM}	150 75	mA
Repetitive peak forward current	I _{FRM}	500	mA
Non-repetitive 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

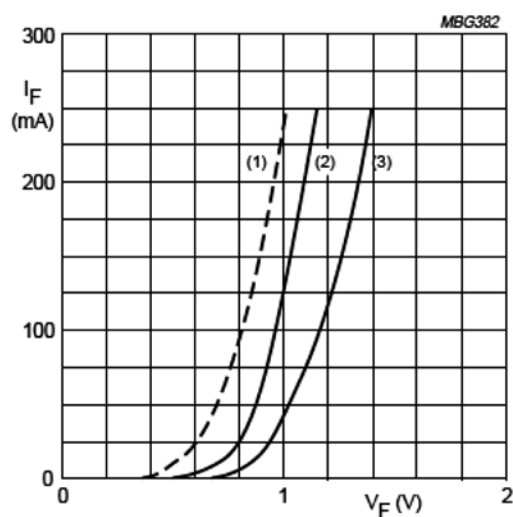
High-Speed Double Diode

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



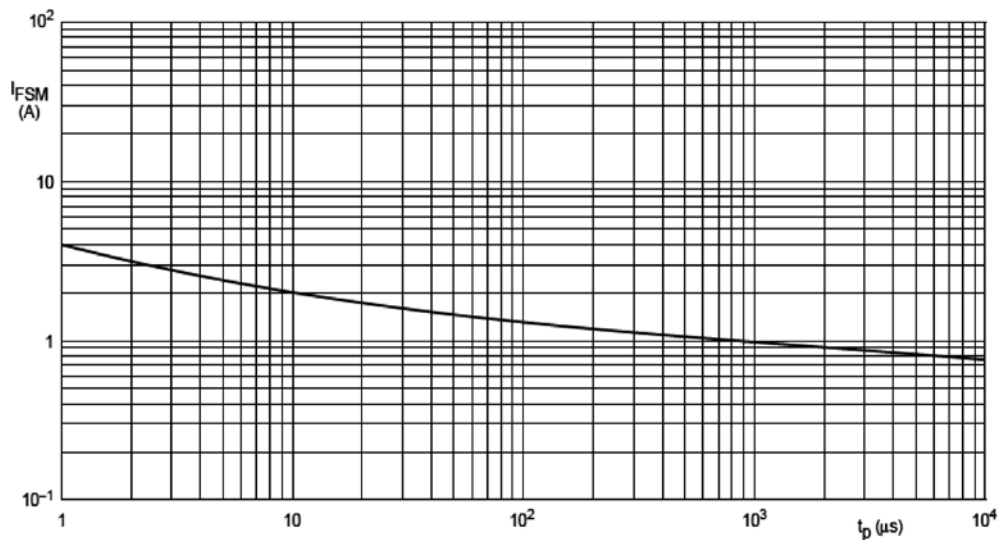
- (1) One diode loaded.
- (2) Both diodes loaded.

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.

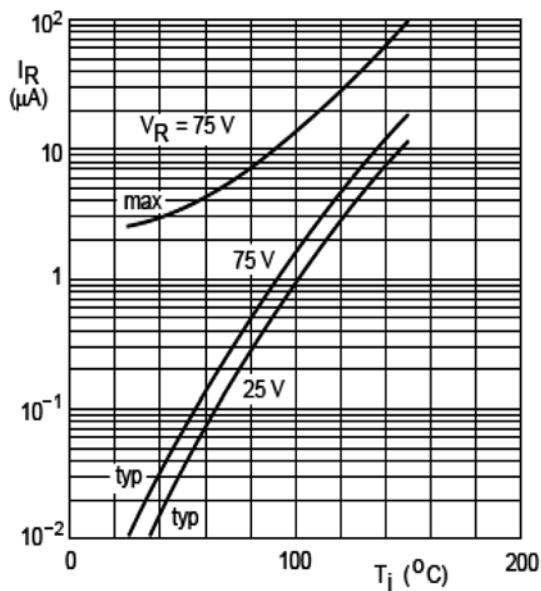
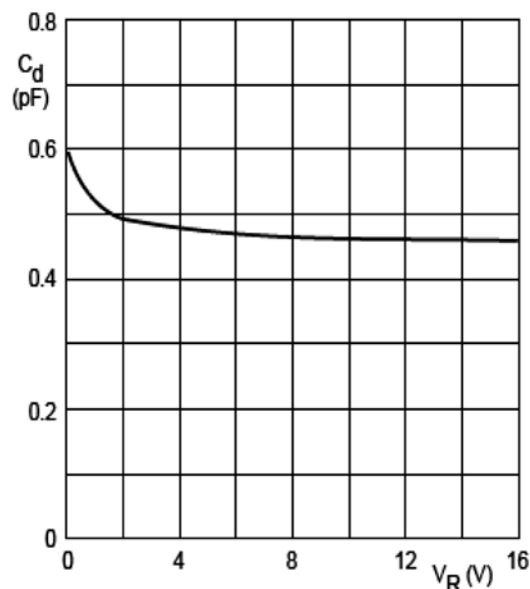


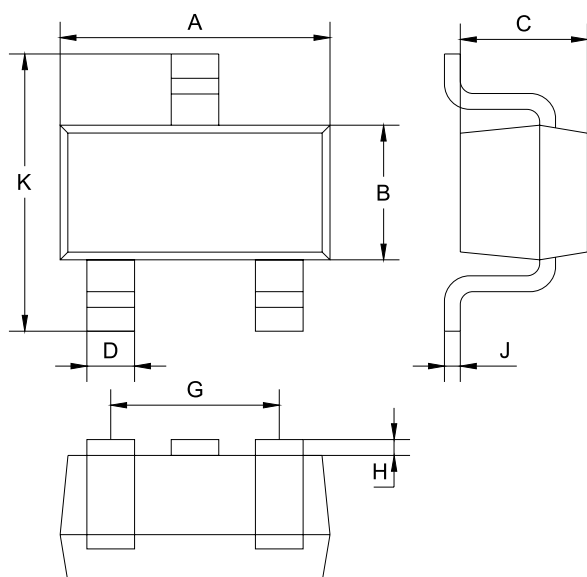
Fig.5 Reverse current as a function of junction temperature.



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

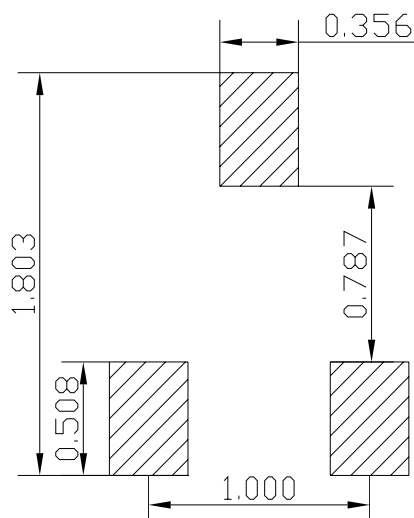
Fig.6 Diode capacitance as a function of reverse voltage; typical values.

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

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2012.