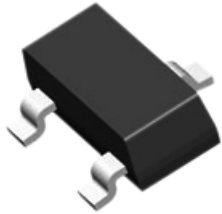
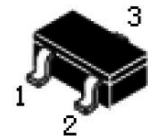
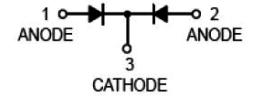


High-Speed Double Diode



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

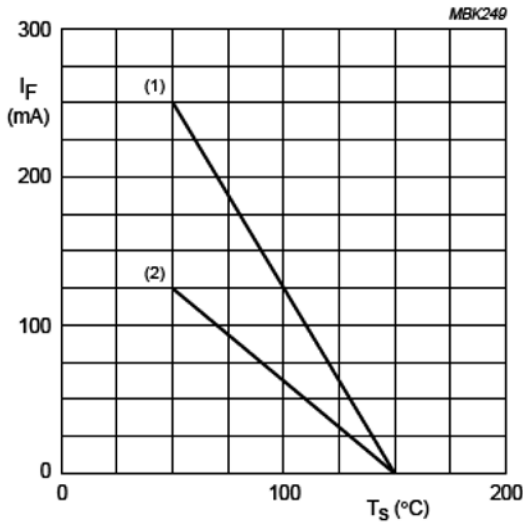
Max. Rating @ TA = 25°C unless otherwise specified

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 $T_s = 90^\circ\text{C}$; one diode loaded	P_{tot}	170	mW
Junction and storage temperature	T_j, T_{STG}	-65 to +150	$^\circ\text{C}$

Electrical Characteristics @ TA = 25°C unless otherwise specified

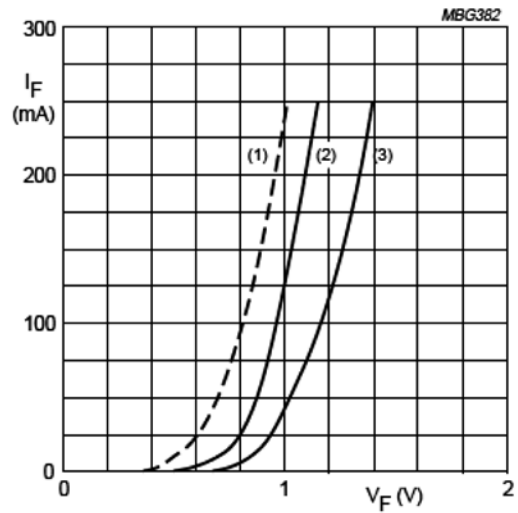
Parameter	Symbol	Conditions	Min.	Max.	Unit
Leakage current	I_R	$V_R = 25\text{V}$	-	30	nA
		$V_R = 75\text{V}$		2	μA
		$V_R = 25\text{V}, T_j = 150^\circ\text{C}$		60	μA
		$V_R = 75\text{V}, T_j = 150^\circ\text{C}$		100	μA
Forward voltage	V_F	$I_F = 1\text{mA}$	-	0.715	V
		$I_F = 10\text{mA}$		0.855	
		$I_F = 50\text{mA}$		1	
		$I_F = 150\text{mA}$		1.25	
Diode capacitance	C_D	$V_R = 0\text{V}, f = 1\text{MHz}$	-	1.5	pF
Forward recovery voltage	V_{ff}	$I_F = 10\text{mA}, t_r = 20\text{ns}$	-	1.75	V
Reverse recovery time	t_{rr}	$I_F = I_R = 10\text{mA}, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	4	ns

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



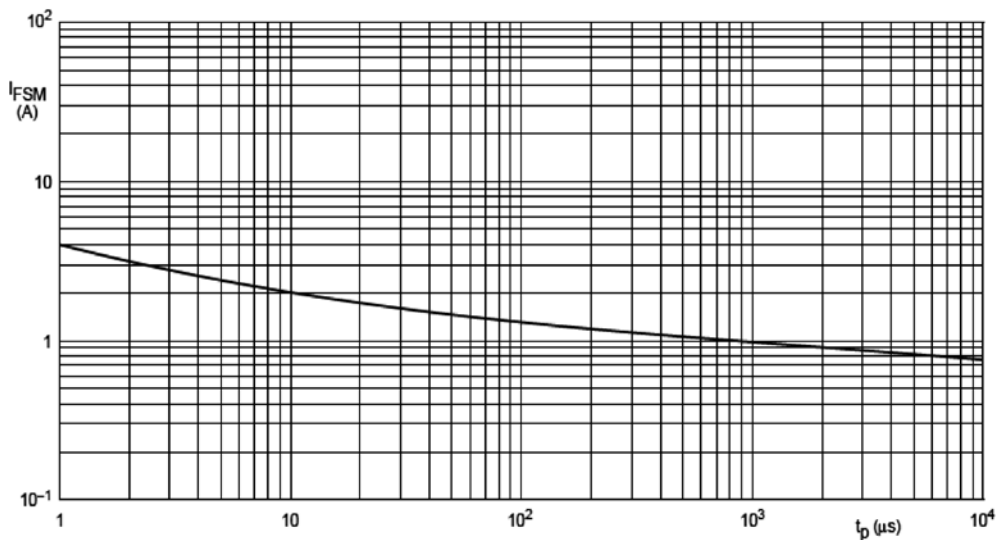
- (1) One diode loaded.
- (2) Both diodes loaded.

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.

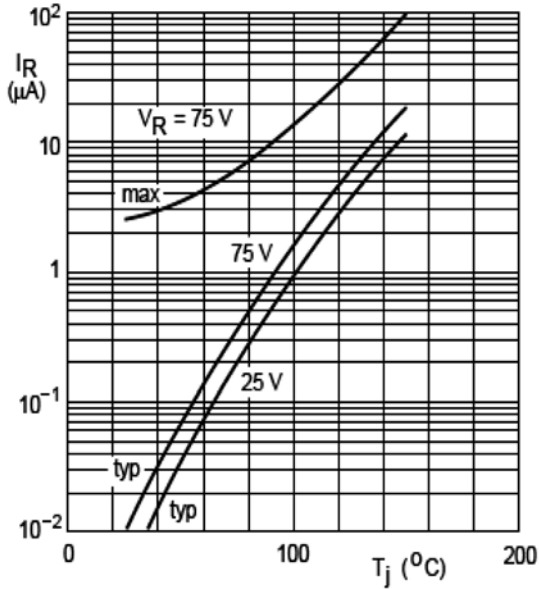
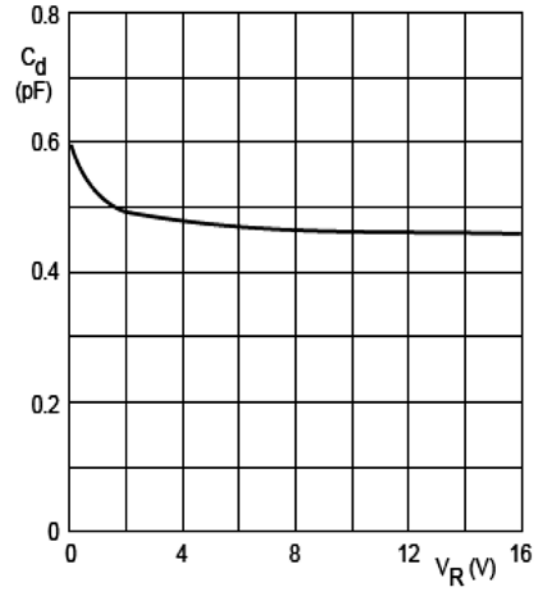


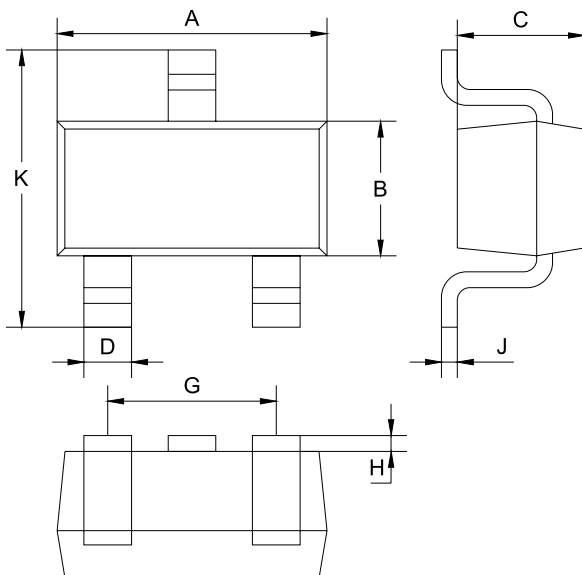
Fig.5 Reverse current as a function of junction temperature.



f = 1 MHz; T_j = 25 °C.

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

Plastic surface mounted package

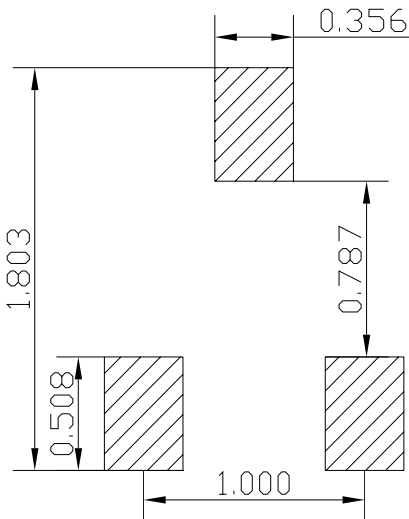


SOT-523		
Dim	Min	Max
A	1.5	1.7
B	0.75	0.85
C	0.6	0.8
D	0.15	0.3
G	0.9	1.1
H	0.02	0.1
J	0.1Typical	
K	1.45	1.75
All Dimensions in mm		

High-Speed Double Diode



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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