

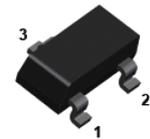
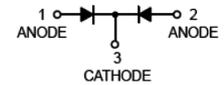
# Low-Leakage Double Diode

multicomp **PRO**



## Features:

- Plastic SMD Package
- Low Leakage Current : typ. 3pA
- Switching Time : Typ. 0.8 ms
- Continuous Reverse Voltage : 75V Max.
- Repetitive Peak Reverse Voltage : 85V Max.
- Repetitive Peak Forward Current : 500mA Max.



SOT-23

## Applications:

Low-leakage current applications in surface mounted circuits

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

Parameter	Symbol	Limits	Unit
Repetitive peak reverse voltage	$V_{RRM}$	85	V
DC Reverse Voltage	$V_R$	75	V
Forward continuous current Single diode loaded Double diode loaded	$I_F$	215 125	mA
Repetitive peak forward current	$I_{FRM}$	500	mA
Non-Repetitive peak forward current square wave; $T_j = 25^\circ\text{C}$ prior to surge; $t_p = 1\mu\text{s}$ $t_p = 1\text{ms}$ $t_p = 1\text{s}$	$I_{FSM}$	4 1 0.5	A
Total power dissipation	$P_{tot}$	250	mW
Operating junction temperature range	$T_j$	150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-65 to +125	$^\circ\text{C}$

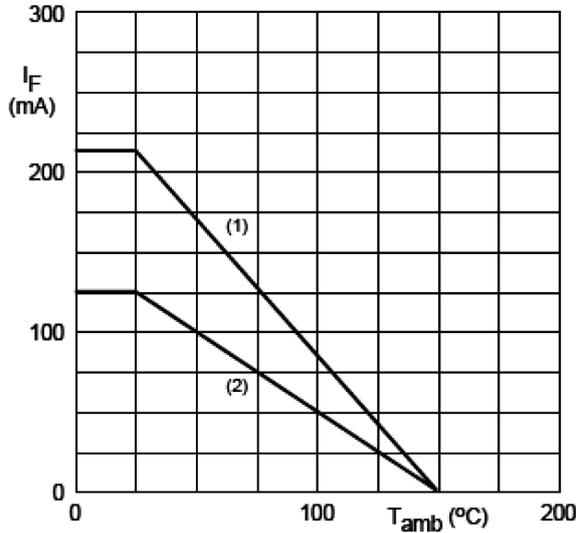
## Electrical Characteristics @ TA = 25°C unless otherwise specified

Parameter	Symbol	Conditions	Min.	Max.	Unit
Forward voltage	$V_F$	$I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 100\text{mA}$	-	900 1,000 1,100 1,250	mV
Reverse leakage current	$I_R$	$V_R = 75\text{V}$ $V_R = 75\text{V}, T_j = 150^\circ\text{C}$	-	5 80	nA
Junction capacitance	$C_J$	$V_R = 0\text{V}, f = 1\text{MHz}$	-	2	pF
Reverse recovery time	$t_{rr}$	$I_F = I_R = 10\text{mA},$ $I_{rr} = 0.1 \times I_R$	-	3	$\mu\text{s}$

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

multicomp **PRO**

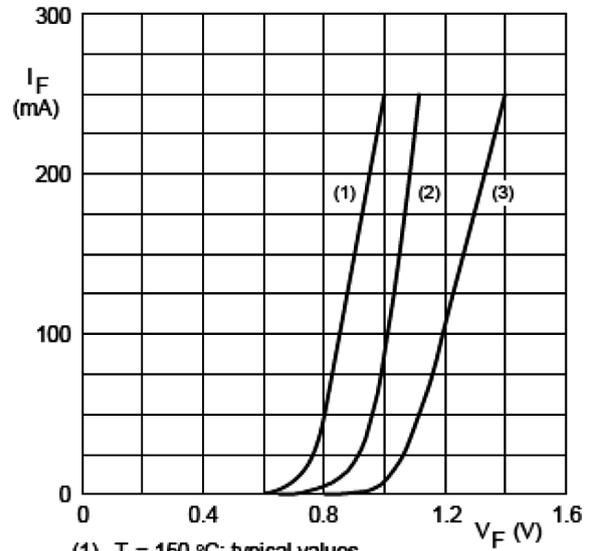
## Typical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified



Device mounted on a FR4 printed-circuit board.

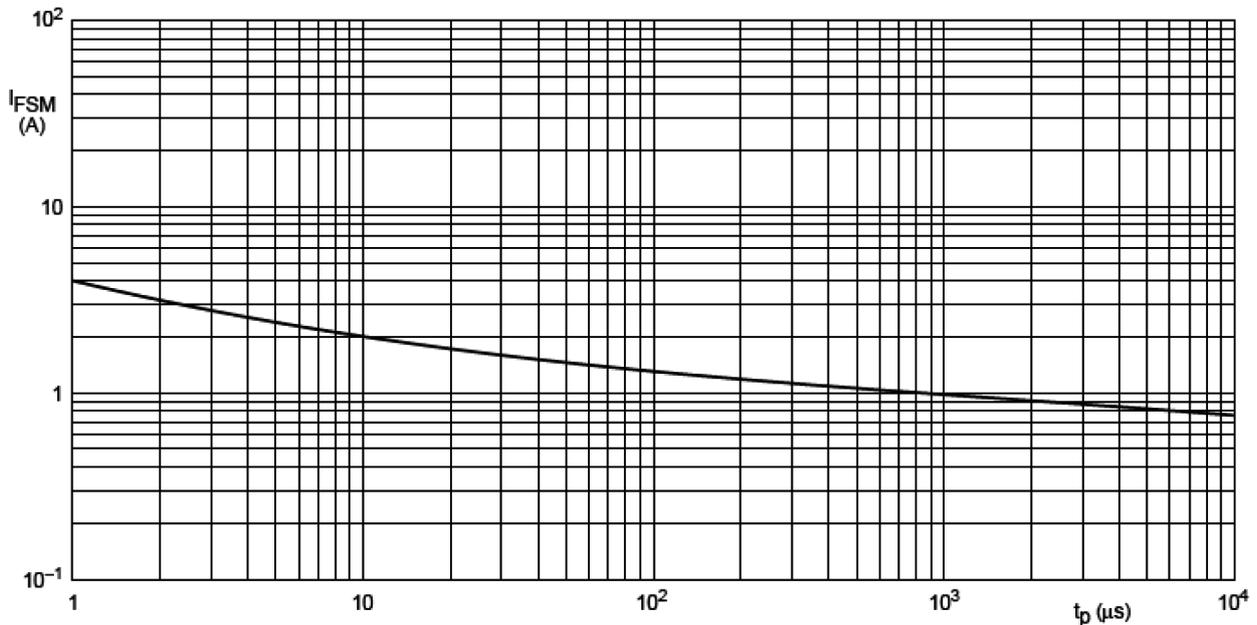
- (1) Single diode loaded.
- (2) Double diode loaded.

Maximum permissible continuous forward current as a function of ambient temperature.

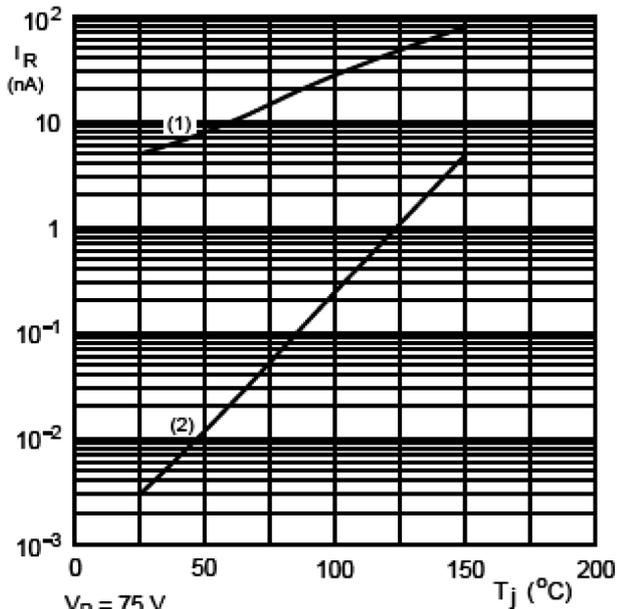


- (1)  $T_j = 150^\circ\text{C}$ ; typical values.
- (2)  $T_j = 25^\circ\text{C}$ ; typical values.
- (3)  $T_j = 25^\circ\text{C}$ ; maximum values.

Forward current as a function of forward voltage; per diode.

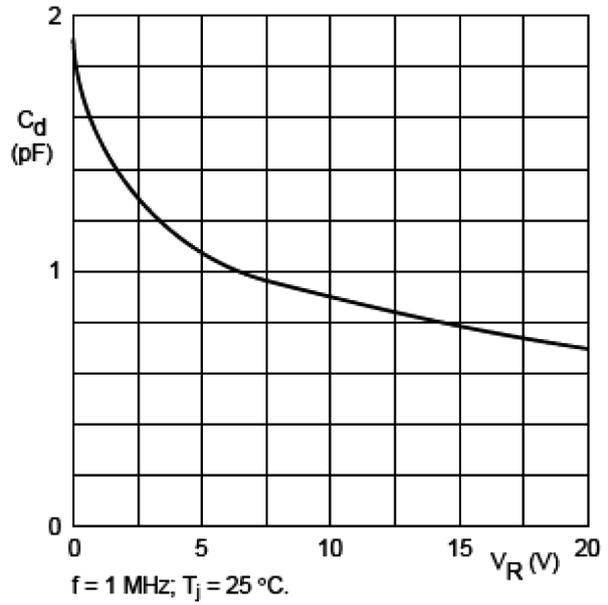


Maximum permissible non-repetitive peak forward current as a function of pulse duration per diode.



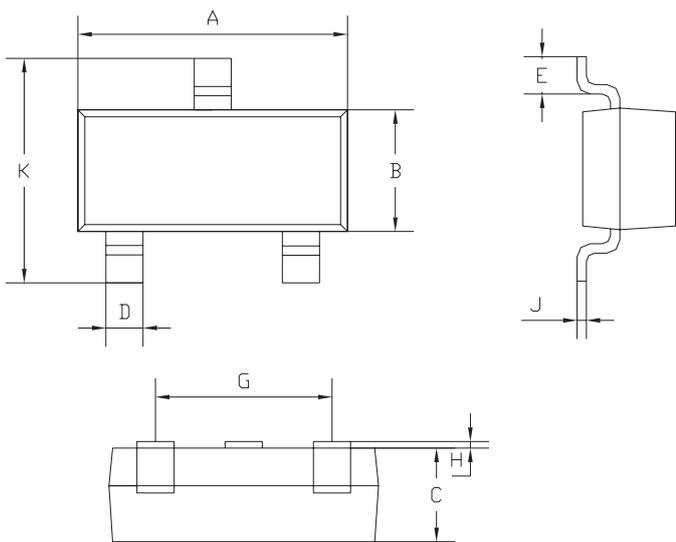
$V_R = 75\text{ V.}$   
 (1) Maximum values.  
 (2) Typical values.

Reverse current as a function of junction temperature; per diode.



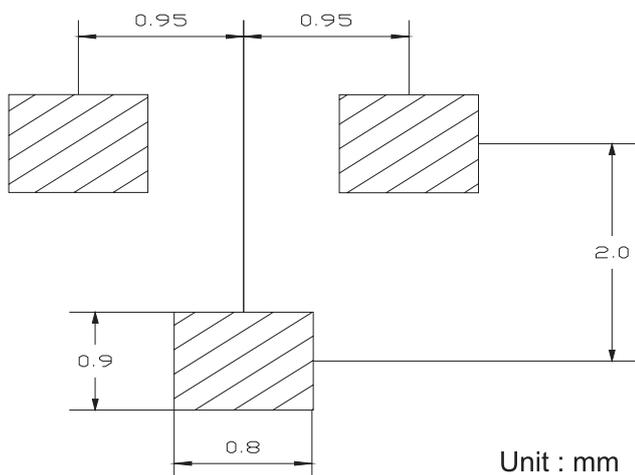
Diode capacitance as a function of reverse voltage; per diode; typical values.

## Plastic surface mounted package



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1 Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1 Typical	
K	2.35	2.45
All Dimensions in mm		

## Soldering Footprint



## Package Information

Device	Package	Shipping
BAV170-7-F	SOT-23	3,000 / Tape & Reel

## Part Number Table

Description	Part Number
Low-leakage double diode	BAV170-7-F

**Important Notice :** This data sheet and its contents (the "Information") belong to the members of the AVNET 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 Pro is the registered trademark of Premier Farnell Limited 2019.