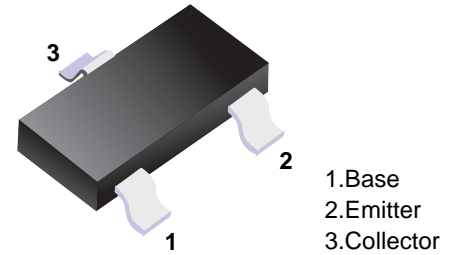


# BAS21 A/C/S

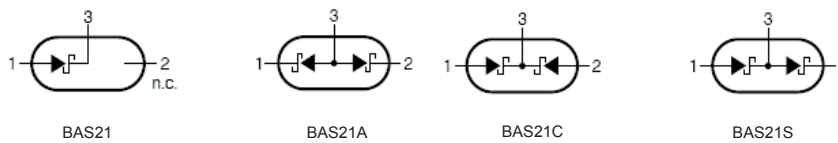
## Switching Diodes

### Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- High Conductance
- For General Purpose Switching Applications



### Simplified outline(SOT-23)



### Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Reverse Voltage	$V_R$	250	V
Forward Current	$I_F$	200	mA
Power Dissipation	$P_D$	200	mW
Operating Junction Temperature Range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$

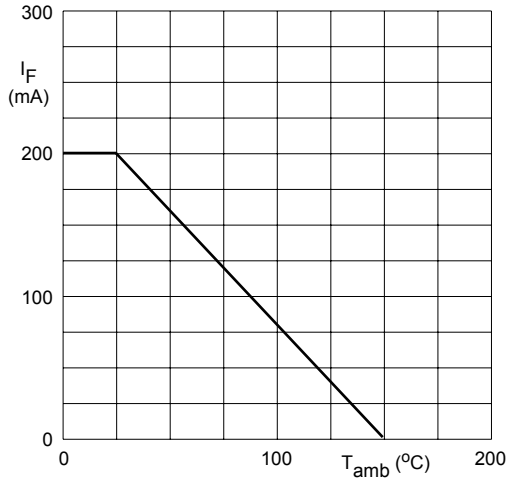
### Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100 \mu\text{A}$	250			V
Forward Voltage	$V_F$	$I_F=100\text{mA}$ $I_F=200\text{mA}$			1.0 1.25	V
Reverse Leakage	$I_R$	$V_R=200\text{V}$			100	nA
Junction Capacitance	$C_j$	$V_R=0\text{V}$ , $f=1.0\text{MHz}$			5.0	pF
Reverse Recover Time	$T_{rr}$				50	nS

### Marking

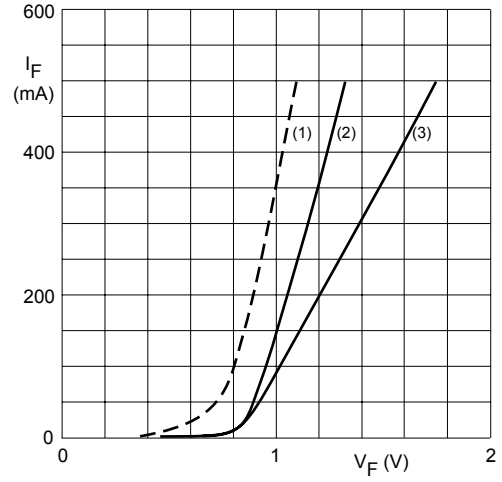
NO.	BAS21	BAS21A	BAS21C	BAS21S
Marking	JS	JS2	JS3	JS4

■ Typical Characteristics



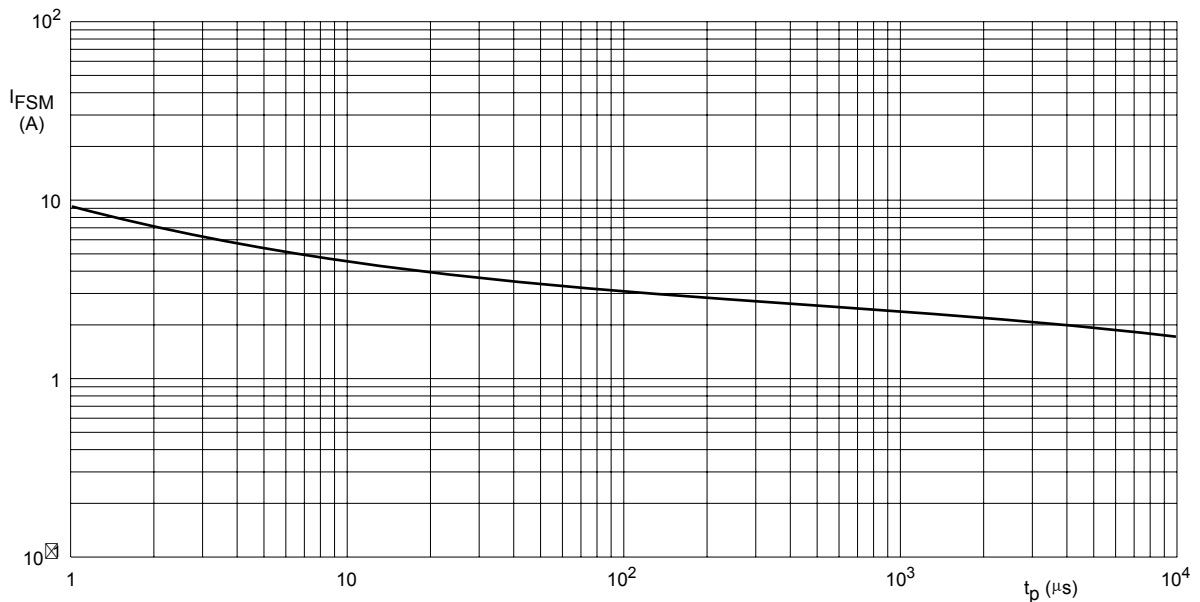
Device mounted on an FR4 printed-circuit board.

Fig.1 Maximum permissible continuous forward current as a function of ambient temperature.



- (1)  $T_j = 150$  °C; typical values.
- (2)  $T_j = 25$  °C; typical values.
- (3)  $T_j = 25$  °C; maximum values.

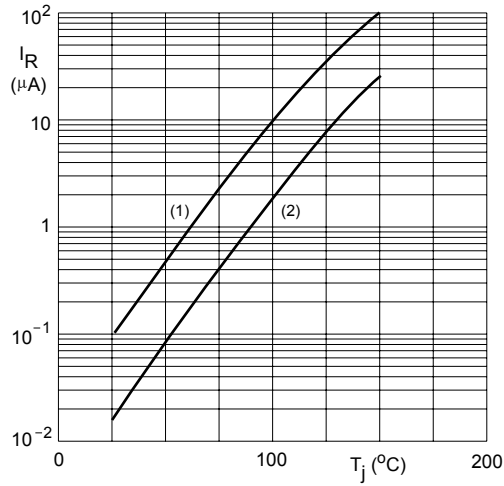
Fig.2 Forward current as a function of forward voltage.



Based on square wave currents.  
 $T_j = 25$  °C prior to surge.

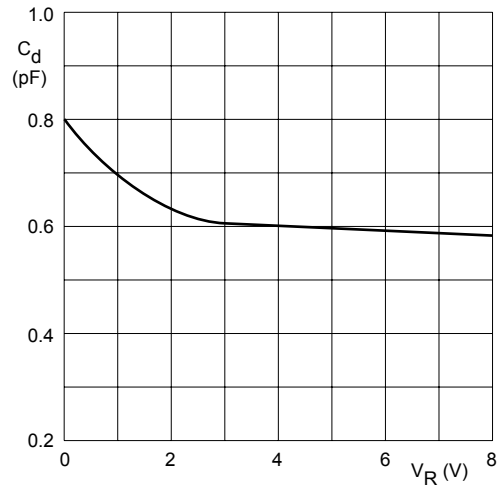
Fig.3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

■ Typical Characteristics



(1)  $V_R = V_{Rmax}$ ; maximum values.  
(2)  $V_R = V_{Rmax}$ ; typical values.

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



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

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

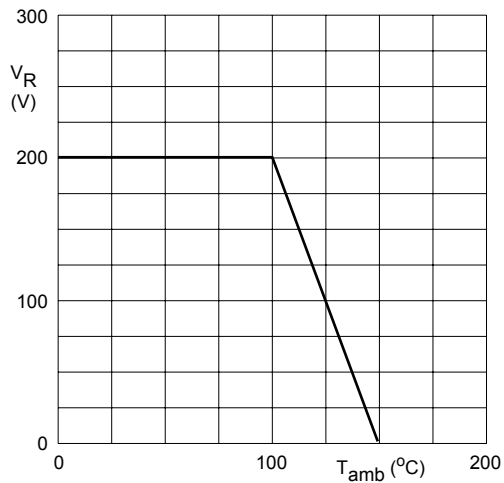
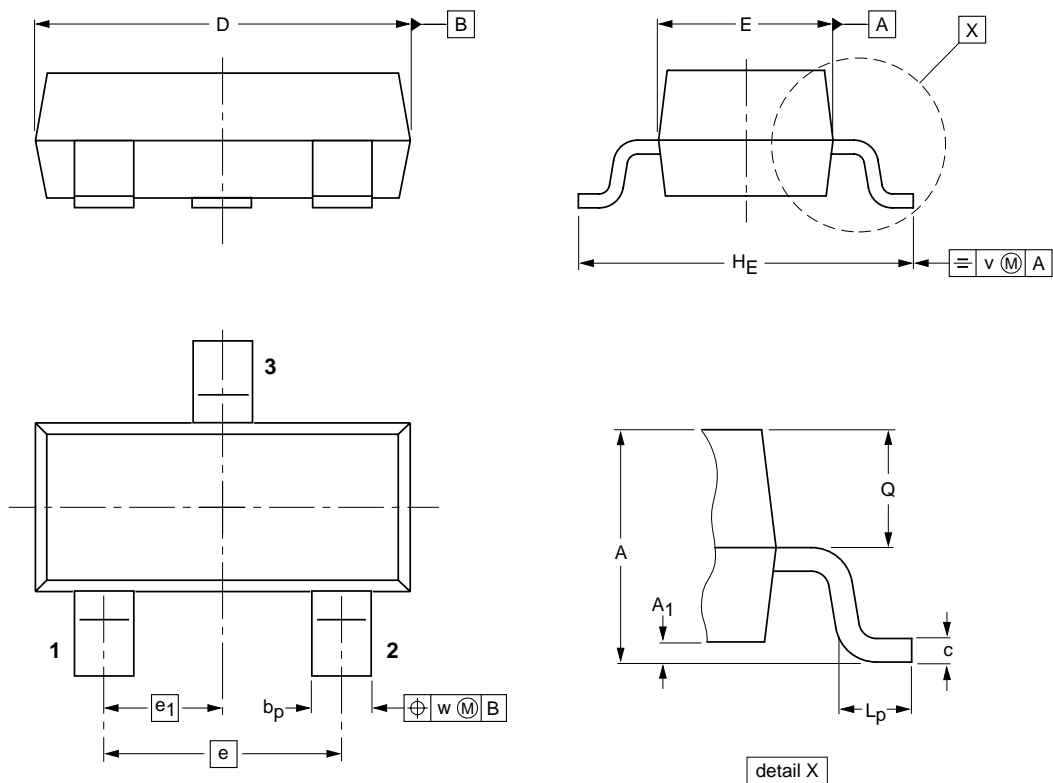


Fig.7 Maximum permissible continuous reverse voltage as a function of the ambient temperature.

■ SOT-23



**DIMENSIONS (mm are the original dimensions)**

UNIT	A	A <sub>1</sub> max.	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1