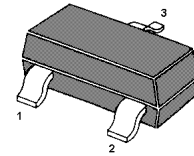
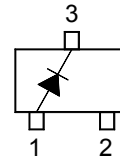


# BAS19, BAS20, BAS21

## Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes



Marking Code: **HC**  
SOT-23 Plastic Package

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

Parameter	Symbol	Value	Unit	
Reverse Voltage	BAS19 BAS20 BAS21	$V_R$	120 200 250	V
Continuous Forward Current	$I_{F(AV)}$	200	mA	
Repetitive Peak Forward Current	$I_{FRM}$	625	mA	
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	0.5 2.5	A	
	at $t = 1\text{ s}$ at $t = 1\text{ }\mu\text{s}$			
Total Device Dissipation	$P_{tot}$	350	mW	
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C/W}$	
Junction and Storage Temperature Range	$T_j, T_{stg}$	- 55 to + 150	$^\circ\text{C}$	

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

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage	$V_F$	-	1	V
at $I_F = 100\text{ mA}$				
at $I_F = 200\text{ mA}$			1.25	V
Reverse Breakdown Voltage	$V_{(BR)}$	120	-	V
at $I_R = 100\text{ }\mu\text{A}$	BAS19			
at $I_R = 100\text{ }\mu\text{A}$	BAS20	200	-	V
at $I_R = 100\text{ }\mu\text{A}$	BAS21	250	-	V
Reverse Current	$I_R$	-	0.1	$\mu\text{A}$
at $V_R = 100\text{ V}$	BAS19			
at $V_R = 150\text{ V}$	BAS20		0.1	$\mu\text{A}$
at $V_R = 200\text{ V}$	BAS21		0.1	$\mu\text{A}$
at $V_R = 100\text{ V}, T_j = 150\text{ }^\circ\text{C}$	BAS19		100	$\mu\text{A}$
at $V_R = 150\text{ V}, T_j = 150\text{ }^\circ\text{C}$	BAS20		100	$\mu\text{A}$
at $V_R = 200\text{ V}, T_j = 150\text{ }^\circ\text{C}$	BAS21		100	$\mu\text{A}$
Total Capacitance	$C_{tot}$	-	5	pF
at $V_R = 0, f = 1\text{ MHz}$				
Reverse Recovery Time	$t_{rr}$	-	50	ns
at $I_F = I_R = 30\text{ mA}, I_{R(REC)} = 3\text{ mA}, R_L = 100\text{ }\Omega$				

**TOP DYNAMIC**



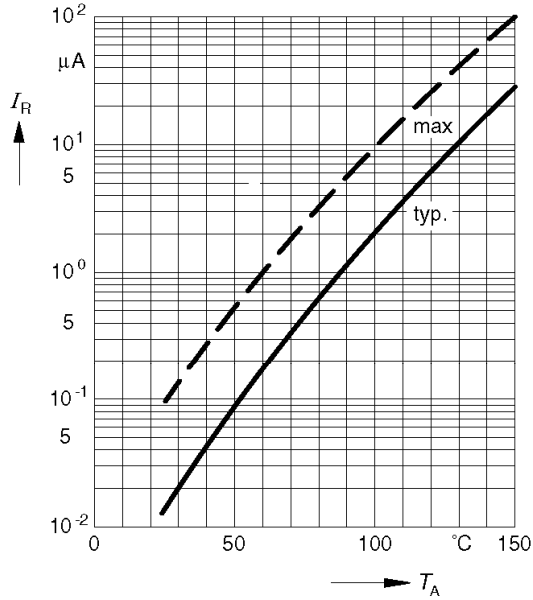
ISO14001 : 2004 Certificate No. 121505007  
 ISO 9001 : 2008 Certificate No. 50114012  
 OHSAS 18001 : 2007 Certificate No. 0513150008  
 IECQ QC 080000 Certificate No. BSM100074102

Dated : 17/03/2012 Rev:01

# BAS19, BAS20, BAS21

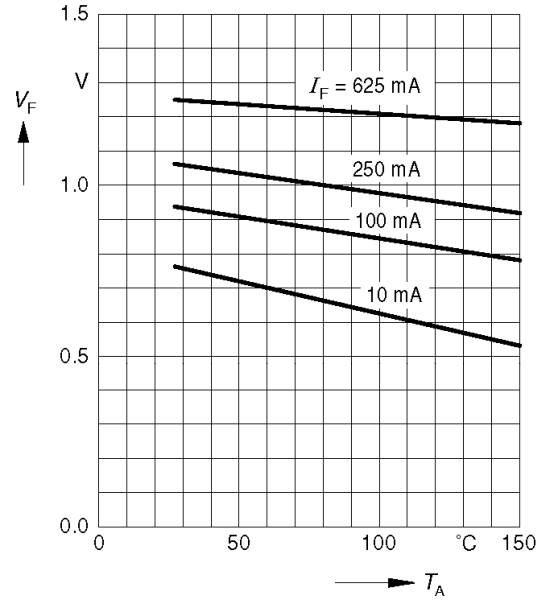
Reverse current  $I_R = f(T_A)$

$V_R = 200V$

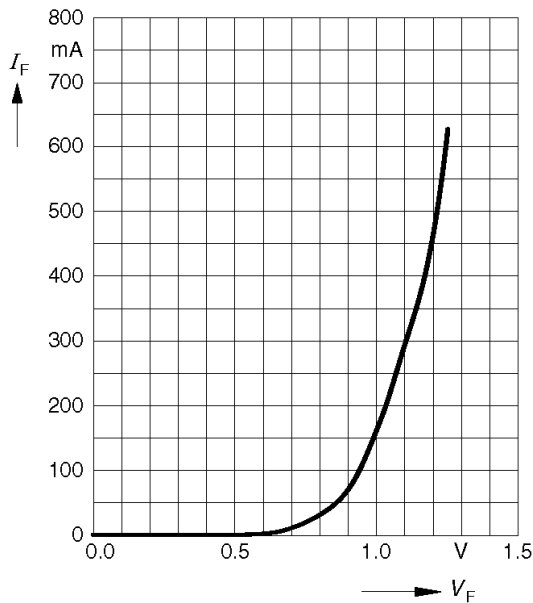


Forward Voltage  $V_F = f(T_A)$

$I_F = \text{Parameter}$



Forward current  $I_F = f(V_F)$



**TOP DYNAMIC**