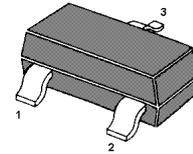
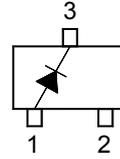


BAS19, BAS20, BAS21

Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes



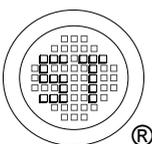
Marking Code: **HC**
SOT-23 Plastic Package

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	200	-	V
at $I_R = 100\text{ }\mu\text{A}$	BAS20	250	-	V
at $I_R = 100\text{ }\mu\text{A}$	BAS21			
Reverse Current	I_R	-	0.1	μA
at $V_R = 100\text{ V}$	BAS19		0.1	μA
at $V_R = 150\text{ V}$	BAS20		0.1	μA
at $V_R = 200\text{ V}$	BAS21		0.1	μA
at $V_R = 100\text{ V}, T_j = 150\text{ }^\circ\text{C}$	BAS19		100	μA
at $V_R = 150\text{ V}, T_j = 150\text{ }^\circ\text{C}$	BAS20		100	μA
at $V_R = 200\text{ V}, T_j = 150\text{ }^\circ\text{C}$	BAS21		100	μA
Total Capacitance	C_{tot}	-	5	pF
at $V_R = 0, f = 1\text{ MHz}$				
Reverse Recovery Time	t_{rr}	-	50	ns
at $I_F = I_R = 30\text{ mA}, I_{R(REC)} = 3\text{ mA}, R_L = 100\text{ }\Omega$				



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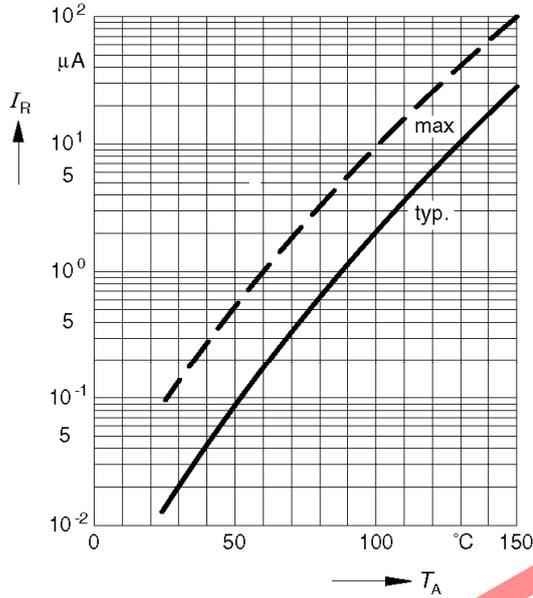


Dated : 17/03/2011 Rev:01

BAS19, BAS20, BAS21

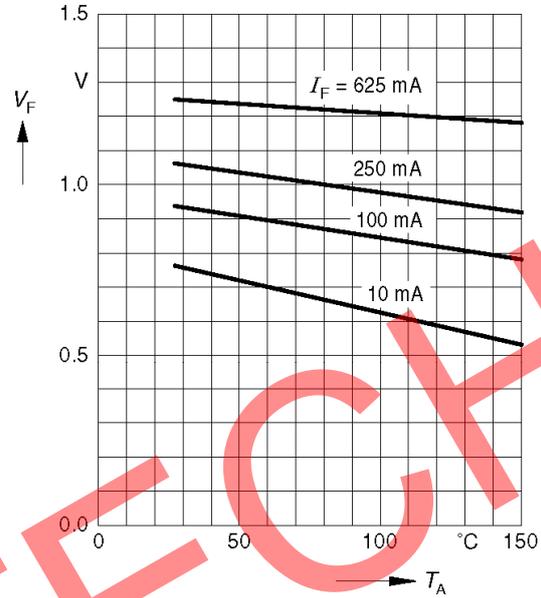
Reverse current $I_R = f(T_A)$

$V_R = 200V$

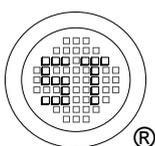
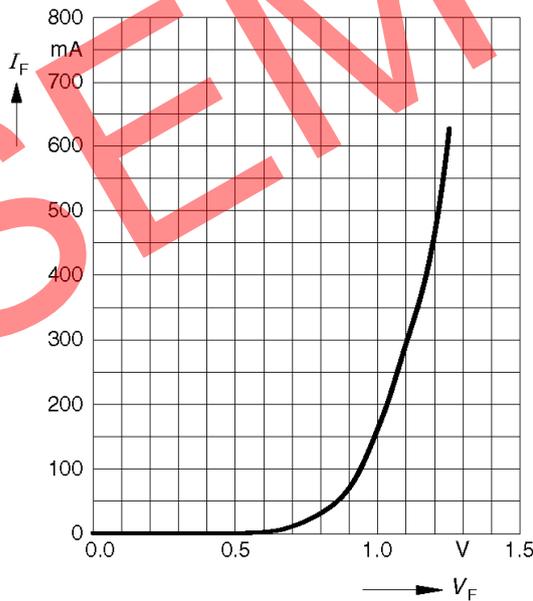


Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$



Forward current $I_F = f(V_F)$



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