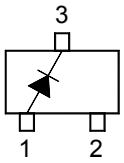
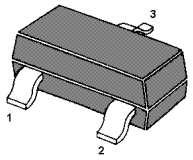
BAS19, BAS20, BAS21

Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes





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

Absolute Maximum Ratings (T_a = 25 °C)

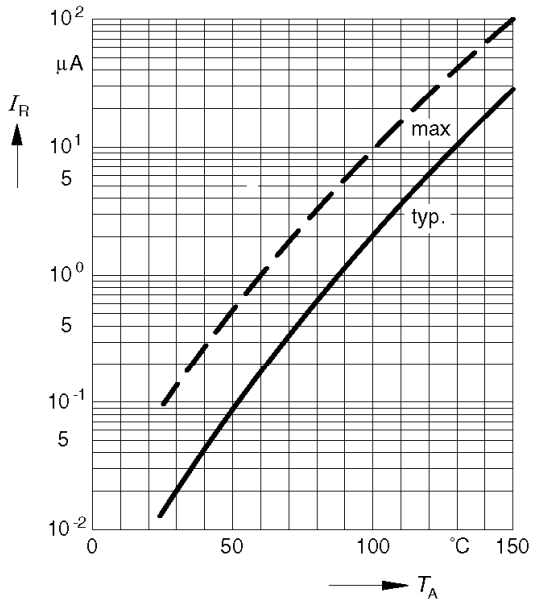
Parameter		Symbol	Value	Unit
Reverse Voltage	BAS19 BAS20 BAS21	V_R	120 200 250	V
Continuous Forward Current		$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current		I_{FRM}	625	mA
Non-repetitive Peak Forward Surge Current	at t = 1 s at t = 1 µs	I_{FSM}	0.5 2.5	A
Total Device Dissipation		P_{tot}	350	mW
Thermal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

Characteristics at T_a = 25 °C

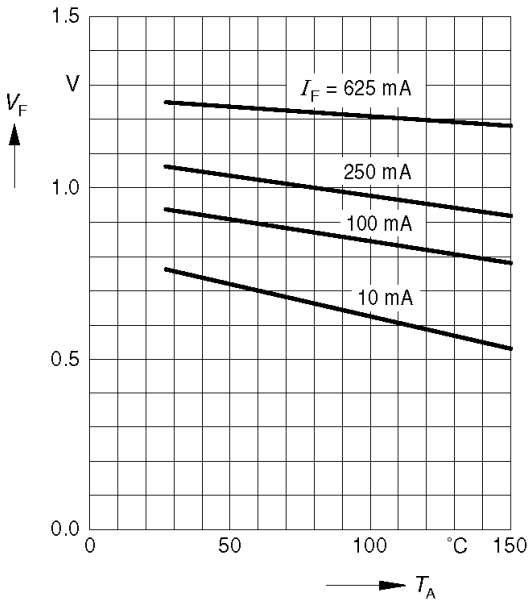
Parameter		Symbol	Min.	Max.	Unit
Forward Voltage at I_F = 100 mA at I_F = 200 mA		V_F	 - -	 1 1.25	 V V
Reverse Breakdown Voltage at I_R = 100 µA at I_R = 100 µA at I_R = 100 µA	 BAS19 BAS20 BAS21	$V_{(BR)}$	 120 200 250	 - - -	 V V V
Reverse Current at V_R = 100 V at V_R = 150 V at V_R = 200 V at V_R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

BAS19, BAS20, BAS21

Reverse current $I_R = f(T_A)$
V_R = 200V



Forward Voltage $V_F = f(T_A)$
I_F = Parameter



Forward current $I_F = f(V_F)$