

BAS19, BAS20, BAS21

PRV : 120 - 250 Volts
I_O : 200 mA

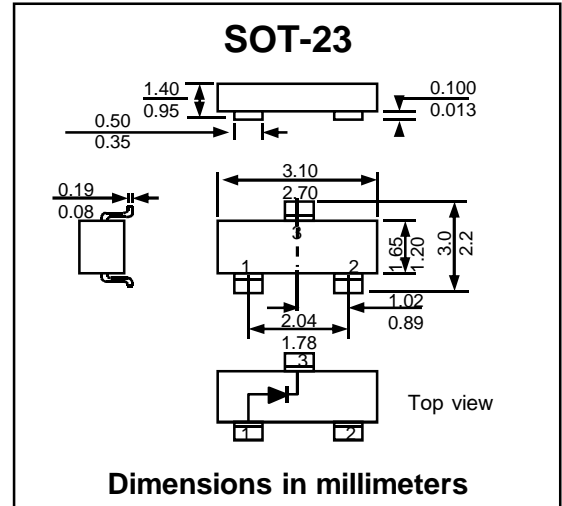
FEATURES :

- * High Voltage Switching Diode
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SOT-23 plastic Case
- * BAS19 Marking Code : HA
- * BAS20 Marking Code : HB
- * BAS21 Marking Code : HC

HIGH VOLTAGE SWITCHING DIODES



Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	BAS19	BAS20	BAS21	Unit
Reverse Voltage	V _R	120	200	250	V
Continuous Forward Current	I _F	200			mA
Repetitive Peak Forward Current	I _{FRM}	625			mA
Non-repetitive Peak Forward Surge Current	I _{FSM}	2.5			A
		0.5			
Total Device Dissipation	P _{tot}	350			mW
Thermal Resistance Junction to Ambient	R _{θJA}	375			°C/W
Operating Junction and Storage temperature range	T _J , T _{STG}	-55 to +150			°C

Electrical Characteristics (T_a = 25 °C)

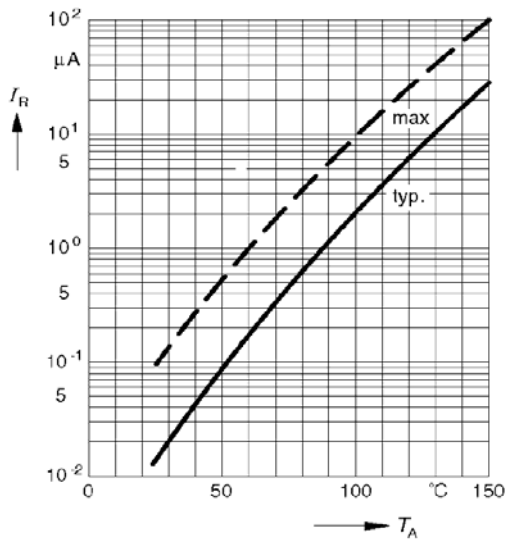
Parameter	Test Condition	Symbol	Min.	Type.	Max.	Unit
Forward Voltage	I _F = 100 mA	V _F	-	-	1.00	V
	I _F = 200 mA		-	-	1.25	
Reverse Breakdown Voltage	at I _{BR} = 100 μA BAS19	V _(BR)	120	-	-	V
	at I _{BR} = 100 μA BAS20		200	-	-	
	at I _{BR} = 100 μA BAS21		250	-	-	
Reverse Current	at V _R = 100 V BAS19	I _R	-	-	0.1	μA
	at V _R = 150 V BAS20		-	-	0.1	
	at V _R = 200 V BAS21		-	-	0.1	
	at V _R = 100V, T _j = 150 °C BAS19		-	-	100	
	at V _R = 150V, T _j = 150 °C BAS20		-	-	100	
	at V _R = 200V, T _j = 150 °C BAS21		-	-	100	
Capacitance	V _R = 0 V, f = 1 MHz	C _D	-	-	5	pF
Reverse Recovery Time	I _F = I _R = 30 mA to I _{R(RCE)} = 3mA, R _L = 100Ω	T _{rr}	-	-	50	ns

Note : (1) Device mounted on an FR4 printed circuit board.

RATINGS AND CHARACTERISTIC CURVES (BAS19, BAS20, BAS21)

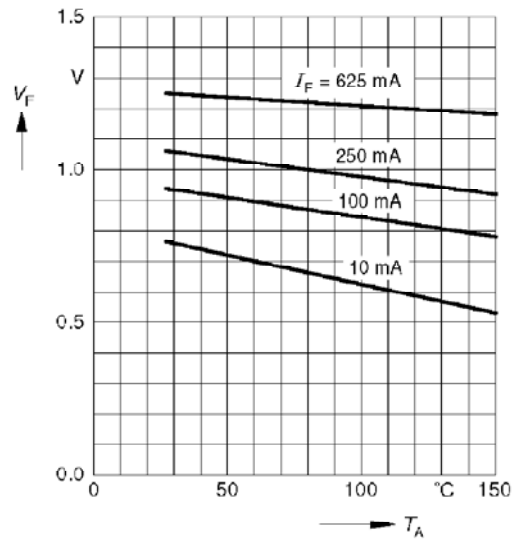
Reverse current $I_R = f(T_A)$

$V_R = 200V$



Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$



Forward current $I_F = f(V_F)$

