

BAS19, BAS20, BAS21

PRV : 120 - 250 Volts
I_O : 200 mA

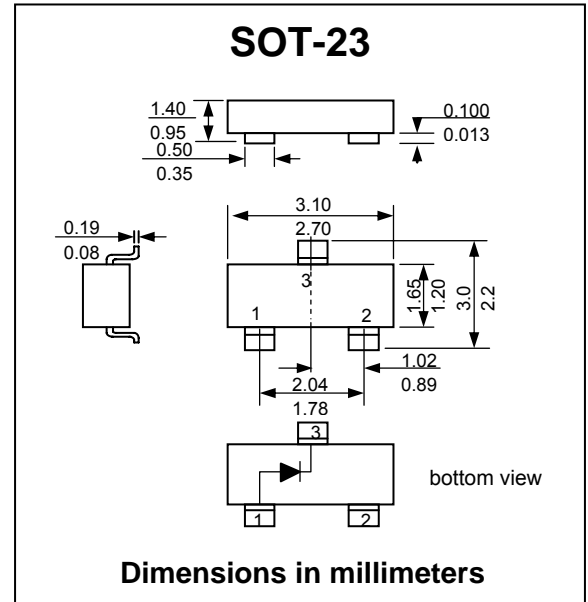
FEATURES :

- * Small plastic SMD package
- * Switching speed: max. 50 ns
- * General application
- * Continuous reverse voltage: max. 100V, 150V, 200V
- * Repetitive peak reverse voltage: max. 120V, 200V, 250V
- * **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



MAXIMUM RATINGS AND THERMAL CHARACTERISTICS (Ta = 25 °C unless otherwise specified)

Parameter	Symbol	BAS19	BAS20	BAS21	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	120	200	250	V
Maximum Continuous Reverse Voltage	V _R	100	150	200	V
Maximum Continuous Forward Current (Note 1)	I _F	200			mA
Maximum Non-repetitive Peak Forward Current (square wave; T _j = 25 °C prior to surge)	t = 1 μs	9			A
	t = 100 μs	3			
	t = 10 ms	1.7			
Total Power Dissipation (Note 1)	P _{tot}	250			mW
Thermal Resistance Junction to Tie-point	R _{th j-tp}	330			K/W
Thermal Resistance Junction to Ambient	R _{th j-a}	500			K/W
Junction Temperature Range	T _J	150			°C
Storage Temperature Range	T _{STG}	-65 to +150			°C

ELECTRICAL CHARACTERISTICS (T_J = 25 °C unless otherwise specified).

Parameter	Test Condition	Symbol	BAS19	BAS20	BAS21	Unit
Forward Voltage	I _F = 100 mA	V _F	1.00			V
	I _F = 200 mA		1.25			
Reverse Current	V _R = V _{Rmax}	I _R	100			nA
	V _R = V _{Rmax} , T _J = 150 °C		100			μA
Capacitance	V _R = 0 V, f = 1 MHz	C _D	5			pF
Reverse Recovery Time	I _F = 30 mA to I _R = 30mA, R _L = 100 Ω, measure at I _R = 3 mA	T _{rr}	50			ns

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

RATINGS AND CHARACTERISTIC CURVES (BAS19, BAS20, BAS21)

FIG.1 - MAXIMUM CONTINUOUS FORWARD CURRENT VS. AMBIENT TEMPERATURE

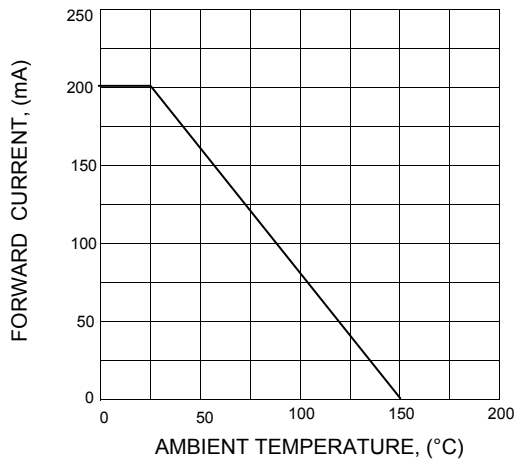


FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE; TYPICAL VALUES

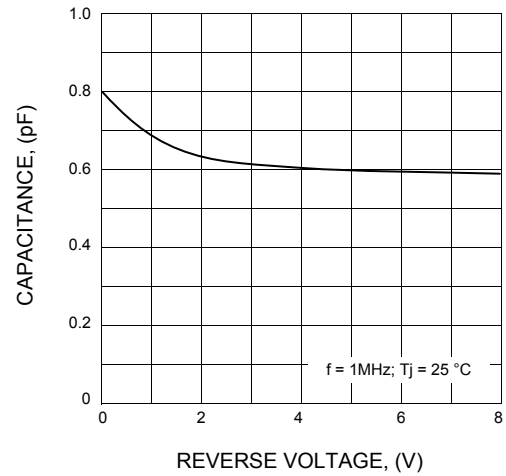


FIG.3 - FORWARD CURRENT VS. FORWARD VOLTAGE ; TYPICAL VALUES

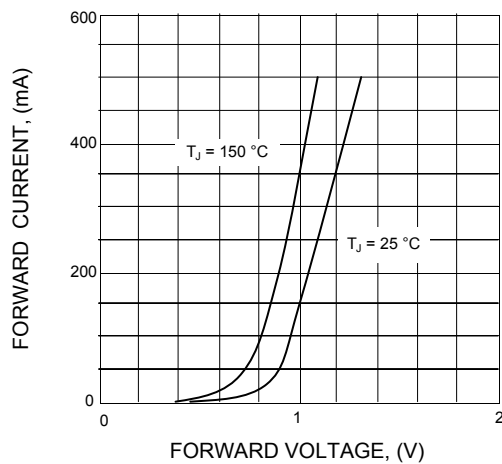


FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE; TYPICAL VALUES

