



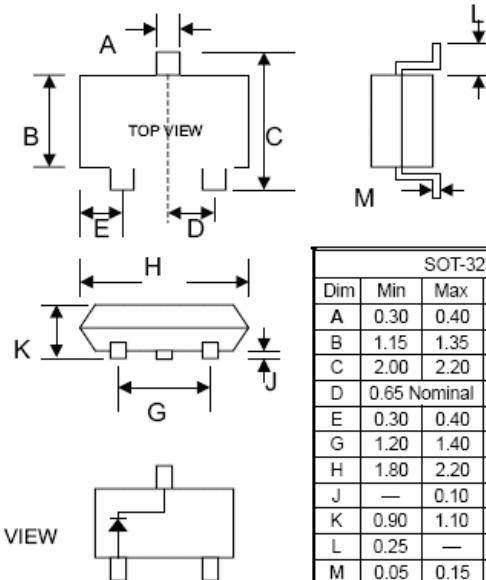
Technical Data
Data Sheet N0588, Rev. -

Features

- High Conductance
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose and Switching
- Plastic Material – UL Recognition Flammability Classification 94V-O
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.006 grams (approx.)
- Mounting Position: Any
- Marking: BAS19W A8
BAS20W A80
BAS21W A82



SOT-323				
Dim	Min	Max	Min	Max
A	0.30	0.40	0.012	0.016
B	1.15	1.35	0.045	0.053
C	2.00	2.20	0.079	0.087
D	0.65 Nominal		0.026Nominal	
E	0.30	0.40	0.012	0.016
G	1.20	1.40	0.047	0.055
H	1.80	2.20	0.071	0.087
J	—	0.10	—	0.004
K	0.90	1.10	0.035	0.043
L	0.25	—	0.010	—
M	0.05	0.15	0.002	0.006
			In mm	In inch

Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristic	Symbol	BAS19W	BAS20W	BAS21W	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	120	200	250	V
Peak Repetitive Reverse Voltage	V_{RRM}	100	150	200	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
Forward Continuous Current (Note 1)	I_F	400			mA
Average Rectified Output Current (Note 1)	I_o	200			mA
Peak Forward Surge Current (Note 1) @ $t = 1.0\mu\text{s}$	I_{FSM}	2.5			A
Power Dissipation (Note 1)	P_d	200			mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625			K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150			$^{\circ}\text{C}$



Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Forward Voltage	V_F	—	1.0 1.25	V	@ $I_F = 100\text{mA}$ @ $I_F = 200\text{mA}$
Reverse Leakage Current	I_R	—	100	nA	@ Rated DC Blocking Voltage
Junction Capacitance	C_j	—	5.0	pF	$V_R = 0\text{V}$, $f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	50	nS	$I_F = I_R = 30\text{mA}$, $I_{RR} = 0.1 \times I_R$, $R_L = 100\Omega$

Note: 1. Device mounted on fiberglass substrate 40 x 40 x 1.5mm.

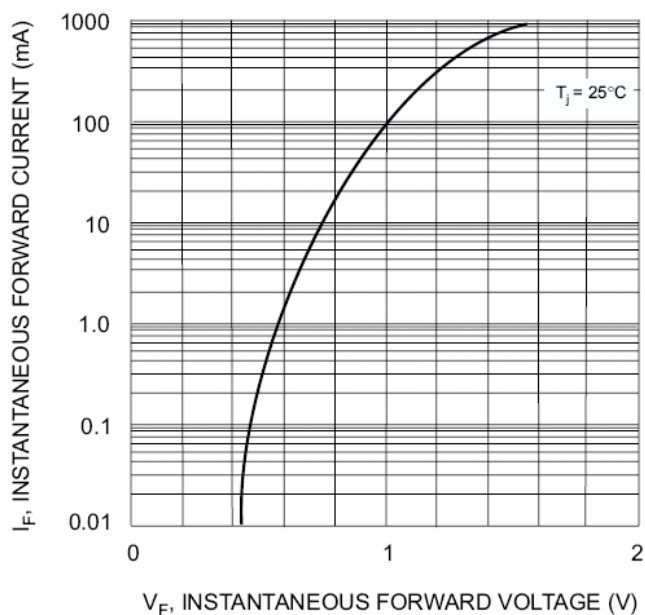


Fig. 1 Forward Characteristics

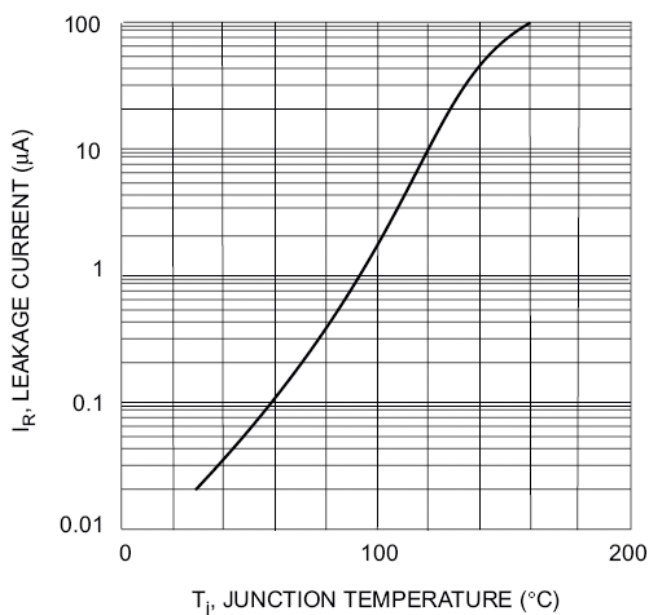


Fig. 2 Leakage Current vs Junction Temperature



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