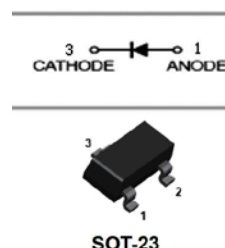


Surface Mount Switching Diode



Features

- Fast switching speed.
- Surface mount package ideally suited for automatic insertion.
- For general purpose switching applications.
- High conductance.

Applications

High speed switching application.

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

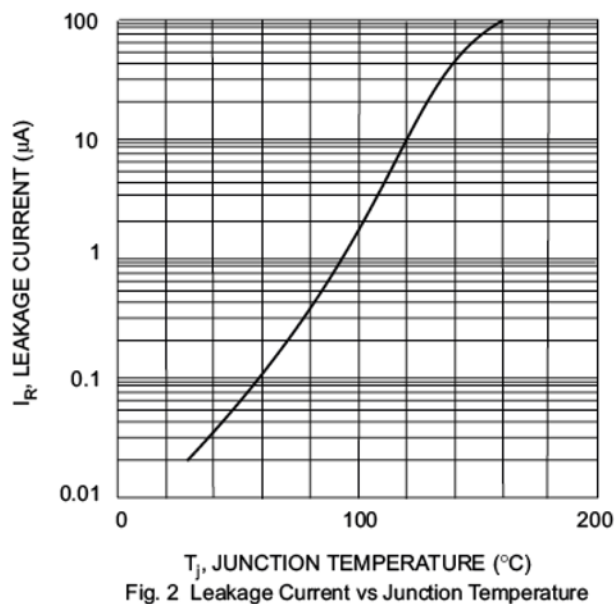
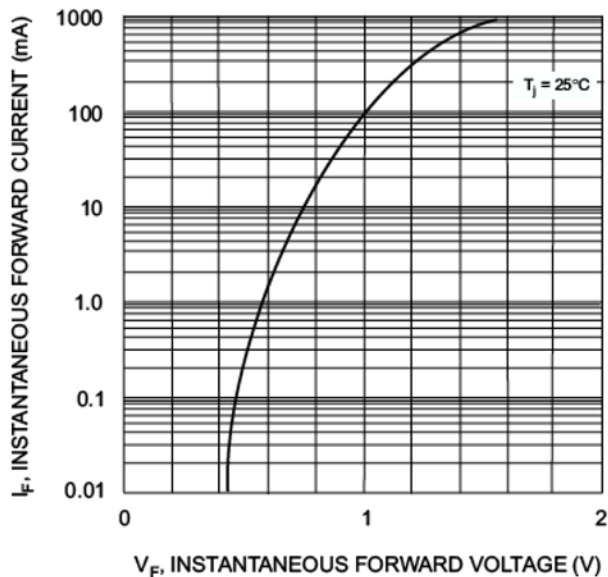
Characteristic	Symbol	BAS19	BAS20	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	120	200	V
Working Peak Reverse Voltage DC Reverse Voltage	V_{RWM} V_R	100	150	V
RMS Reverse Voltage	$V_{R(RMS)}$	71	106	V
Forward Continuous Current (max.)	I_{FM}	400		mA
Average rectified output Current	I_o	200		mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\mu\text{s}$ @ $t=1.0\text{s}$	I_{FSM}	2.5 0.5		A
Repetitive Peak Forward Surge Current	I_{FRM}	625		A
Power Dissipation	P_D	250		mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500		$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_j	150		$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150		$^{\circ}\text{C}$

Surface Mount Switching Diode

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

Characteristic	Symbol	Min	Max.	Unit	Test Condition
Reverse breakdown voltage BAS19 BAS20	$V_{(BR)R}$	100 150	-	V	$I_R = 100\mu\text{A}$
Forward Voltage	V_F	-	1 1.25	V	$I_F = 100\text{mA}$ $I_F = 200\text{mA}$
Reverse Leakage Current BAS19 BAS20	I_R	-	100	nA	$V_R = 100\text{V}$ $V_R = 105\text{V}$
Junction Capacitance	C_j	-	5	pF	$V_R = 0\text{V}$, $f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	-	50	ns	$I_F = I_R = 30\text{mA}$, $t_{rr} = 0.1 \times I_R$

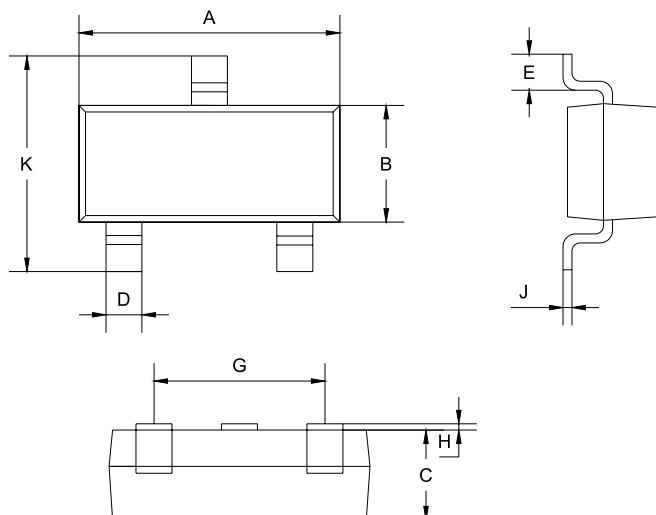
Typical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified



Surface Mount Switching Diode

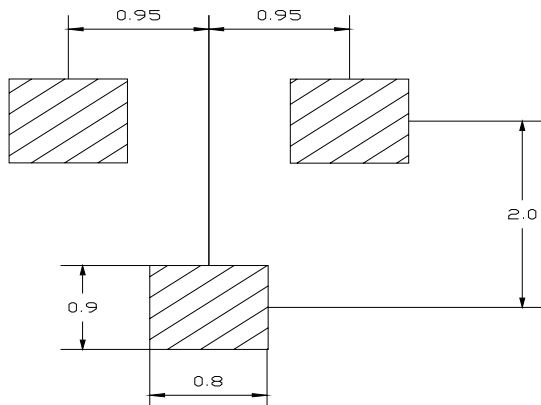
Package Outline

Plastic surface mounted package



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1 Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1 Typical	
K	2.35	2.45
All Dimensions in mm		

Soldering Footprint



Dimension : Millimetres

Package Information

Device	Package	Shipping
BAS19/20/21	SOT-23	3000/Tape&Reel

Part Number Table

Description	Part Number
Surface mount switching diode	BAS19-7-F
	BAS20W-7-F

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