BAS31

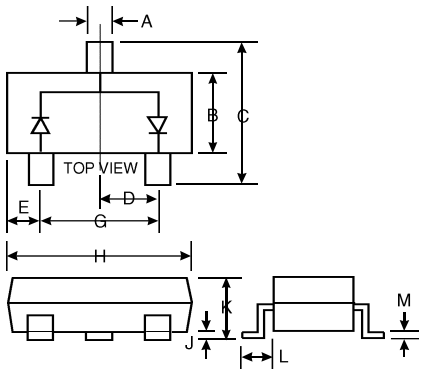
DUAL SURFACE MOUNT SWITCHING DIODE

Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

Mechanical Data

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.008 grams (approx.)



SOT-23		
Dim	**Min**	**Max**
A	0.37	0.51
B	1.19	1.40
C	2.10	2.50
D	0.89	1.05
E	0.45	0.61
G	1.78	2.05
H	2.65	3.05
J	0.013	0.15
K	0.89	1.10
L	0.45	0.61
M	0.076	0.178
All Dimensions in mm		

Maximum Ratings @ T_A = 25 C unless otherwise specified

Characteristic	Symbol	BAS31	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	75	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current (Note 1)	I_{FM}	500	mA
Average Rectified Output Current (Note 1)	I_O	250	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0 s @ t = 1.0s	I_{FSM}	4.0 2.0	A
Power Dissipation (Note 1)	P_d	350	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R_{JA}	357	K/W
Operating and Storage Temperature Range	T_j , T_{STG}	-65 to +150	C

Electrical Characteristics @ T_A = 25 C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Maximum Forward Voltage	V_{FM}	0.62	0.72 0.855 1.0 1.25	V	I_F = 5.0mA I_F = 10mA I_F = 100mA I_F = 150mA
Maximum Peak Reverse Current	I_{RM}		2.5 50 30 25	A A A nA	V_R = 75V V_R = 75V, T_j = 150 C V_R = 25V, T_j = 150 C V_R = 20V
Junction Capacitance	C_j		2.0	pF	V_R = 0, f = 1.0MHz
Reverse Recovery Time	t_{rr}		4.0	ns	I_F = I_R = 10mA, I_{rr} = 0.1 x I_R, R_L = 100

Notes: 1. Valid provided that terminals are kept at ambient temperature.

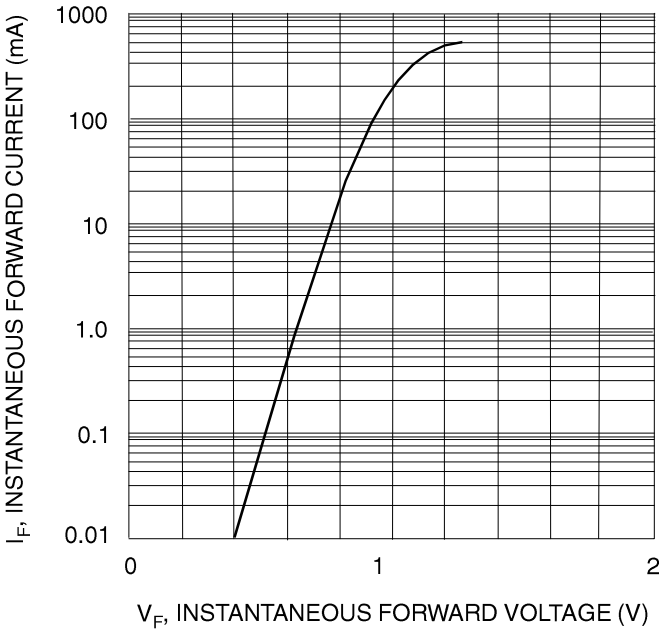


Fig. 1 Forward Characteristics

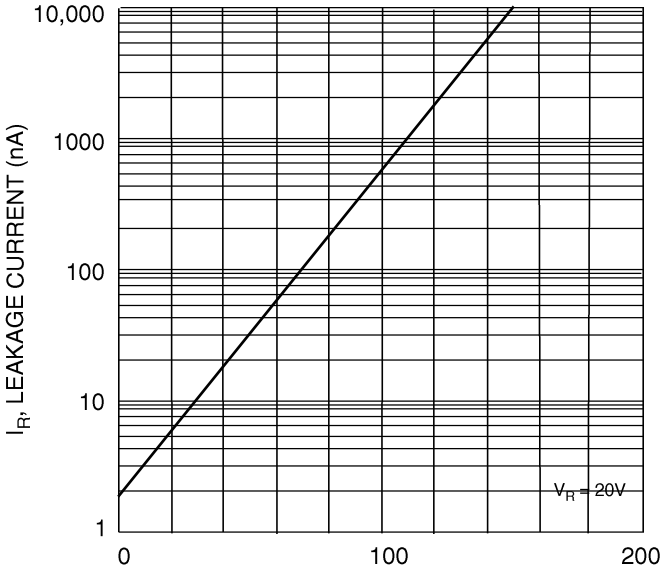


Fig. 2 Leakage Current vs Junction Temperature