



BAS19 / BAS20 / BAS21

Surface Mount Fast Switching Diode



Voltage Range
100/150/200 Volts
250m Watts Power Dissipation

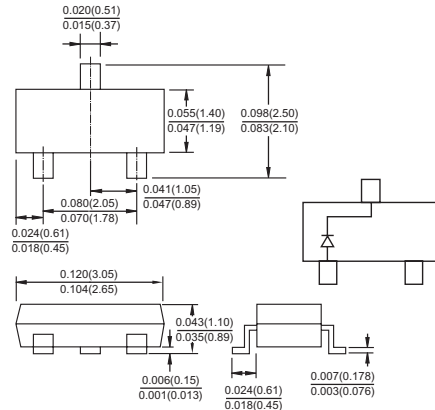
Features

- ✧ 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
- ✧ BAS19 Marking: A8
- ✧ BAS20 Marking: A81
- ✧ BAS21 Marking: A82
- ✧ Weight: 0.008 gram (approx.)

SOT-23



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	BAS19	BAS20	BAS21	Units
Repetitive Peak Reverse Voltage	V _{RRM}	120	200	250	V
Working Peak Reverse Voltage	V _{RWM}				
DC Blocking Voltage	V _R	100	150	200	V
RMS Reverse Voltage	V _{R(RMS)}	71	106	141	V
Forward Continuous Current (Note 1)	I _{FM}		400		mA
Average Rectifier Output Current (Note 1)	I _o		200		mA
Non-Repetitive Peak Forward Surge Current @ t=1.0uS @ t=1.0S	I _{FSM}		2.5 0.5		A
Repetitive Peak Forward Surge Current	I _{FRM}		625		mA
Power Dissipation (Note 1)	P _d		250		mW
Thermal Resistance Junction to Ambient Air (Note 1)	R _{θJA}		500		K/W
Operating and Storage Temperature Range	T _J , T _{STG}		-65 to + 150		°C

Electrical Characteristics

Type Number	Symbol	Min	Max	Units
Forward Voltage IF=100mA IF= 200mA	V _F	-	1.0 1.25	V
Peak Reverse Current T _j =25°C T _j =100°C	I _R	-	100 15	nA uA
Junction Capacitance VR=0, f=1.0MHz	C _j	-	5.0	pF
Reverse Recovery Time (Note 2)	t _{rr}	-	50	nS

Notes: 1. Valid Provided that Terminals are Kept at Ambient Temperature.

2. Reverse Recovery Test Conditions: IF=IR=10mA, I_{rr}=0.1 x I_R, R_L=100Ω.

RATINGS AND CHARACTERISTIC CURVES (BAS19 THRU BAS21)

FIG.1- FORWARD CHARACTERISTICS

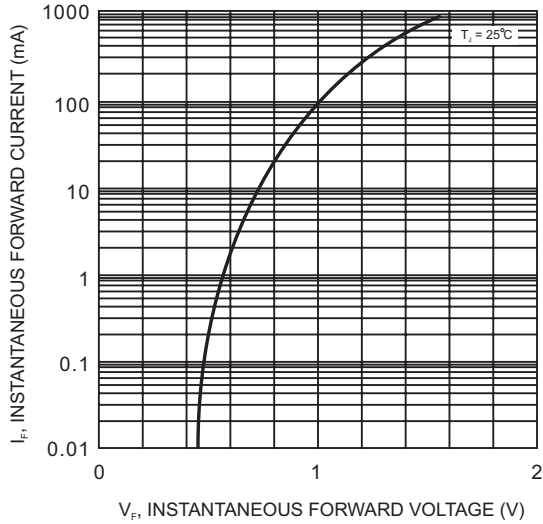


FIG.2- LEAKAGE CURRENT VS JUNCTION TEMPERATURE

