



# BAV99

## Dual Surface Mount Switching Diode



Voltage Range  
75 Volts  
350m Watts Power Dissipation

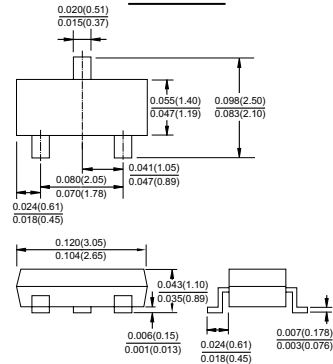
### SOT-23

### 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
- ✧ Marking: JE
- ✧ Weight: 0.008 gram (approx.)



### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

#### Maximum Ratings

Type Number	Symbol	BAV99	Units
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	75	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_R(RMS)$	53	V
Forward Continuous Current (Note 1)	$I_{FM}$	300	mA
Average Rectifier Output Current (Note 1)	$I_o$	150	mA
Non-Repetitive Peak Forward Surge Current @ t=1.0uS @ t=1.0S	$I_{FSM}$	2.0 1.0	A
Power Dissipation (Note 1)	$P_d$	350	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	357	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=1.0mA IF= 10mA IF = 50mA IF=150mA	$V_F$	-	0.715 0.855 1.0 1.25	V
Peak Reverse Current VR=75V VR=75V, Tj=150°C VR=25V, Tj=150°C VR=20V	$I_R$	-	2.5 50 30 25	uA nA
Junction Capacitance VR=0, f=1.0MHz	$C_j$	-	2.0	pF
Reverse Recovery Time (Note 2)	$t_{rr}$	-	4.0	nS

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

2. Reverse Recovery Test Conditions:  $I_F=I_R=10mA$ ,  $I_{rr}=0.1 \times I_R$ ,  $R_L=100\Omega$ .

## RATINGS AND CHARACTERISTIC CURVES (BAV99)

FIG.1- FORWARD CHARACTERISTICS

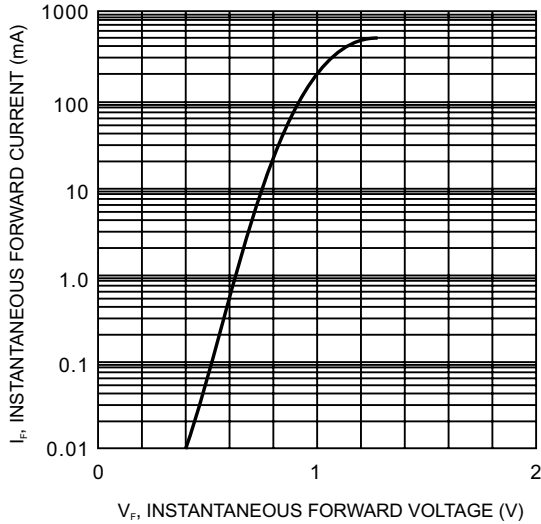


FIG.2- LEAKAGE CURRENT VS JUNCTION TEMPERATURE

