



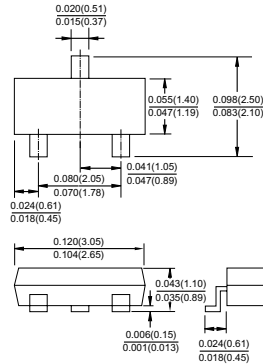
BAL99

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: JF
- ✧ Weight: 0.008 gram (approx.)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	BAL99	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 (BAL99)

FIG.1- FORWARD CHARACTERISTICS

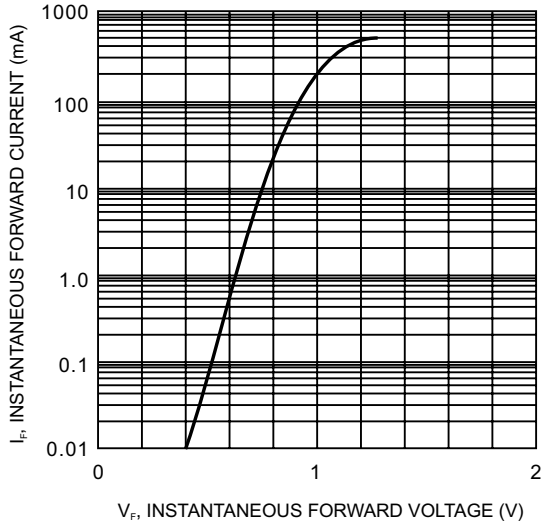


FIG.2- LEAKAGE CURRENT VS JUNCTION TEMPERATURE

