

BAV170

Features

- Surface Mount Package Ideally Suited for Automatic Insertion
- Very Low Leakage Current

Mechanical Data

- Case: SOT-23
- Weight: approx. 0.008 grams
- Marking Code: JX
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

Maximum Ratings

Symbol	Parameter	Rating	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	85	V
V_{RWM}	Working Peak Reverse Voltage		
$V_{R(RMS)}$	RMS Reverse Voltage	60	V
I_F	Forward Continuous Current Single diode loaded Note1	215	mA
	Double diode loaded Note1	125	
I_{FRM}	Repetitive Peak Forward Current	500	mA
I_{FSM}	Non-Repetitive Peak Forward Surge Current @ t=1.0us	4.0	A
	@ t=1.0ms	1.0	
	@ t=1.0s	0.5	
P_D	Power Dissipation	250	mW
R_{JA}	Thermal Resistance Junction to Ambient Air	500	K/W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-65 to +150	°C

Note 1: Device mounted on a FR4 printed circuit board

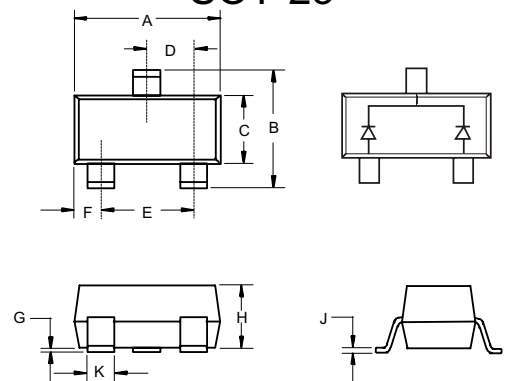
Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
$V_{(BR)R}$	Reverse Breakdown Voltage ($I_R=100\mu\text{A}$)	85	---	---	V
V_F	Forward Voltage ⁽¹⁾ $I_F=1.0\text{mA}$	---	---	0.9	V
	$I_F=10\text{mA}$	---	---	1.0	
	$I_F=50\text{mA}$	---	---	1.1	
	$I_F=150\text{mA}$	---	---	1.25	
I_R	Leakage Current ($V_R=75\text{Vdc}$)	---	---	5.0	nA
C_j	Junction Capacitance ($V_R=0$, $f=1.0\text{MHz}$)	---	2.0	---	pF
t_{rr}	Reverse Recovery Time ($I_F=10\text{mA}$, $I_R=10\text{mA}$, $I_{rr}=0.1 \times I_R$ $R_L=100\Omega$)	---	---	3.0	us

*⁽¹⁾ Short duration pulse test to minimize self-heating effect.

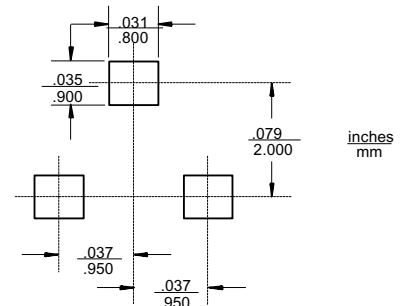
250mW
Low Leakage Diode
85 Volts

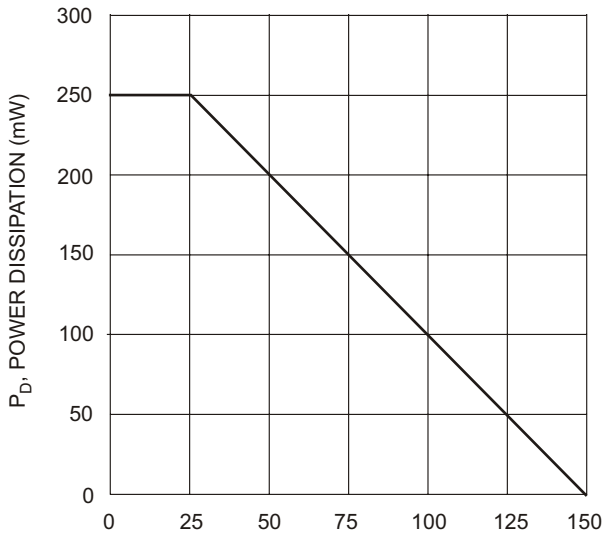
SOT-23



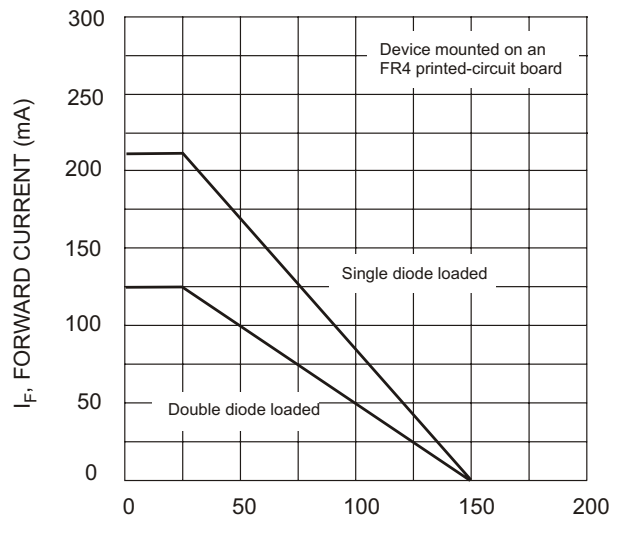
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

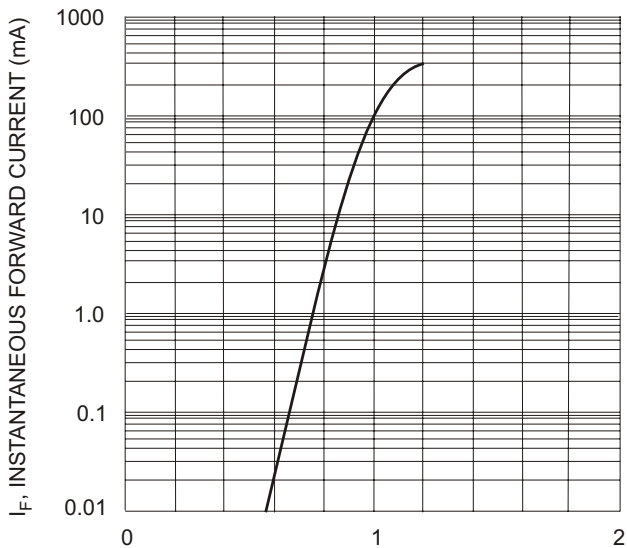




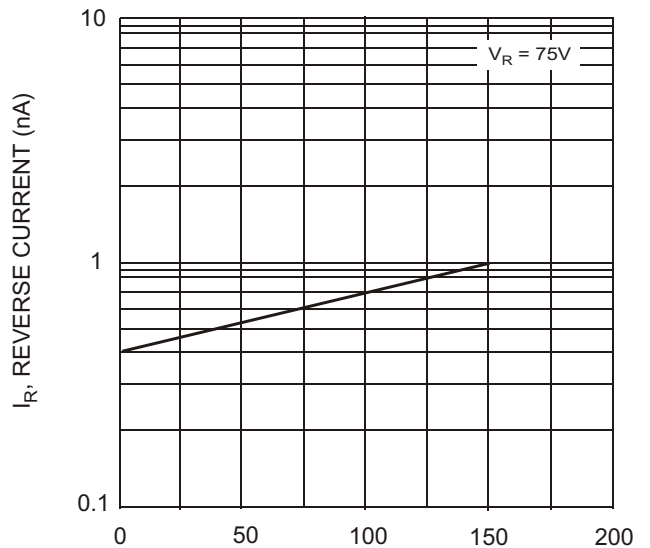
T_A , AMBIENT TEMPERATURE (°C)
Fig. 1 Power Derating Curve



T_A , AMBIENT TEMPERATURE (°C)
Fig. 2 Current Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 3 Typical Forward Characteristics



T_A , AMBIENT TEMPERATURE (°C)
Fig. 4 Typical Reverse Characteristics

Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel