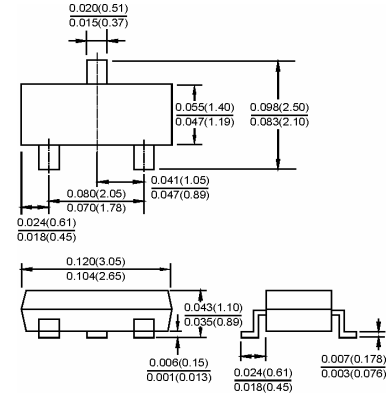


## SOT-23



Dimensions in inches and (millimeters)

## Features

- ✧ Plastic SMD package
- ✧ Low leakage current: typ. 3pA
- ✧ Switching time: typ. 0.8 ms
- ✧ Continuous reverse voltage: max. 75V
- ✧ Repetitive peak reverse voltage: max. 85V
- ✧ Repetitive peak forward current: max. 500mA.

## Applications

- ✧ Low-leakage current applications in surface mounted circuits.

## Ordering Information

Type No.	Marking	Package Code
BAV170	JX	SOT-23

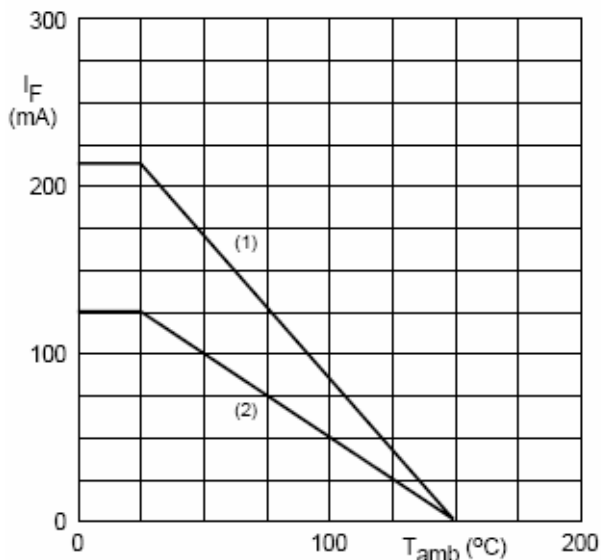
## MAXIMUM RATING @ Ta=25°C unless otherwise specified

Characteristic	Symbol	Limits	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	85	V
DC Reverse Voltage	$V_R$	75	V
Forward Continuous Current single diode loaded double diode loaded	$I_F$	215 125	mA
repetitive peak forward current	$I_{FRM}$	500	mA
non-repetitive peak forward current square wave; $T_j=25^\circ\text{C}$ prior to surge; $t_p=1\mu\text{s}$ $t_p=1\text{ms}$ $t_p=1\text{s}$	$I_{FSM}$	4 1 0.5	A
Total Power Dissipation	$P_{tot}$	250	mW
Operating Junction Temperature Range	$T_j$	150	°C
Storage Temperature Range	$T_{STG}$	-65 to +125	°C

## ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Characteristic	Symbol	Typ	MAX	UNIT	Test Condition
Forward Voltage	$V_F$		900 1000 1100 1250	mV	$I_F=1\text{mA}$ $I_F=10\text{mA}$ $I_F=50\text{mA}$ $I_F=100\text{mA}$
Reverse Leakage Current	$I_R$		5 80	nA	$V_R=75\text{V}$ $V_R=75\text{V}, T_J=150^\circ\text{C}$
Junction Capacitance	$C_j$		2.0	pF	$V_R=0\text{V}, f=1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$		3	$\mu\text{s}$	$I_F=I_R=10\text{mA}, I_{rr}=0.1 \cdot I_R$

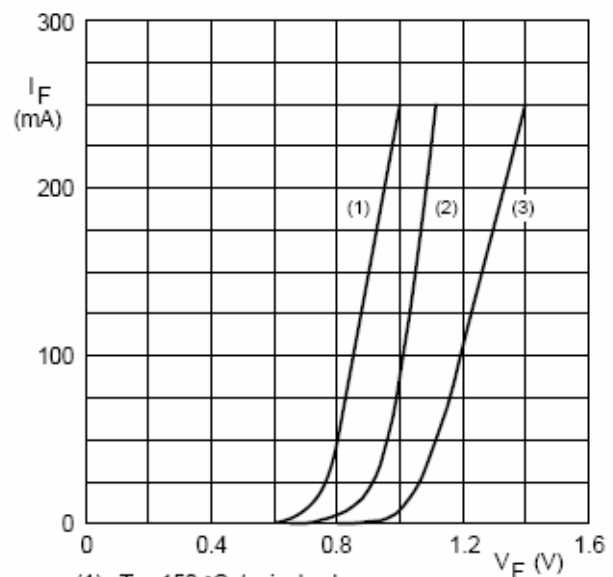
## TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



Device mounted on a FR4 printed-circuit board.

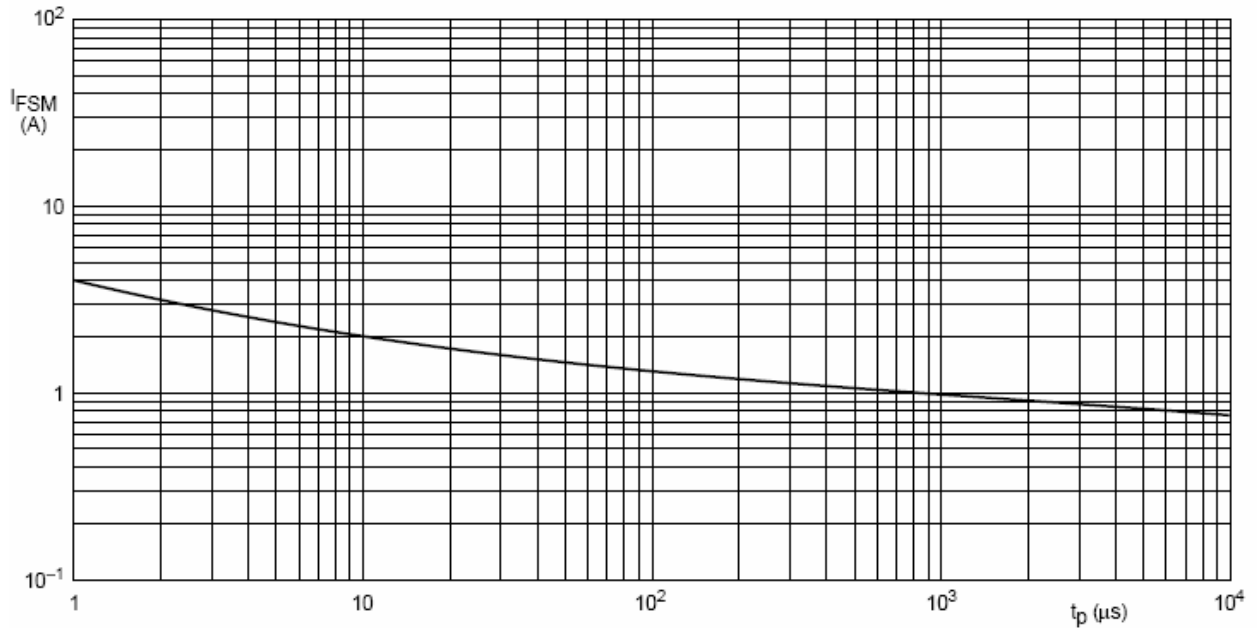
- (1) Single diode loaded.
- (2) Double diode loaded.

Maximum permissible continuous forward current as a function of ambient temperature.

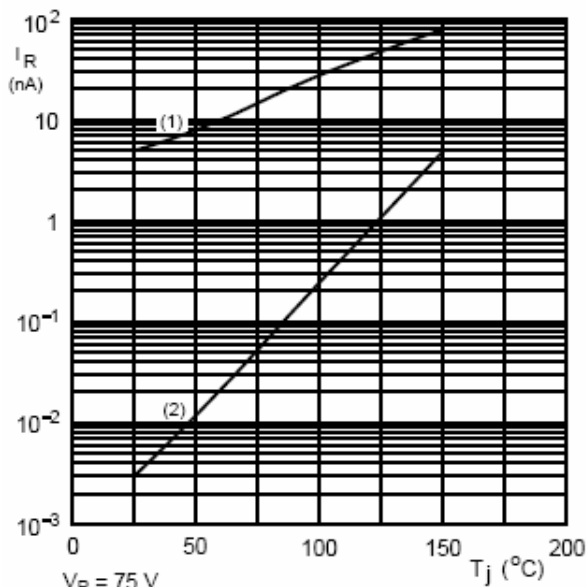


- (1)  $T_j = 150^\circ\text{C}$ ; typical values.
- (2)  $T_j = 25^\circ\text{C}$ ; typical values.
- (3)  $T_j = 25^\circ\text{C}$ ; maximum values.

Forward current as a function of forward voltage; per diode.



Maximum permissible non-repetitive peak forward current as a function of pulse duration per diode.

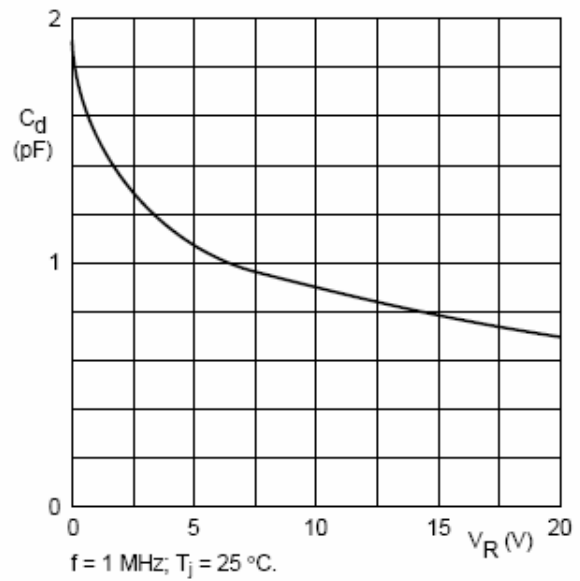


$V_R = 75 \text{ V}$ .

(1) Maximum values.

(2) Typical values.

Reverse current as a function of junction temperature; per diode.



$f = 1 \text{ MHz}$ ;  $T_j = 25 \text{ °C}$ .

Diode capacitance as a function of reverse voltage; per diode; typical values.