

Low-leakage double diode

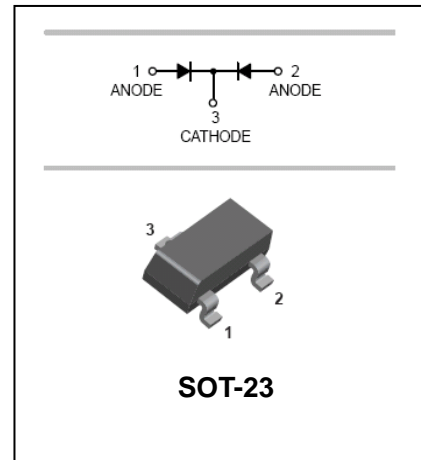
BAV170

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.



Lead-free



SOT-23

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	I_F	215	mA
single diode loaded double diode loaded		125	
repetitive peak forward current	I_{FRM}	500	mA
non-repetitive peak forward current square wave; $T_j=25^\circ\text{C}$ prior to surge;	I_{FSM}	4	A
$t_p=1\mu\text{s}$		1	
$t_p=1\text{ms}$ $t_p=1\text{s}$		0.5	
Total Power Dissipation	P_{tot}	250	mW
Operating Junction Temperature Range	T_j	150	°C
Storage Temperature Range	T_{STG}	-65 to +125	°C

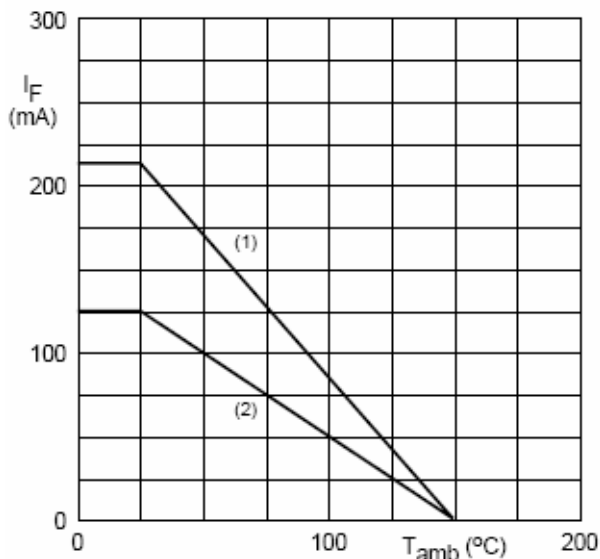
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ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

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

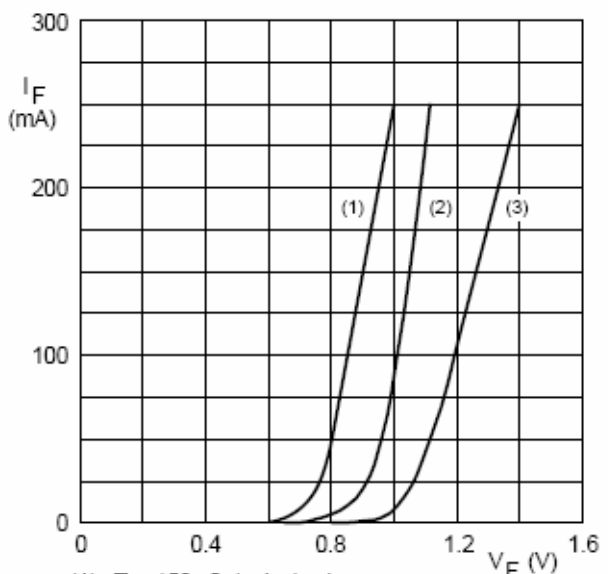
TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



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.

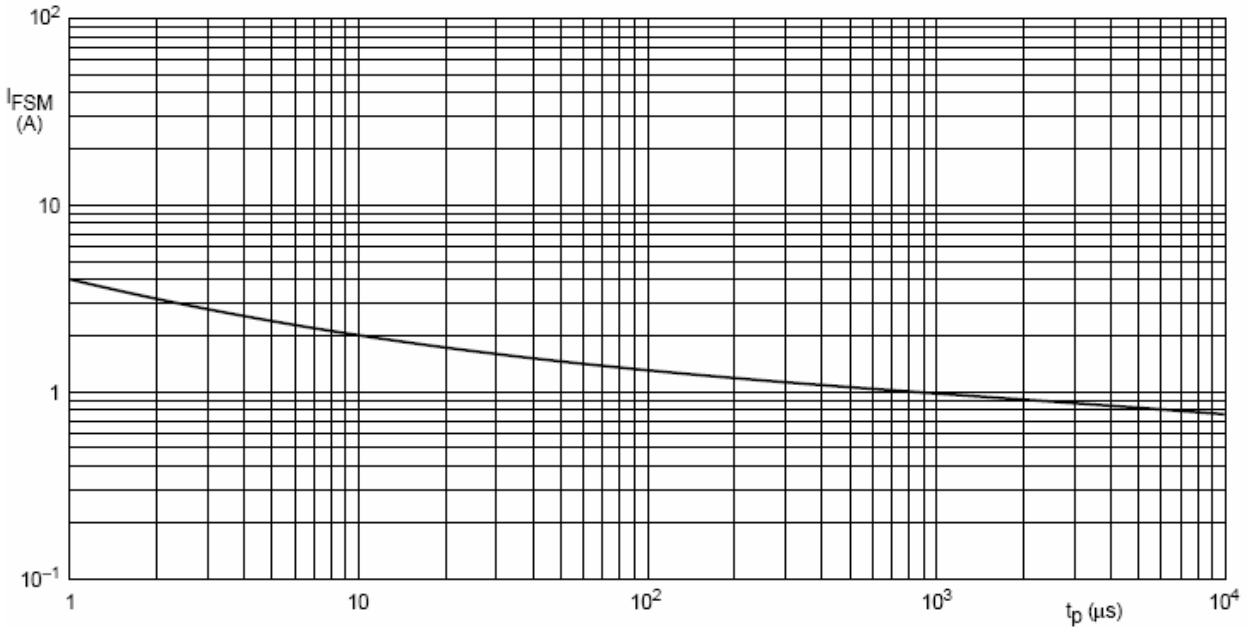


- (1) $T_J = 150^\circ\text{C}$; typical values.
- (2) $T_J = 25^\circ\text{C}$; typical values.
- (3) $T_J = 25^\circ\text{C}$; maximum values.

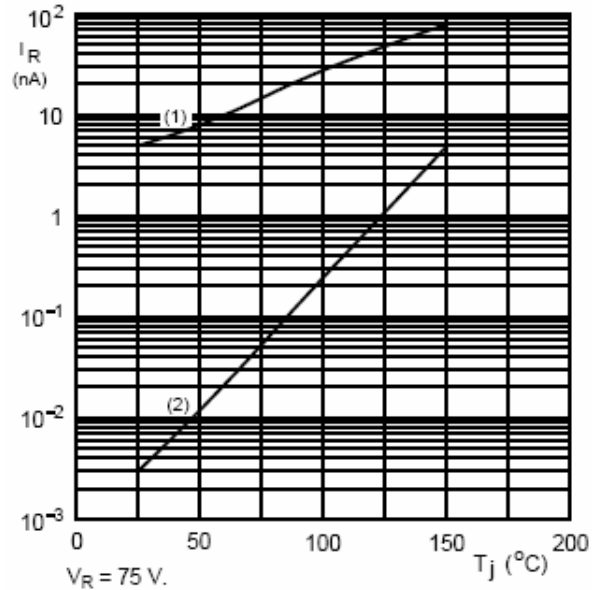
Forward current as a function of forward voltage; per diode.

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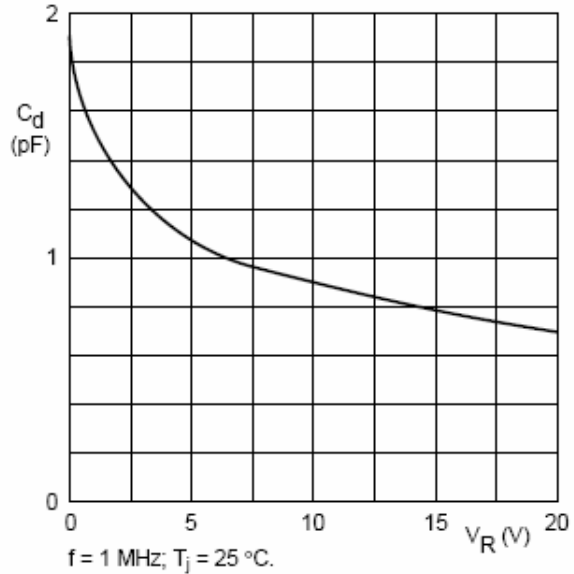
Maximum permissible non-repetitive peak forward current as a function of pulse duration per diode.



V_R = 75 V.

- (1) Maximum values.
- (2) Typical values.

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



f = 1 MHz; T_j = 25 °C.

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

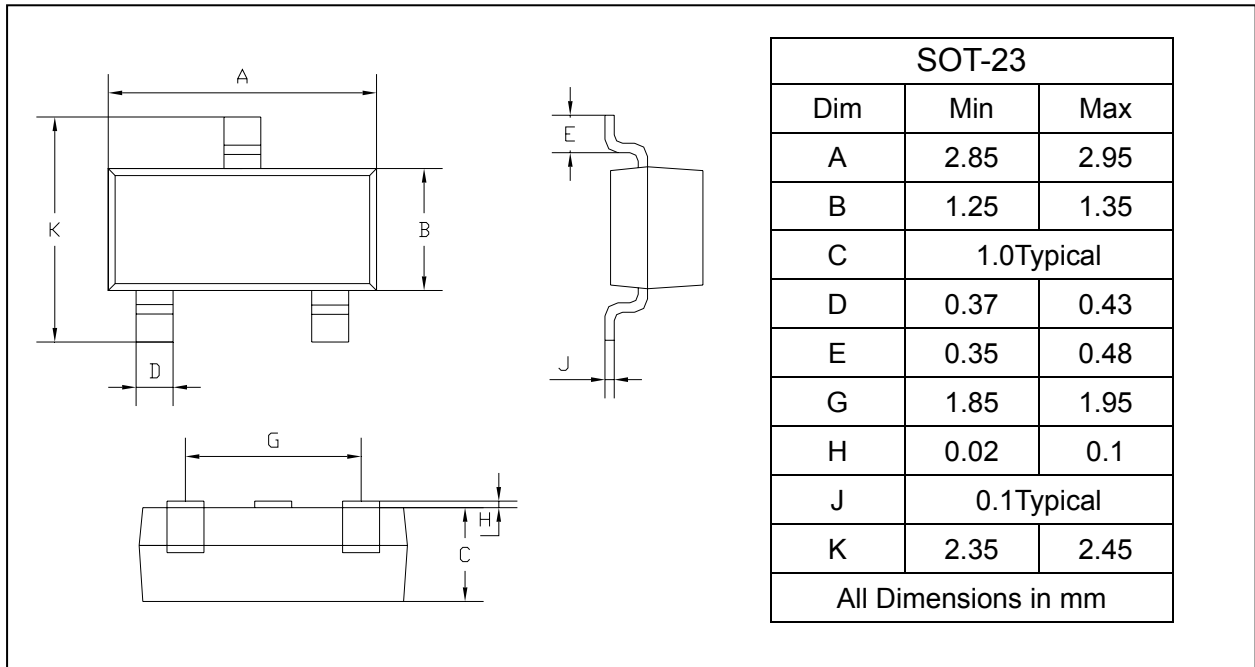
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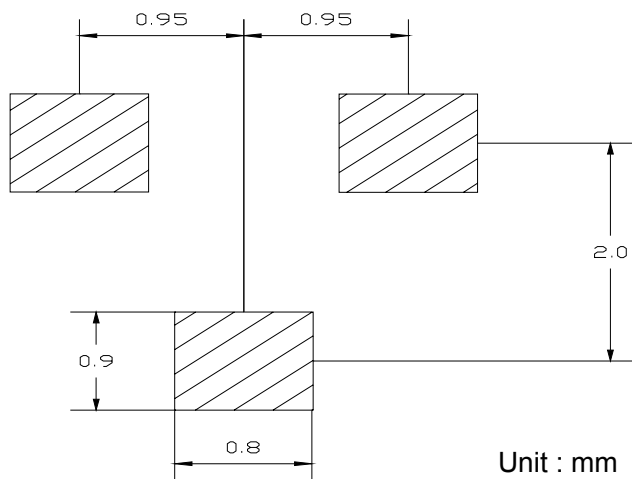
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
BAV170	SOT-23	3000/Tape&Reel

www.s-manuals.com