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April 2013



BAV102 High Voltage, General Purpose Diode



Description

A general purpose diode that couples high forward conductance fast swiching speed and high blocking voltages in a glass leadless LL-34 surface mount package. Placement of the expansion gap has no relationship to the location of the cathode terminal which is indicated by the first color band.

Absolute Maximum Ratings⁽¹⁾

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^{\circ}$ C unless otherwise noted.

Symbol	Parameter	Value	Units	
W _{IV}	Working Inverse Voltage	150	V	
Ι _Ο	Average Rectified Current		200	mA
۱ _F	DC Forward Current		500	mA
i _f	Recurrent Peak Forward Current		600	mA
I _{FSM}	Non-repetitive Peak Forward Current	Pulse Width = 1.0 s	1.0	A
		Pulse Width = 1.0 µs	4.0	A
T _{STG}	Storage Temperature Range		-65 to +200	°C
ТJ	Operating Junction Temperature		-65 to +200	°C

Note:

1. These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

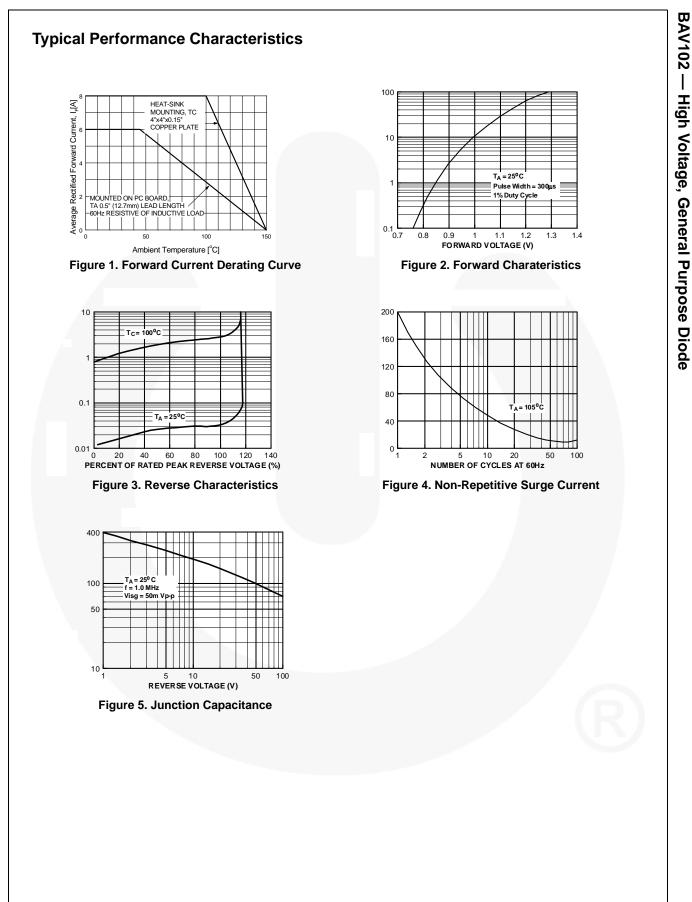
Thermal Characteristics

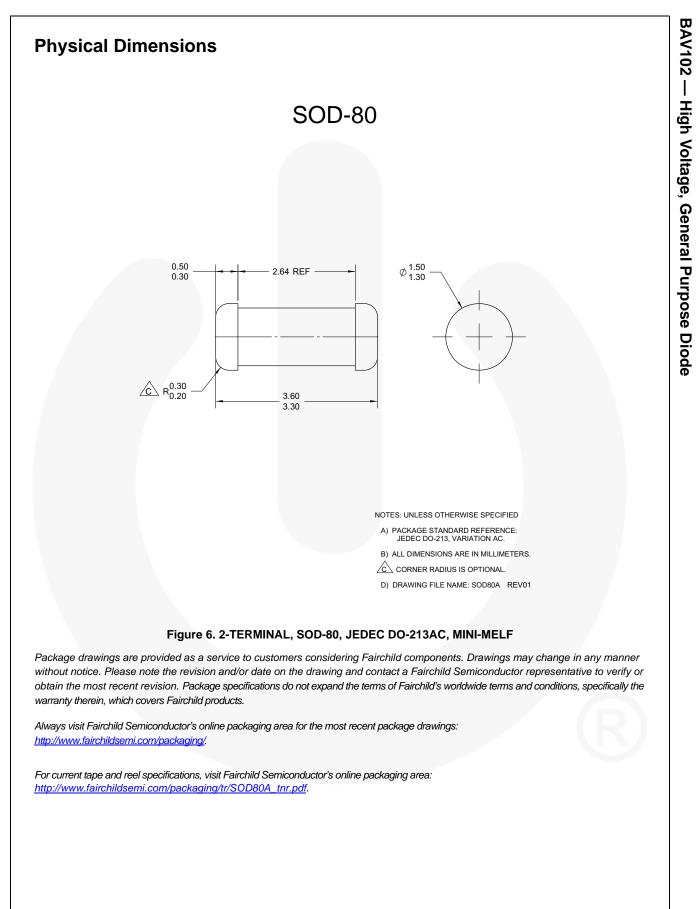
Symbol	Parameter	Value	Units
PD	Power Dissipation	500	mW
	Linear Derating Factor from $T_A = 25^{\circ}C$	3.33	mW/°C
R _{θJA}	Thermal Resistance, Junction to Ambient	350	°C/W

Electrical Characteristics

Values are at $T_C = 25^{\circ}C$ unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Max.	Units
V _R	Breakdown Voltage	I _R = 100 μA	200		V
V _F	Forward Voltage	I _F = 100 mA		1.00	V
		I _F = 200 mA		1.25	V
I _R	Reverse Current	V _R = 150 V		100	nA
		$V_{R} = 150 \text{ V}, \text{ T}_{A} = 150^{\circ}\text{C}$		100	μΑ
CT	Total Capacitance	V _R = 0, f = 1.0 MHz		5.00	pF
t _{rr}	Reverse Recovery Time	$I_F = I_R = 30 \text{ mA}, I_{RR} = 1 \text{ mA}$ $R_L = 100 \Omega$		50	ns





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