

BAV19W-HAF, BAV20W-HAF, BAV21W-HAF

SURFACE MOUNT SWITCHING DIODE

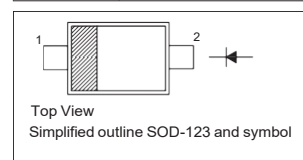
Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automated Insertion
- For General Purpose Switching Applications
- High Reverse Breakdown Voltage
- Totally Lead-Free & Fully RoHS Compliant
- Halogen and Antimony Free. "Green" Device

TYPE	BAV19W-HAF	BAV20W-HAF	BAV21W-HAF
MARKING	JX	T2	T3

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	BAV19W-HAF	BAV20W-HAF	BAV21W-HAF	Unit
Non-Repetitive Peak Reverse Voltage	V _{RM}	120	200	250	V
Peak Repetitive Reverse Voltage	V _{RRM}	100	150	200	V
Working Peak Reverse Voltage	V _{RWM}				
DC Blocking Voltage	V _R				
RMS Reverse Voltage	V _{R(RMS)}	71	106	141	V
Forward Continuous Current (Note 1)	I _{FM}	400			mA
Average Rectified Output Current (Note 1)	I _O	200			mA
Non-Repetitive Peak Forward Surge Current @t = 1.0ms @t = 1.0s	I _{FSM}	2.5 0.5			A
Repetitive Peak Forward Surge Current	I _{FRM}	625			mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 2)	P _D	250	mW
Thermal Resistance Junction to Ambient Air (Note 2)	R _{θJA}	500	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 3)	V _{(BR)R}	120 200 250	—	V	I _R = 100μA
Forward Voltage	V _{FM}	—	1.0 1.25	V	I _F = 100mA I _F = 200mA
Peak Reverse Current @ Rated DC Blocking Voltage (Note 3)	I _{RM}	—	100 15	nA μA	T _J = +25°C T _J = +100°C
Total Capacitance	C _T	—	5.0	pF	V _R = 0, f = 1.0MHz
Reverse Recovery Time	t _{RR}	—	50	ns	I _F = I _R = 30mA, I _{RR} = 0.1 x I _R , R _L = 100W

- Notes:
1. I_{FM}, I_O are valid provided that terminals are kept at ambient temperature.
 2. Part mounted on FR-4 PC board with minimum recommended pad layout.
 3. Short duration pulse test used to minimize self-heating effect.

Typical Characteristics

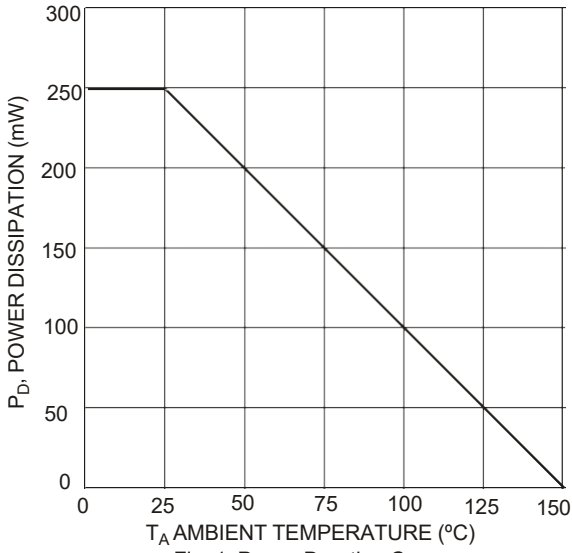


Fig. 1 Power Derating Curve

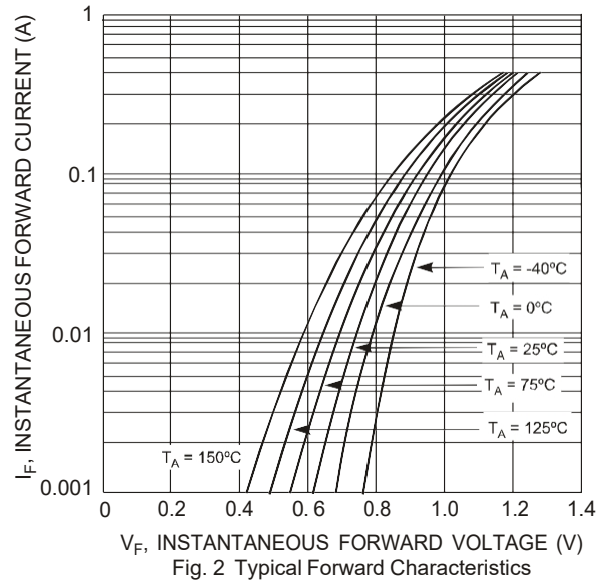


Fig. 2 Typical Forward Characteristics

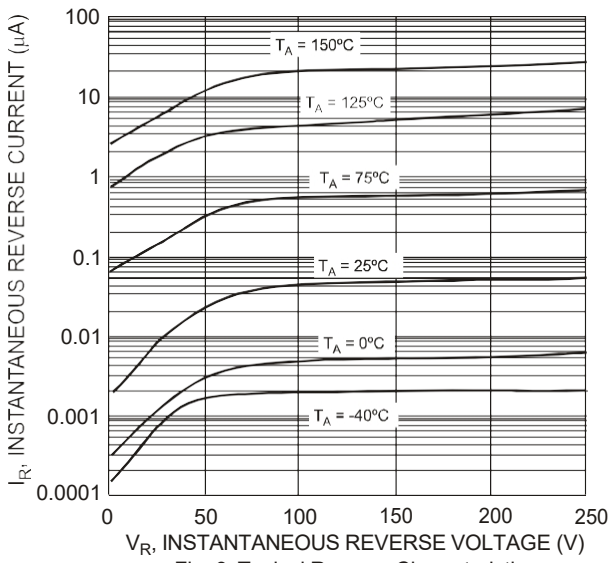


Fig. 3 Typical Reverse Characteristics

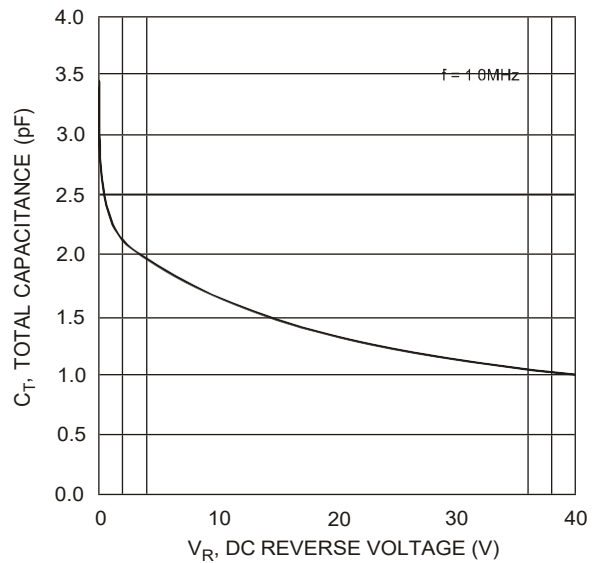
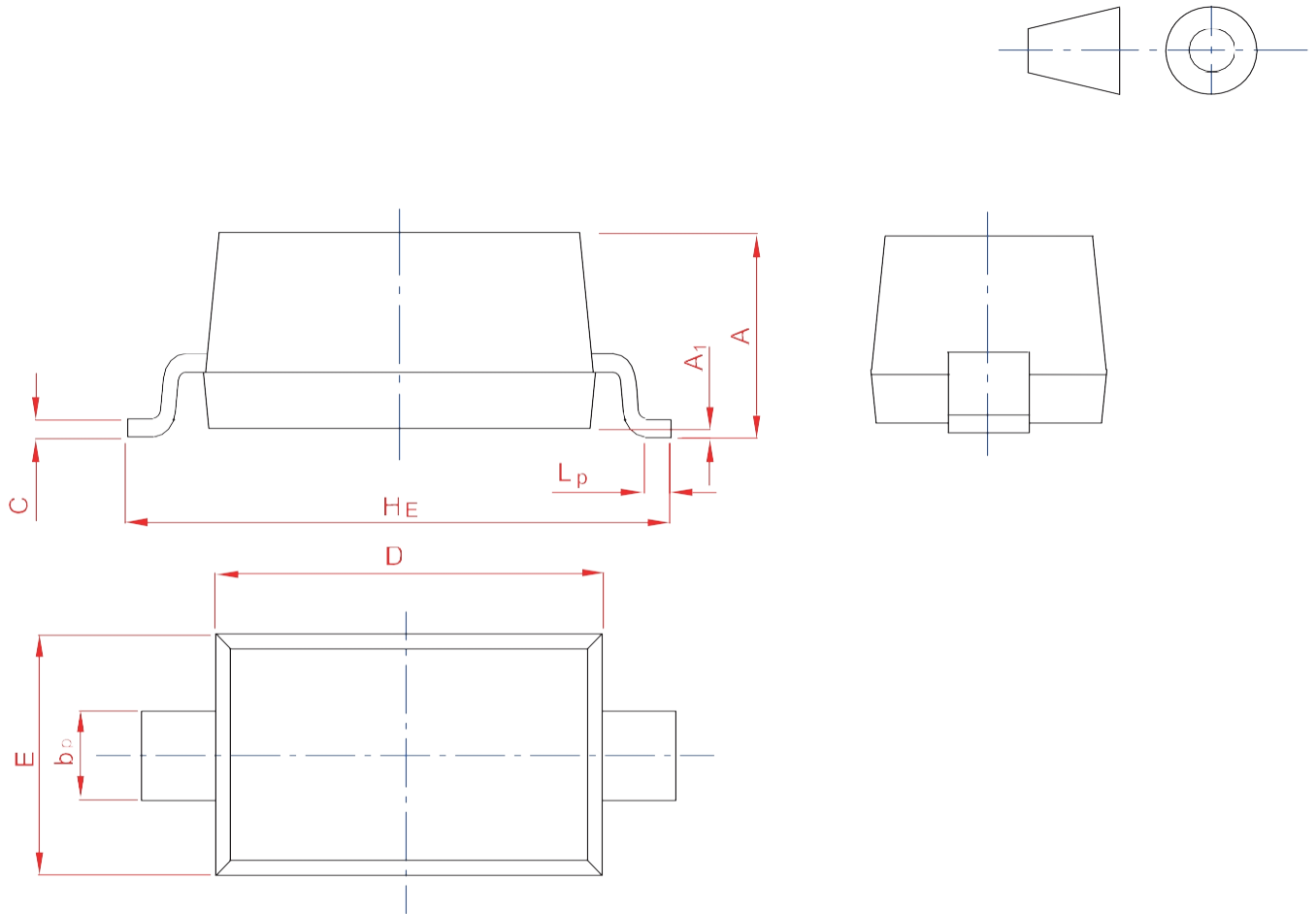


Fig. 4 Total Capacitance vs. Reverse Voltage

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	bp	C	D	E	HE	A1	Lp
mm	1.20	0.60	0.135	2.75	1.65	3.85	0.10	0.50
	0.90	0.50	0.100	2.55	1.55	3.55	0.01	0.20