

BAV19W~BAV21W Fast Switching Diodes

Feature

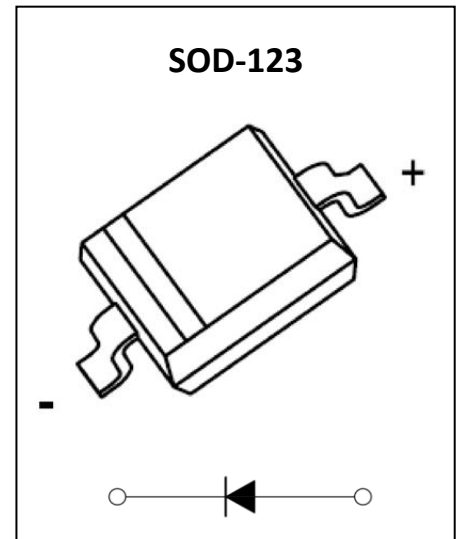
- Low Reverse Current
- Fast Switching Speed
- For General Purpose Switching Applications

Application

- Extreme fast switches

MARKING:

- BAV19WS: JX
- BAV20WS: T2
- BAV21WS: T3



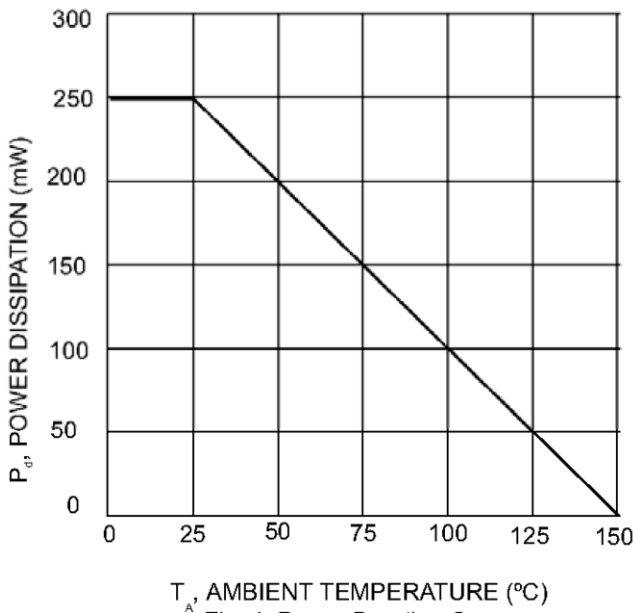
ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value		Unit
Non-Repetitive Peak Reverse Voltage	V_{RSM}	BAV19W	100	V
		BAV20W	150	V
		BAV21W	200	V
Repetitive Peak Reverse Voltage	V_{RRM}	BAV19W	120	V
		BAV20W	200	
		BAV21W	250	
Average rectified output current	I_o	0.20		A
Forward continuous current	I_{FM}	0.40		A
Non-repetitive Peak Forward Surge Current @ $t=1$ ms	I_{FSM}	2.5		A
Non-repetitive Peak Forward Surge Current @ $t=1$ s		0.5		A
Power Dissipation	P_D	0.25		W
Junction Temperature	T_J	125		$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-65 ~ +150		$^{\circ}\text{C}$

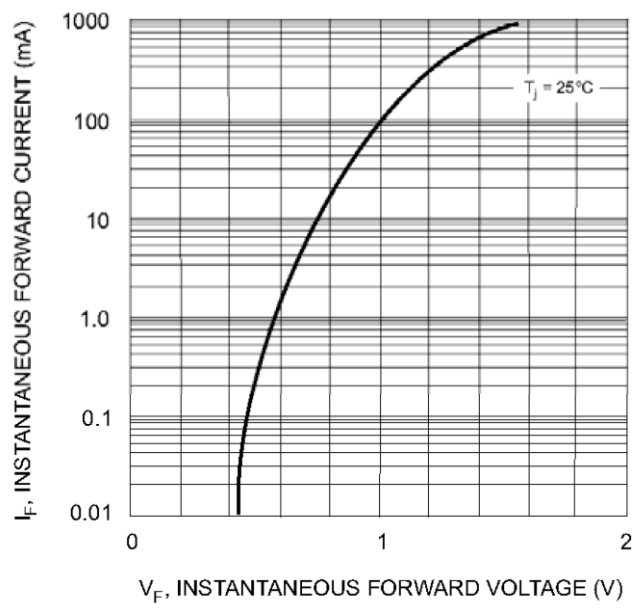
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise noted)

Parameter	Symbol	Test Condition		Min	Max	Unit
Forward voltage	V _F	I _F = 100mA			1	V
		I _F = 200mA			1.25	V
Reverse Breakdown Voltage	V _{(BR)R}	I _R = 100μA	BAV19W	120		V
			BAV20W	200		
			BAV21W	250		
Reverse current	I _R	V _R = 100V	BAV19W		100	nA
		V _R = 150V	BAV20W		100	
		V _R = 200V	BAV21W		100	
Diode capacitance	C _D	V _R =0V, f=1MHz			5	pF
Reverse Recovery Time	t _{rr}	I _F =I _R =30mA, I _{rr} =0.1*I _R , R _L =100Ω			50	ns

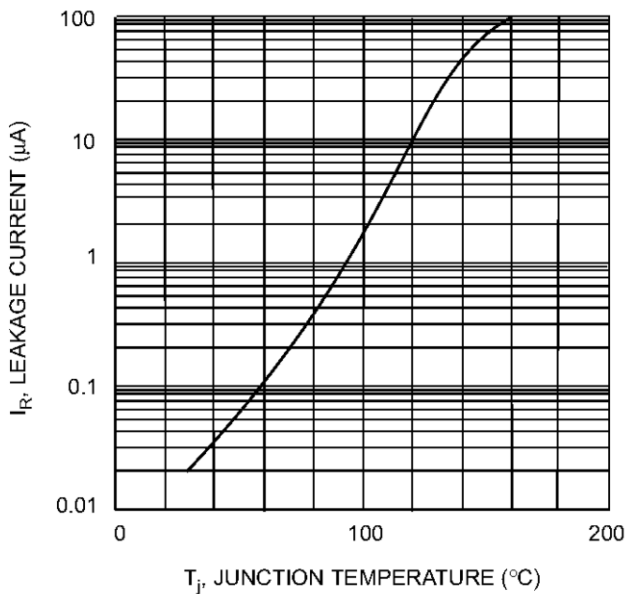
Typical Electrical and Thermal Characteristics



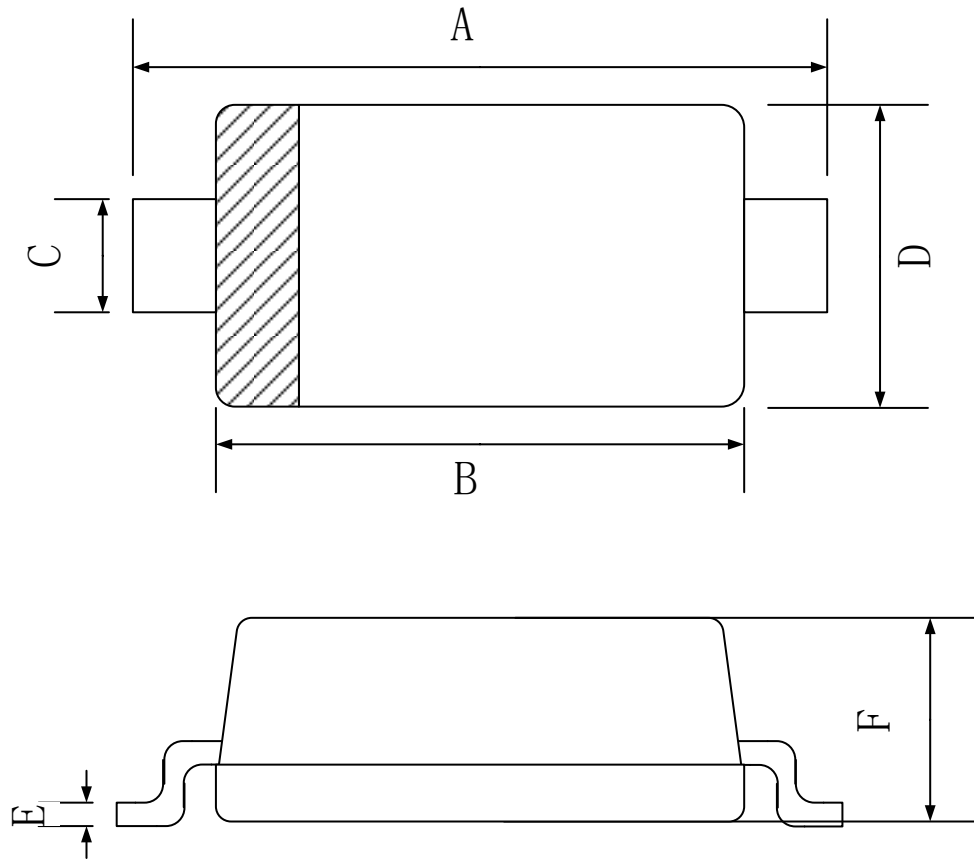
T_A , AMBIENT TEMPERATURE (°C)
Fig. 1 Power Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics



T_J , JUNCTION TEMPERATURE (°C)
Fig. 3 Leakage Current vs. Junction Temperature

SOD-123 Package Outline Dimensions


Symbol	Dimensions In Millimeters		
	Min.	Typ.	Max.
A	3.55	3.70	3.85
B	2.55	2.65	2.75
C	0.45	0.55	0.65
D	1.55	1.60	1.65
E	0.100	0.115	0.135
F	0.90	1.05	1.20