

BAV19W, BAV20W, BAV21W-AH

Silicon Epitaxial Planar Diodes

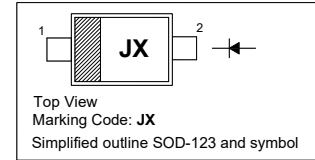
High Voltage Switching Diode

Features

- AEC-Q101 Qualified
- Fast switching speed
- Surface mount package ideally suited for automatic insertion
- Halogen and Antimony Free(HAF), RoHS compliant

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



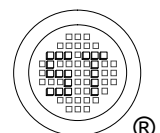
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	120	V
		200	
		250	
Reverse Voltage	V_R	100	V
		150	
		200	
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Forward Continuous Current	I_{FM}	400	mA
Repetitive Peak Forward Current	I_{FRM}	625	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	at t = 1 ms	2.5
		at t = 1 s	0.5
Power Dissipation	P_d	250	mW
Operating and Storage Temperature Range	T_j, T_{stg}	- 65 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta JA}$	500	$^\circ\text{C/W}$

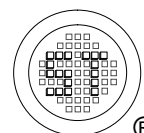
¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 100\text{ mA}$ at $I_F = 200\text{ mA}$	V_F	- -	1 1.25	V
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	120 200 250	- - -	V
Reverse Current at $V_R = 100\text{ V}$ at $V_R = 150\text{ V}$ at $V_R = 200\text{ V}$	I_R	- - -	100 100 100	nA
Total Capacitance at $V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_T	-	5	pF
Reverse Recovery Time at $I_F = I_R = 30\text{ mA}$, $I_{rr} = 0.1 * I_R$, $R_L = 100\text{ }\Omega$	t_{rr}	-	50	ns



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Electrical characteristic curve

Fig 1. Power Derating Curve

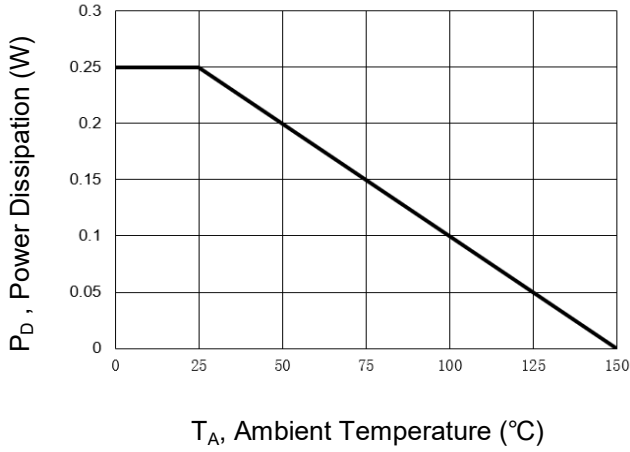


Fig 2. Forward Characteristic Curve

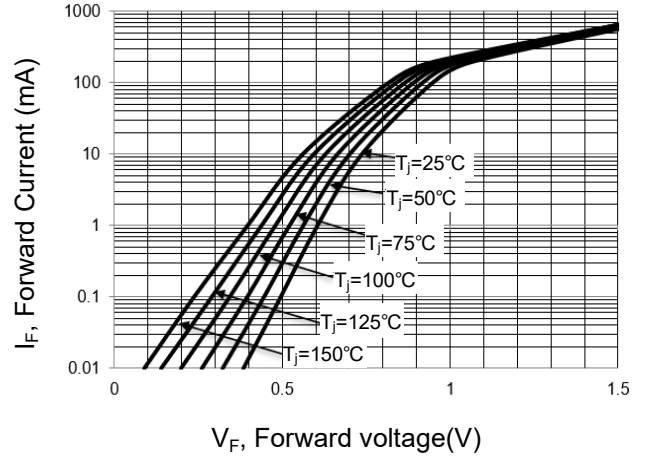


Fig 3. Reverse Characteristic Curve

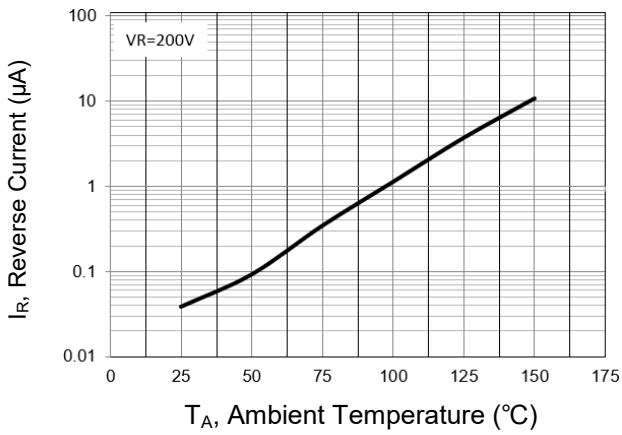
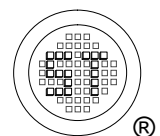
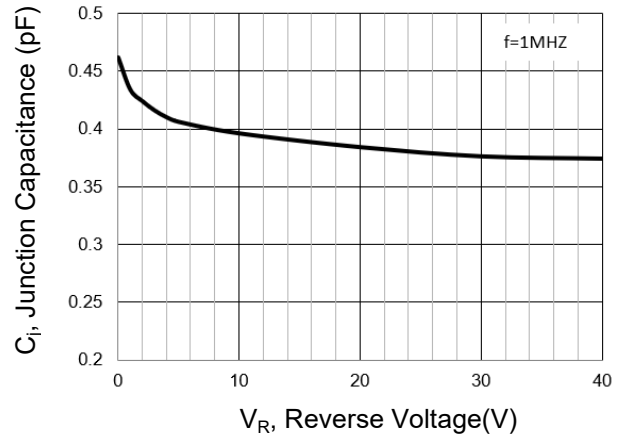


Fig 4. Junction Capacitance

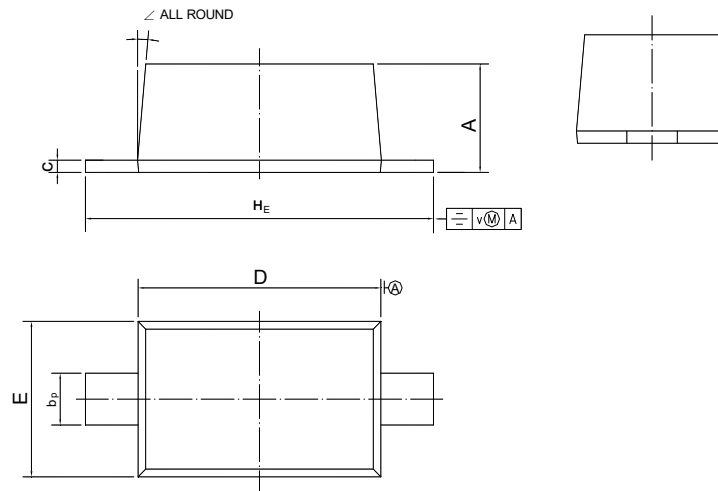


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PACKAGE OUTLINE

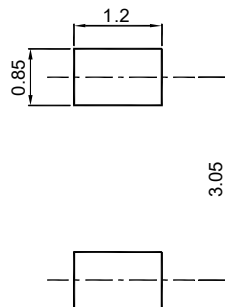
Plastic surface mounted package

SOD-123



UNIT	A	b _p	c	D	E	H _E	v	∠
mm	1.15 1.05	0.6 0.5	0.135 0.100	2.7 2.6	1.65 1.55	3.85 3.55	0.2	5°

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	(inch)	mm	(inch)	
SOD-123	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" • " = HAF (Halogen and Antimony Free)

" III " = Cathode line

" JX " = Part No.

Font type: Arial

