

DATA SHEET

SWITCHING DIODE
GENERAL PURPOSE

BAV116W

RoHS compliant & Halogen free

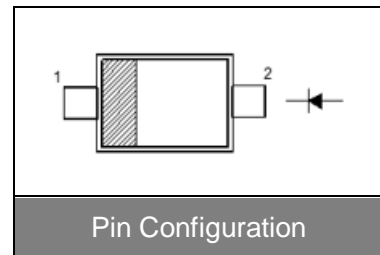
Product specification— January 03, 2023 V.0



Switching Diode

Feature

- Very low leakage current
- Medium speed switching times
- Halogen and Antimony Free(HAF), RoHS compliant
- Marking code: ZX



Applications

- For low leakage current

Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	110	V
Continuous Forward Current	I_{FM}	215	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	at t = 1 μ s	4
		at t = 1 ms	1
		at t = 1 s	0.5
Power Dissipation	P_D	250	mW
Operating and Storage Temperature Range	T_j, T_{stg}	- 65 to + 150	°C

Thermal Characteristics

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

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

Characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu A$	$V_{(BR)R}$	110	-	V
Forward Voltage at $I_F = 1 mA$ at $I_F = 10 mA$ at $I_F = 50 mA$ at $I_F = 150 mA$	V_F	- - - -	0.9 1 1.1 1.25	V
Reverse Current at $V_R = 75 V$ at $V_R = 75 V, T_j = 125^\circ C$	I_R	- -	5 80	nA
Total Capacitance at $V_R = 0, f = 1 MHz$	C_T	-	5	pF
Reverse Recovery Time at $I_F = I_R = 10 mA, I_{rr} = 0.1 \times I_R, R_L = 100 \Omega$	t_{rr}	-	3	μs

Electrical Characteristic Curves

Figure 1. Power Derating Curve

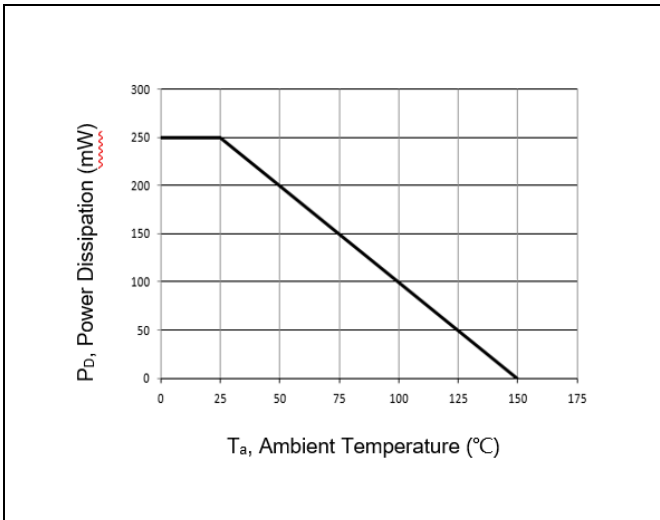


Figure 2. Capacitance Characteristics Curve

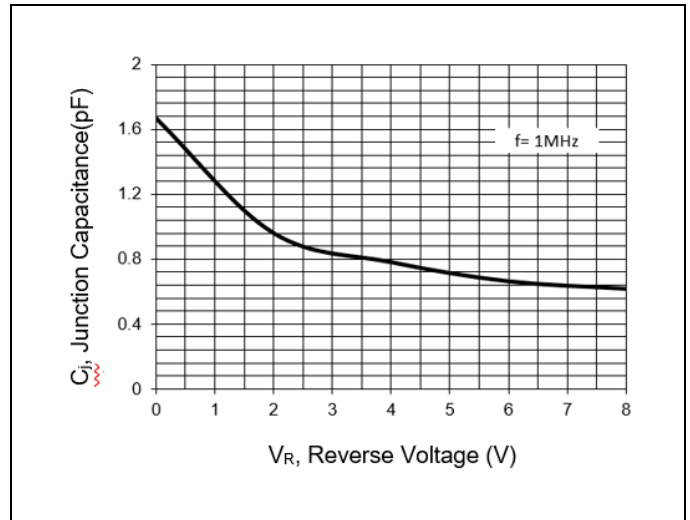


Figure 3. Reverse Characteristics Curve

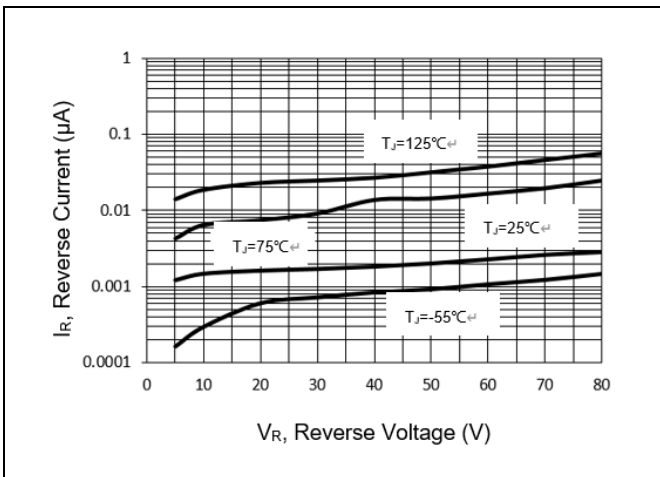
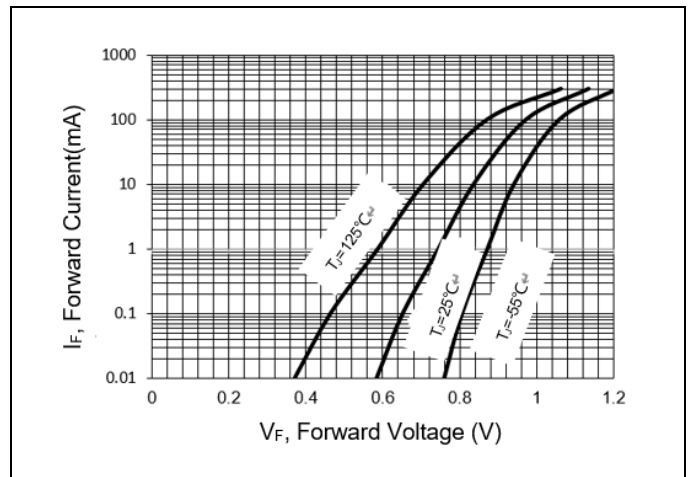


Figure 4. Forward Characteristics Curve



Dimensions (SOD-123)

	Dimension (mm)			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
	A	1.05	1.15	0.041
b _p	0.50	0.60	0.020	0.024
c	0.100	0.135	0.004	0.005
D	2.60	2.70	0.102	0.106
E	1.55	1.65	0.061	0.065
H _E	3.55	3.85	0.140	0.152
V	0.20		0.008	

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