

### Features

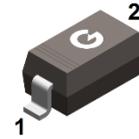
- Fast switching speed
- High conductance
- RoHS compliant with Halogen-free

HF



### Mechanical Data

- Case: SOD-123
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOD-123

### Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAV19W	SOD-123	3000 pcs / Tape & Reel	A8

### Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RRM}$	120	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$	100	V
DC Blocking Voltage	$V_R$	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectified Output Current	$I_F$	200	mA
Non-Repetitive Peak Forward Surge Current, $t_p = 1\mu\text{s}$	$I_{FSM}$	2.5	A
Non-Repetitive Peak Forward Surge Current, $t_p = 1\text{s}$		0.5	A
Repetitive Peak Forward Surge Current	$I_{FRM}$	625	mA

### Thermal Characteristics

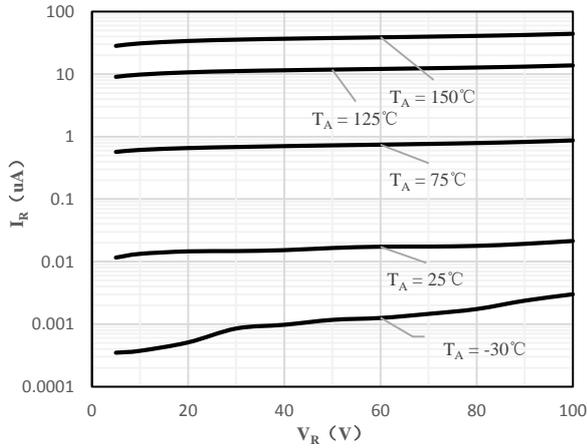
Parameter	Symbol	Value	Unit
Power Dissipation ( $T_A = 25^\circ\text{C}$ )	$P_D$	250	mW
Thermal Resistance Junction-to-Air <sup>*1</sup>	$R_{\theta JA}$	280	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case <sup>*1</sup>	$R_{\theta JC}$	180	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead <sup>*1</sup>	$R_{\theta JL}$	210	$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	-65 ~ +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 ~ +150	$^\circ\text{C}$

### Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

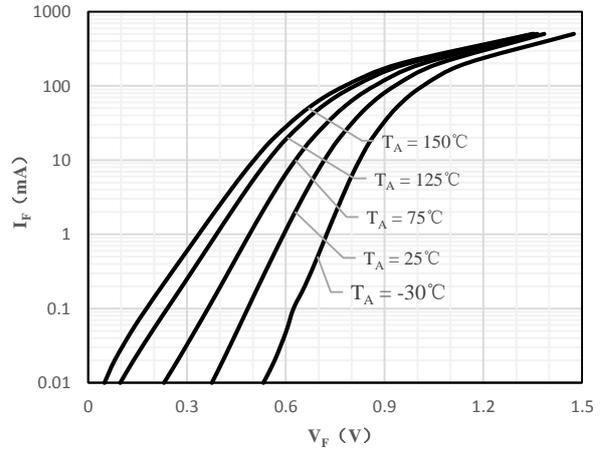
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	120	-	-	V
Forward Voltage	$V_F$	$I_F = 100\text{mA}$	-	-	1	V
		$I_F = 200\text{mA}$	-	-	1.25	V
Maximum Peak Reverse Current	$I_R$	$V_R = 100\text{V}$	-	-	0.1	$\mu\text{A}$
Total Capacitance	$C_J$	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	5	pF
Reverse Recovery Time	$t_{rr}$	$I_F = I_R = 30\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	50	ns

Note 1: The data tested by surface mounted on a 1 inch<sup>2</sup> FR-4 board with 2OZ copper

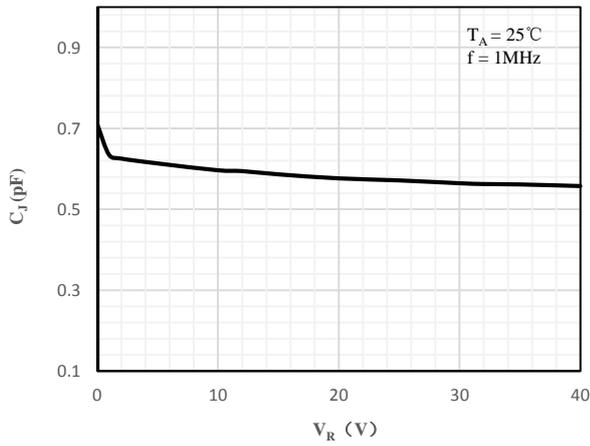
**Ratings and Characteristics Curves** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)



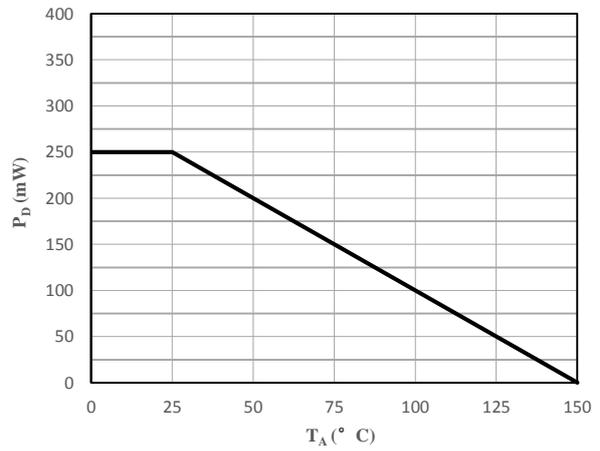
**Fig 1 Typical Reverse Characteristic**



**Fig 2 Typical Forward Characteristics**

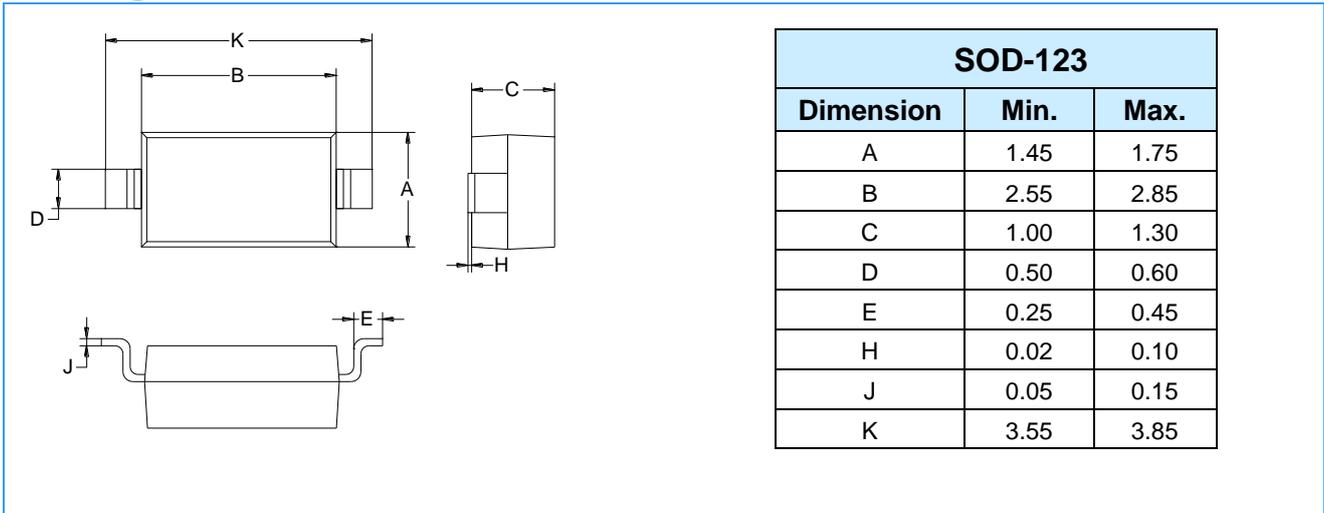


**Fig 3 Capacitance vs. Reverse Voltage**



**Fig 4 Power Derating Curve**

**Package Outline Dimensions** (Unit: mm)



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