

Features

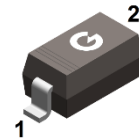
- Fast switching speed
- High conductance
- RoHS compliant with Halogen-free

HF

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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
BAV20W	SOD-123	3000 pcs / Tape & Reel	T2

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

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V _{RRM}	200	V
Peak Repetitive Reverse Voltage	V _{RRM}	150	V
Working Peak Reverse Voltage	V _{RWM}	150	V
DC Blocking Voltage	V _R	150	V
RMS Reverse Voltage	V _{R(RMS)}	105	V
Average Rectified Output Current	I _F	200	mA
Non-Repetitive Peak Forward Surge Current, t _p = 1μs	I _{FSM}	2.5	A
Non-Repetitive Peak Forward Surge Current, t _p = 1s		0.5	A
Repetitive Peak Forward Surge Current	I _{FRM}	625	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T _A = 25°C)	P _D	250	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	400	°C/W
Thermal Resistance Junction-to-Case *1	R _{θJC}	230	°C/W
Thermal Resistance Junction-to-Lead *1	R _{θJL}	260	°C/W
Operating Junction Temperature Range	T _J	-65 ~ +150	°C
Storage Temperature Range	T _{STG}	-65 ~ +150	°C

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	200	-	-	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	$V_R = 150\text{V}$	-	-	0.1	μA
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 minimum recommended FR-4 board

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

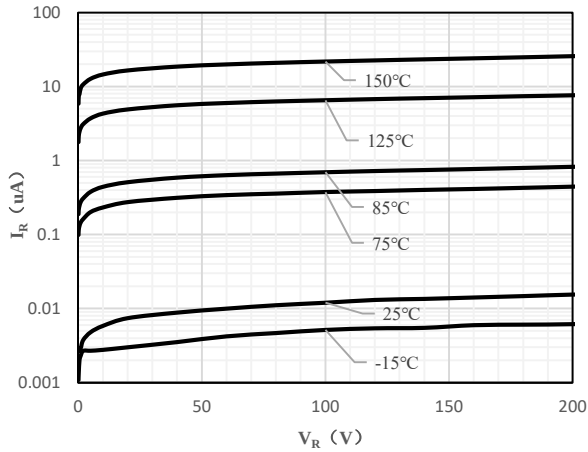


Fig 1 Typical Reverse Characteristic

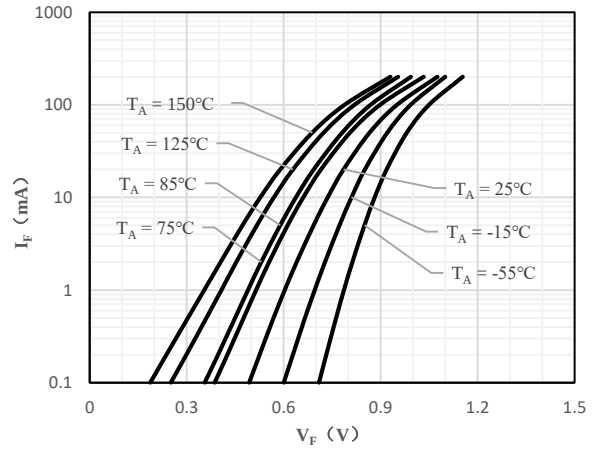


Fig 2 Typical Forward Characteristics

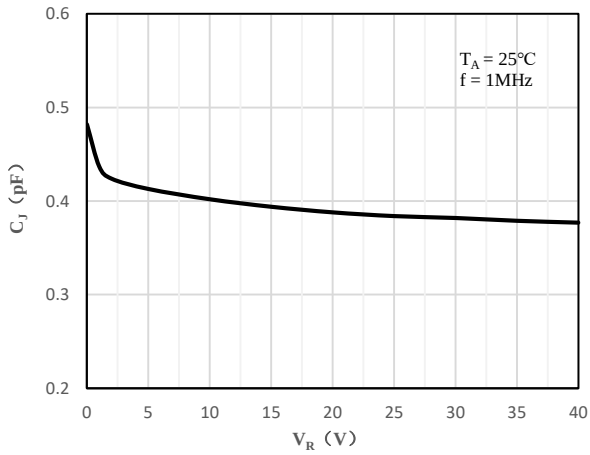


Fig 3 Capacitance vs. Reverse Voltage

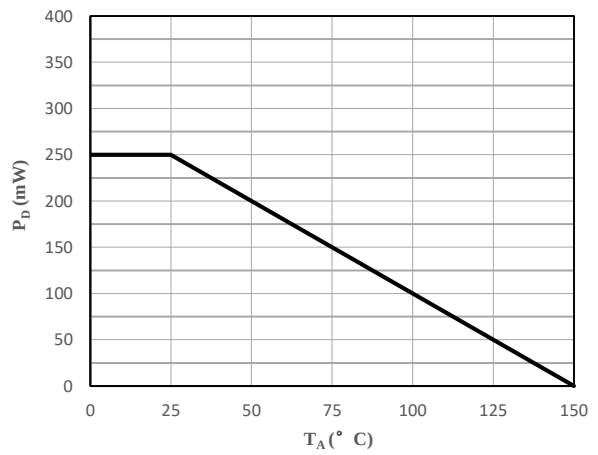
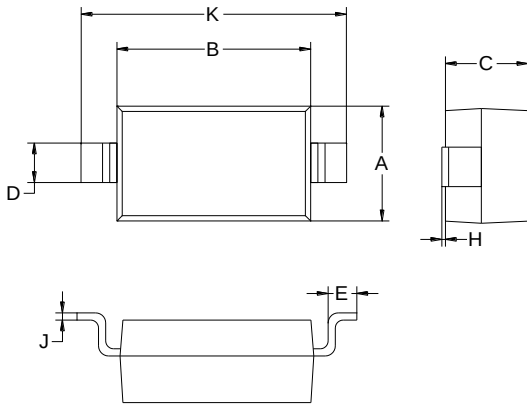


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOD-123		
Dimension	Min.	Max.
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

Package Outline Dimensions (Unit: mm)

SOD-123

