

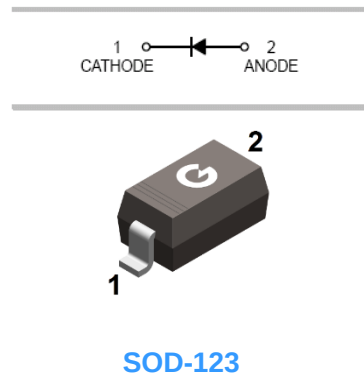
Features

- For general purpose applications
- This diodes features very low turn-on voltage and fast switching

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



Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAT46W	SOD-123	3000 pcs / Tape & Reel	L6

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	100	V
Repetitive Peak Forward Current	I _{FRM}	350	mA
Continuous Forward Current	I _F	150	mA
Peak Forward Surge Current (10ms single half sine-wave)	I _{FSM}	0.75	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	200	mW
Thermal Resistance Junction-to-Air	R _{θJA}	500	°C/W
Operating Junction Temperature Range	T _J	-55 ~ +125	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	100	-	-	V
Forward Voltage	V_F	$I_F = 0.1\text{mA}$	-	-	0.25	V
		$I_F = 10\text{mA}$	-	-	0.45	V
		$I_F = 250\text{mA}$	-	-	1.00	V
Maximum Peak Reverse Current	I_R	$V_R = 1.5\text{V}$	-	-	0.5	μA
		$V_R = 1.5\text{V}, T_J = 60^\circ\text{C}$	-	-	5	μA
		$V_R = 10\text{V}$	-	-	0.8	μA
		$V_R = 10\text{V}, T_J = 60^\circ\text{C}$	-	-	7.5	μA
		$V_R = 50\text{V}$	-	-	2	μA
		$V_R = 50\text{V}, T_J = 60^\circ\text{C}$	-	-	15	μA
		$V_R = 75\text{V}$	-	-	5	μA
		$V_R = 75\text{V}, T_J = 60^\circ\text{C}$	-	-	20	μA
Capacitance Between Terminals	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$	-	10	-	pF
		$V_R = 1\text{V}, f = 1\text{MHz}$	-	6	-	pF

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

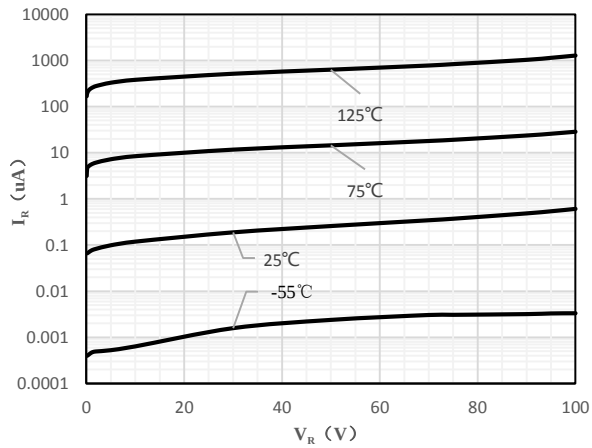


Fig 1 Typical Reverse Characteristic

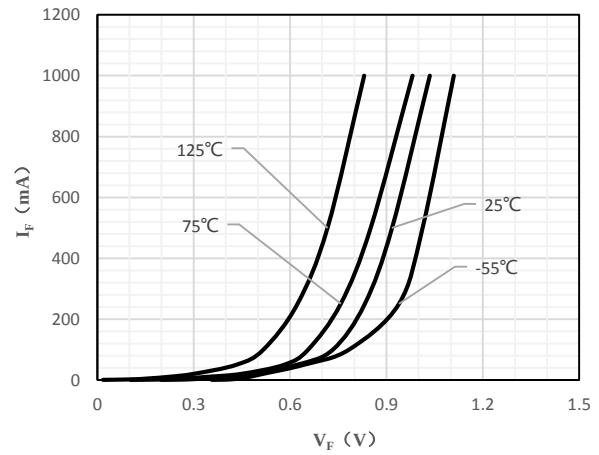


Fig 2 Typical Forward Characteristics

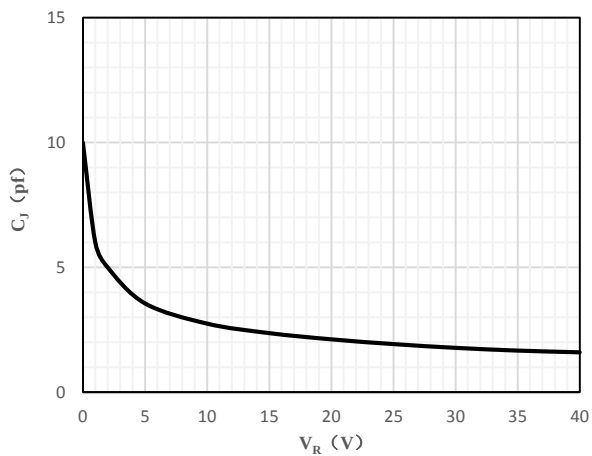


Fig 3 Capacitance Characteristics

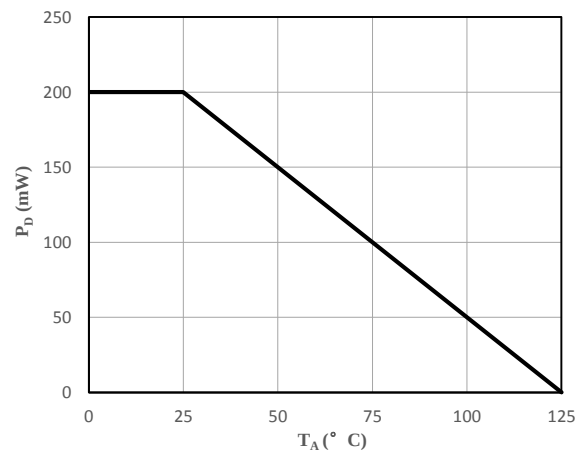
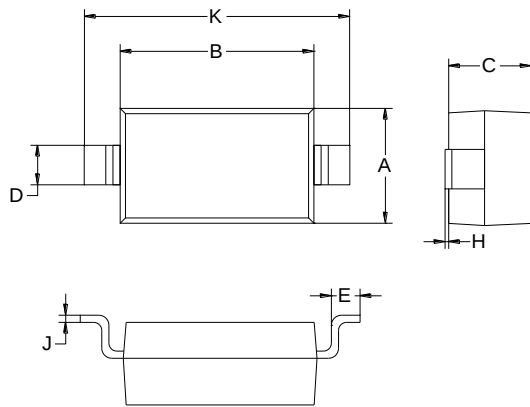


Fig 4 Power Derating Curve

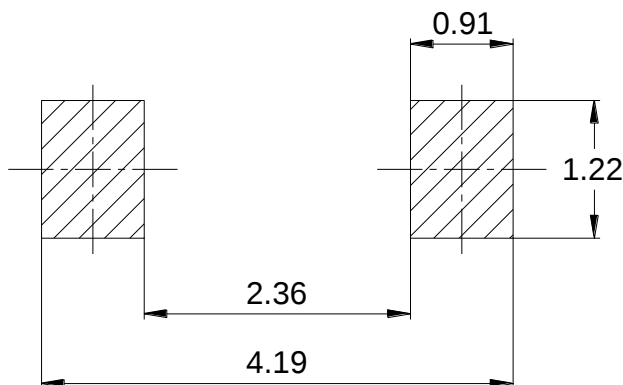
Package Outline Dimensions (Unit: mm)



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



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