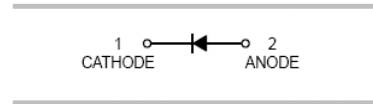




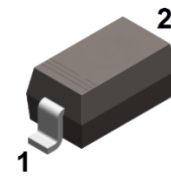
### Features

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



### 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
BAT46W	SOD-123	3000 pcs / Tape & Reel	L6

### Maximum Ratings (@ T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	100	V
Repetitive Peak Forward Current	I <sub>FRM</sub>	350	mA
Continuous Forward Current	I <sub>F</sub>	150	mA
Peak Forward Surge Current (10ms single half sine-wave)	I <sub>FSM</sub>	0.75	A

### Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P <sub>D</sub>	200	mW
Thermal Resistance Junction-to-Air	R <sub>θJA</sub>	500	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55 ~ +125	°C
Storage Temperature Range	T <sub>STG</sub>	-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	$\mu\text{A}$
		$V_R = 1.5\text{V}, T_J = 60^\circ\text{C}$	-	-	5	$\mu\text{A}$
		$V_R = 10\text{V}$	-	-	0.8	$\mu\text{A}$
		$V_R = 10\text{V}, T_J = 60^\circ\text{C}$	-	-	7.5	$\mu\text{A}$
		$V_R = 50\text{V}$	-	-	2	$\mu\text{A}$
		$V_R = 50\text{V}, T_J = 60^\circ\text{C}$	-	-	15	$\mu\text{A}$
		$V_R = 75\text{V}$	-	-	5	$\mu\text{A}$
		$V_R = 75\text{V}, T_J = 60^\circ\text{C}$	-	-	20	$\mu\text{A}$
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)

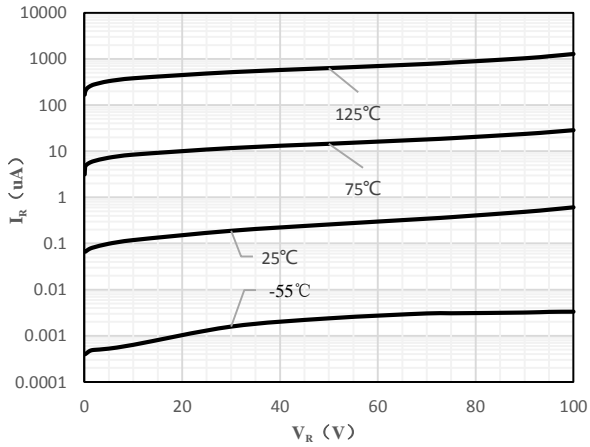


Fig 1 Typical Reverse Characteristic

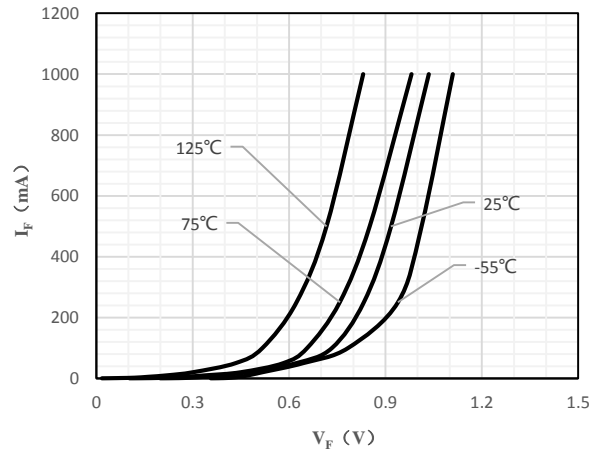


Fig 2 Typical Forward Characteristics

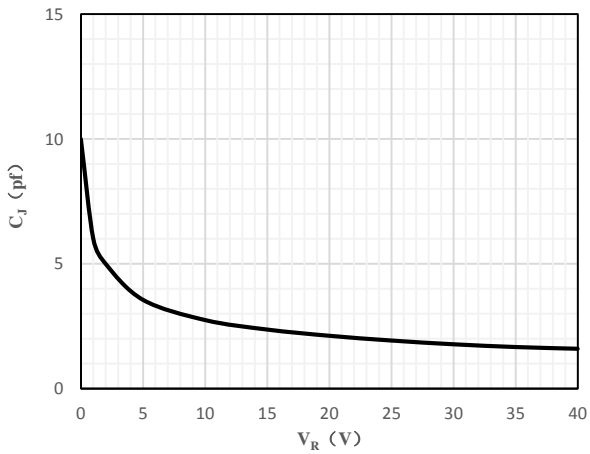


Fig 3 Capacitance Characteristics

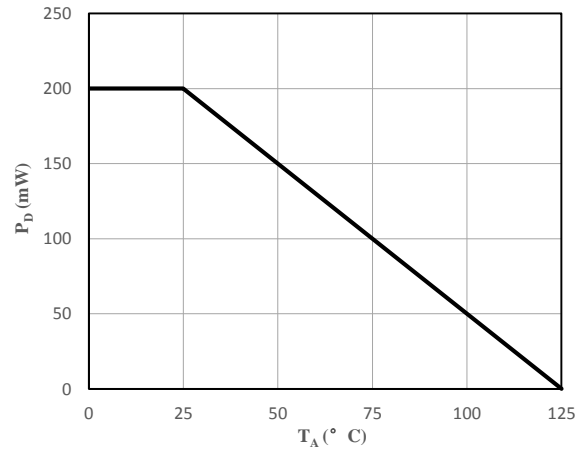
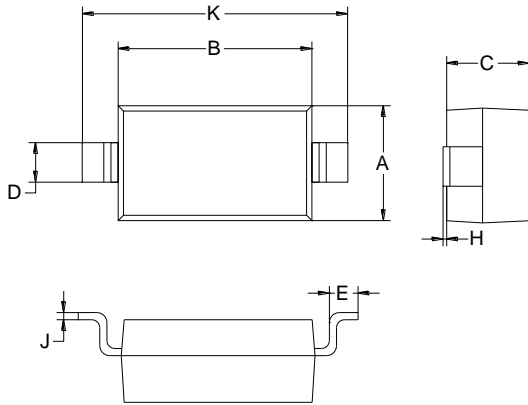


Fig 4 Power Derating Curve



## 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

