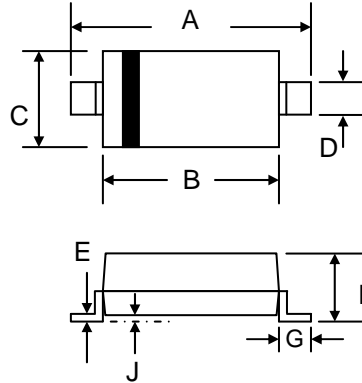


Features

- Low Turn-On Voltage
- Fast Switching Speed
- PN Junction Guard Ring for Transient and ESD Protection
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0



SOD-123		
Dim	Min	Max
A	3.60	3.90
B	2.50	2.80
C	1.40	1.80
D	0.30	0.78
E	—	0.25
G	0.15	—
H	0.95	1.35
J	—	0.15
All Dimensions in mm		

Mechanical Data

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams (approx.)
- Marking: Device Code, See Page 3
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	100	V
Forward Continuous Current	I_F	150	mA
Repetitive Peak Forward Current @ $t < 1.0\text{s}$	I_{FRM}	350	mA
Non-Repetitive Peak Forward Surge Current @ $t < 10\text{ms}$	I_{FSM}	750	mA
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +125	$^\circ\text{C}$

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

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage @ $I_R = 100\mu\text{A}$	$V_{(BR)}$	100			V
Forward Voltage Drop @ $I_F = 0.1\text{mA}$ @ $I_F = 10\text{mA}$ @ $I_F = 250\text{mA}$	V_F			0.25 0.45 1.00	V
Reverse Leakage Current @ $V_R = 1.5\text{V}, T_J = 25^\circ\text{C}$ @ $V_R = 1.5\text{V}, T_J = 60^\circ\text{C}$ @ $V_R = 10\text{V}, T_J = 25^\circ\text{C}$ @ $V_R = 10\text{V}, T_J = 60^\circ\text{C}$ @ $V_R = 50\text{V}, T_J = 25^\circ\text{C}$ @ $V_R = 50\text{V}, T_J = 60^\circ\text{C}$ @ $V_R = 75\text{V}, T_J = 25^\circ\text{C}$ @ $V_R = 75\text{V}, T_J = 60^\circ\text{C}$	I_R			0.5 5.0 0.8 7.5 2.0 15 5.0 20	μA
Diode Capacitance @ $V_R = 0\text{V}, f = 1.0\text{MHz}$ @ $V_R = 1\text{V}, f = 1.0\text{MHz}$	C_D		10 6.0		pF

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_D	200	mW
Thermal Resistance, Junction to Ambient (Note 1)	R_{JA}	500	$^{\circ}\text{C}/\text{W}$

Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

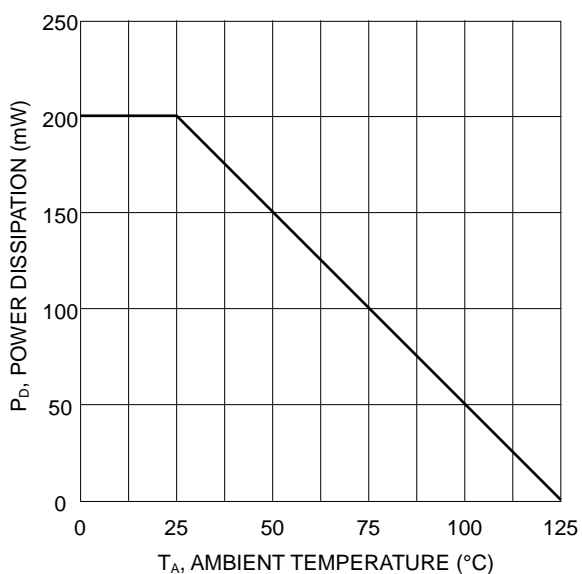


Fig. 1 Power Derating Curve

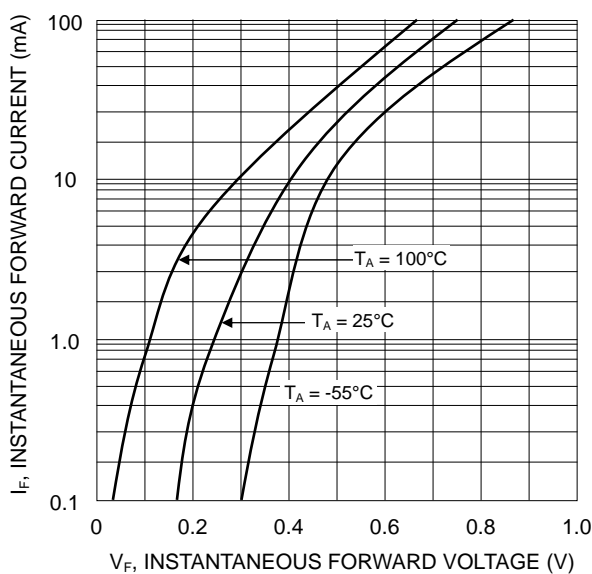


Fig. 2 Typical Forward Characteristics

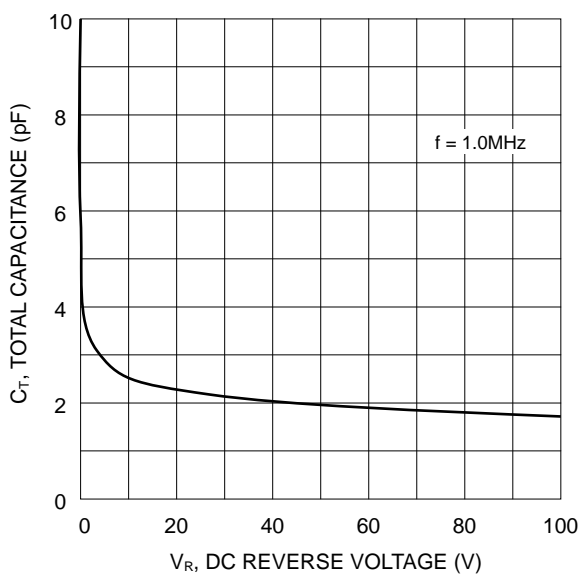


Fig. 3 Total Capacitance vs. Reverse Voltage

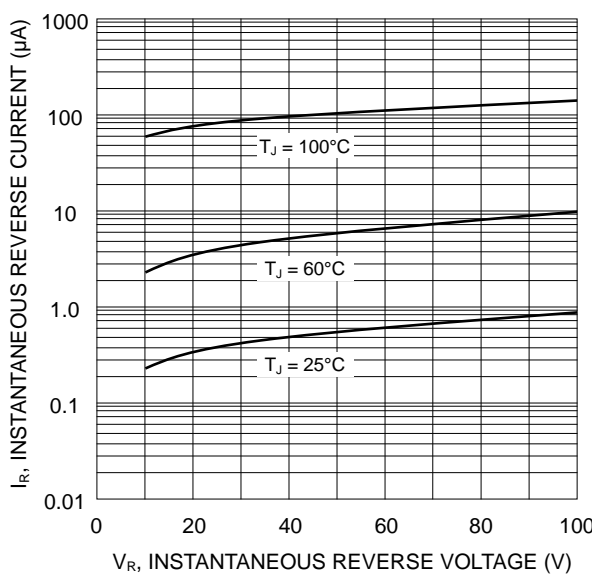



Fig. 4 Typical Reverse Characteristics

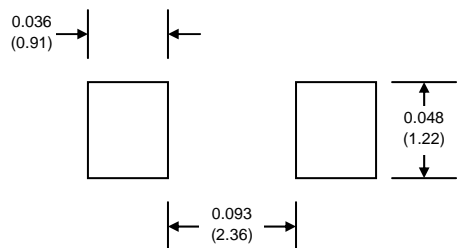
MARKING INFORMATION



xx = Device Code, See Table Below

Mfg Site	Device Code
TW Plant	S9
CN Plant	L6

RECOMMENDED FOOTPRINT



0.036 (0.91)

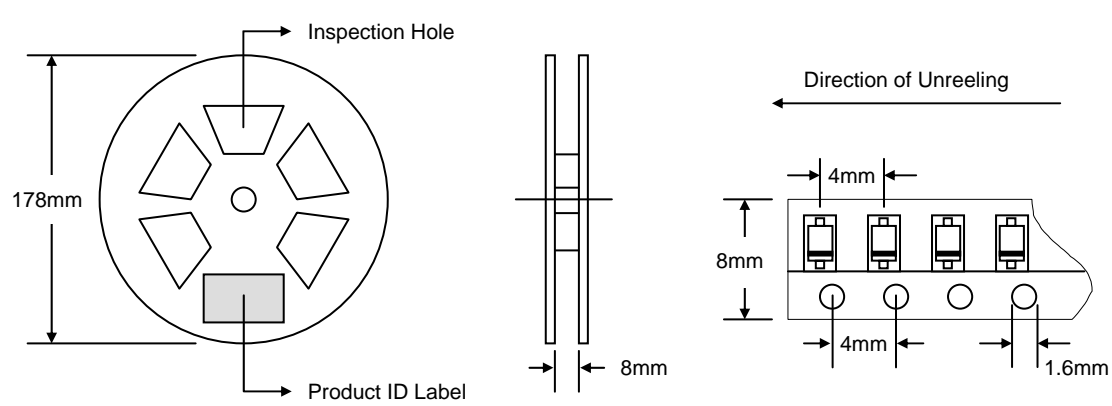
0.093 (2.36)

0.048 (1.22)

inches(mm)

PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	10.0

Note: 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
BAT46W-T1	SOD-123	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, BAT46W-T1-LF.**

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