

Features

- Low reverse current and low forward voltage.
- High reliability.
- Small surface mounting type.



SOD-123

Typical Applications

- For general purpose applications

Mechanical Data

- Case: SOD-123
- Molding compound, UL flammability classification rating 94V-0.
- Terminals: Tin plated leads, solderable per MIL-STD-202, Method 208.

Ordering Information

Part Number	Package	Shipping	Marking Code
SD103AW□	SOD-123	3000/Tape Reel	S4
SD103BW□	SOD-123	3000/Tape Reel	S5
SD103CW□	SOD-123	3000/Tape Reel	S6

□: none is for Lead Free package;
“G” is for Halogen Free package.

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

Characteristic	Symbol	SD103AW	SD103BW	SD103CW	Units
Peak repetitive reverse voltage	V_{RRM}	40	30	20	V
RMS Reverse voltage	V_{RMS}	28	21	14	V
Maximum average forward output current	$I_{F(AV)}$	350			mA
Peak forward surge current, 8.3ms single half-sine-wave	I_{FSM}	1.5			A

Thermal Characteristics

Characteristic	Symbol	Value	Units
Power dissipation	P_D	400	mW
Typical thermal resistance per leg	$R_{\theta JA}^*$	300	$^{\circ}\text{C/W}$
Operating junction temperature range	T_J	125	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

* Part mounted on FR-4 board with recommended pad layout

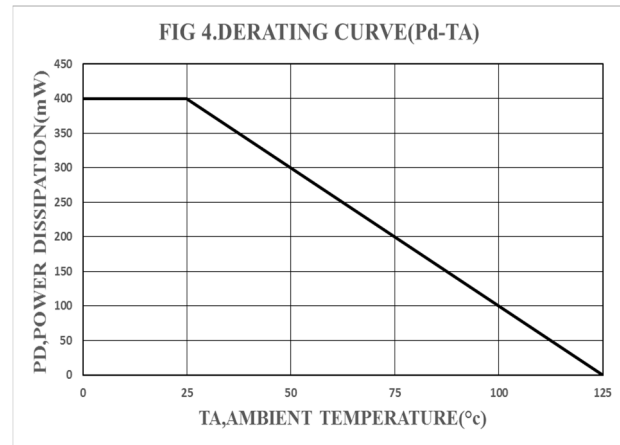
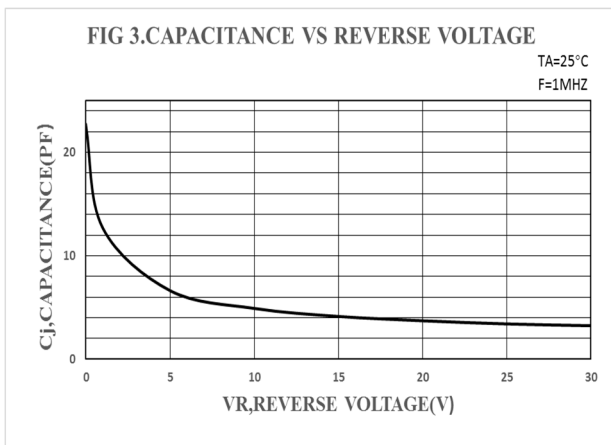
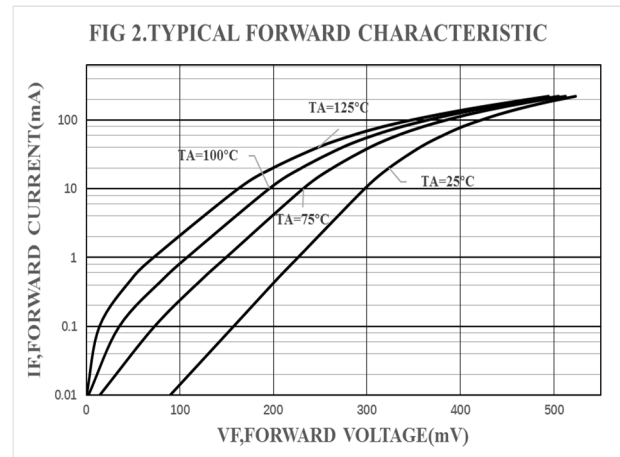
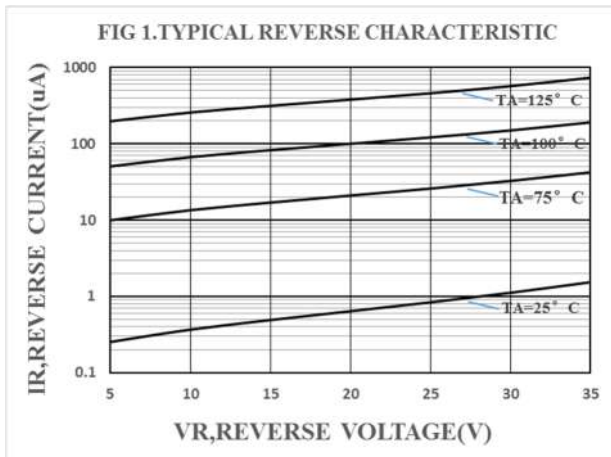
Electrical Characteristics (@ $T_A=25^\circ\text{C}$ unless otherwise specified)

Characteristic	Symbol	Test conditions	Min.	Typ.	Max.	Units
Forward Voltage	V_F^*	$I_F=20\text{mA}$	-	-	0.37	V
		$I_F=200\text{mA}$	-	-	0.60	
Maximum Peak Reverse Current	I_R^{**}	$V_R=30\text{V}$ (SD103AW) $V_R=20\text{V}$ (SD103BW) $V_R=10\text{V}$ (SD103CW)	-	-	5	μA
Capacitance between terminals	C_T	$V_R=0\text{V}, f=1\text{MHz}$	-	22	50	pF

*Pulse width $\leq 380\ \mu\text{s}$, Duty cycle $< 2\%$

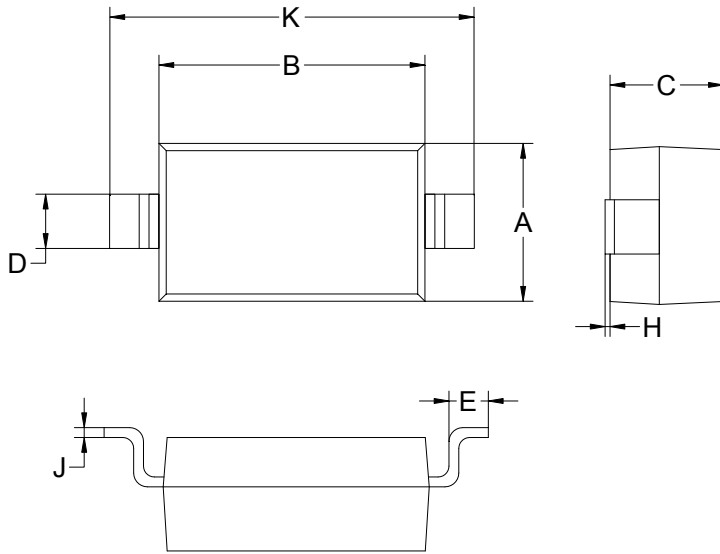
**pulse test, $t_p \leq 5\text{ms}$

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



Package Outline Dimensions (unit:mm)

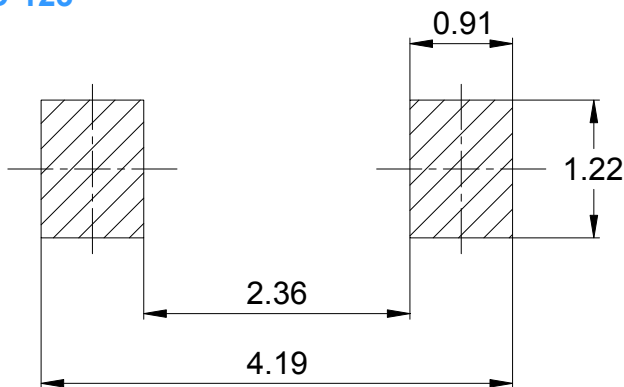
SOD-123



SOD-123		
Dim	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

Mounting Pad Layout (unit:mm)

SOD-123



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