

Features

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

HF

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CATHODE ANODE



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

Maximum Ratings (@T_A=25°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}	2			A

Thermal Characteristics

Characteristic	Symbol	Value	Units
Power dissipation	P _D	400	mW
Thermal Resistance Junction-to-Air	R _{θJA} *	250	°C/W
Thermal Resistance Junction-to-Case	R _{θJC} *	138	°C/W
Operating junction temperature range	T _J	125	°C
Storage temperature range	T _{STG}	-55 to +150	°C

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

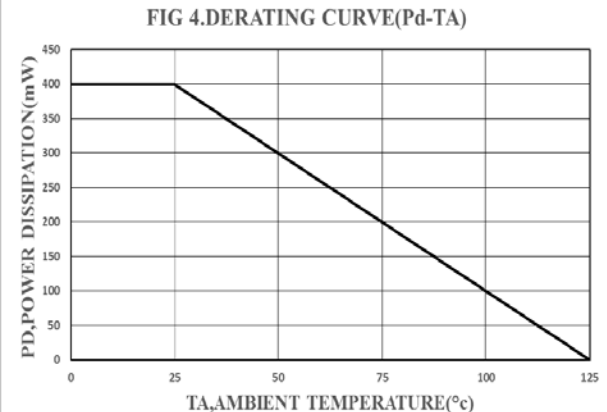
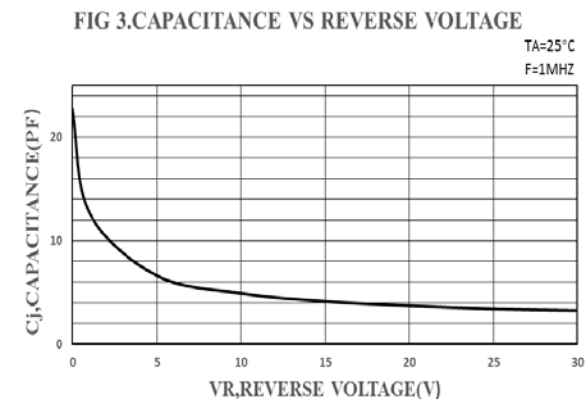
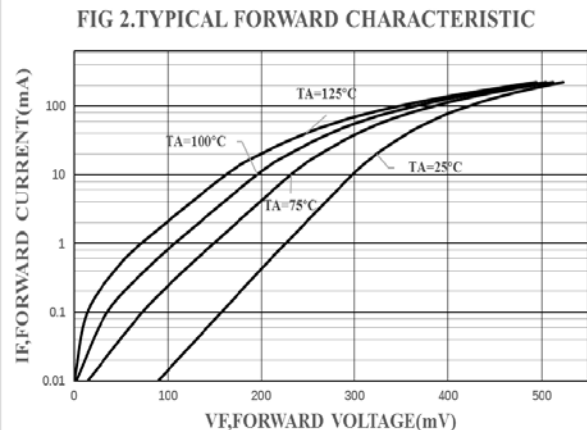
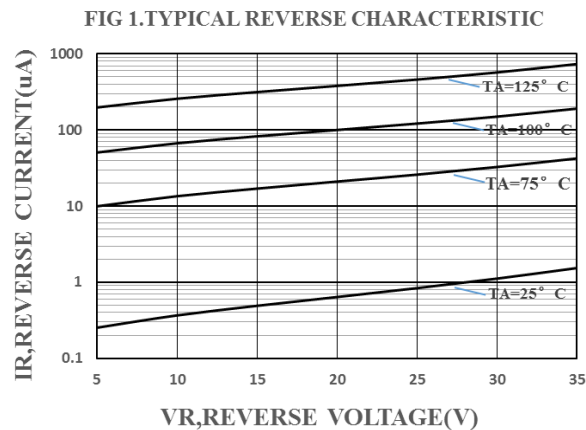
Electrical Characteristics (@ $T_A=25^\circ\text{C}$ unless otherwise specified)

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
Reverse Recovery Time	t_{rr}	$I_F=I_R=200\text{mA}$, $I_{rr}=0.1\times I_R, R_L=100\Omega$	-	10	-	ns

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

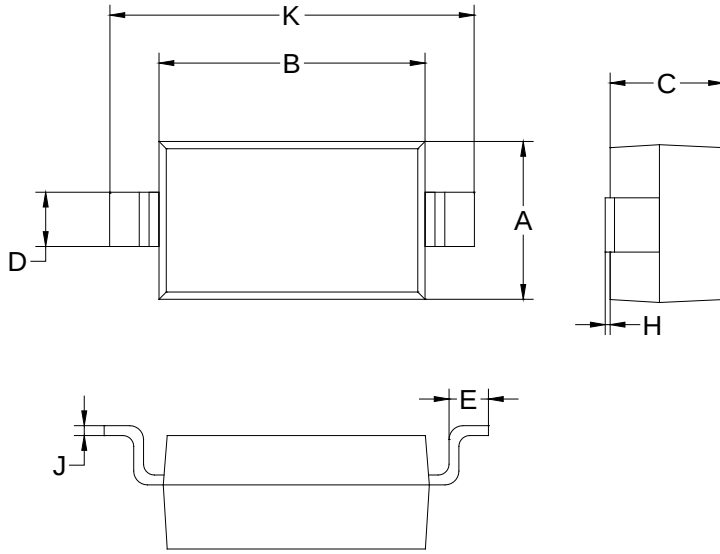
**pulse test, $t_p \leq 5\text{ms}$

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



Package Outline Dimensions(unit:mm)

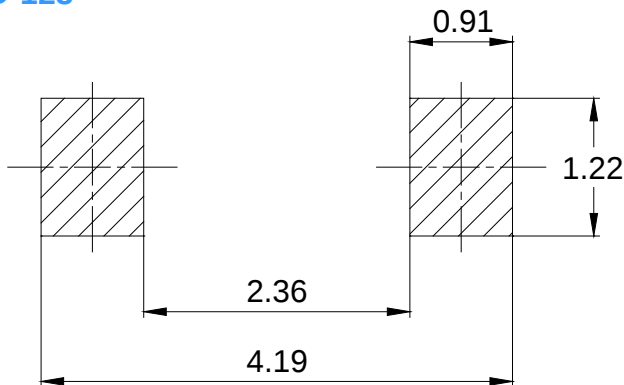
SOD-123



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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