



### 1. Features

SOD-123

- Very low leakage current
- Medium speed switching times



### 2. Mechanical Data

- Case:Molded Plastic,SOD-123.
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking:ZX
- Marking:marked on body.

### 3. Maximum Ratings

Electrical Characteristics Rating at 25°C ambient temperature unless otherwise specified.

Characteristic	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	$V_{RRM}$	130	V
Forward Continuous Current	$I_{FM}$	215	mA
Non-Repetitive Peak Forward Current $t = 1 \text{ ms}$	$I_{FSM}$	1	A
Power Dissipation	$P_D$	250	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	500	°C/W
Junction Temperature	$T_J$	-65 to +150	°C
Storage Temperature Range	$T_{stg}$	-65 to +150	°C

### 4. Electrical Characteristics ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameters	Symbol	Cindition	Min	TYP	Max	Unit
Reverse Breakdown Voltage	$V_{BR}$	$I_R = 100\mu\text{A}$	130	-	-	V
Forward Voltage	$V_F$	$I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 150\text{mA}$	-	-	0.9 1 1.1 1.25	V
Reverse Current	$I_R$	$V_R = 75\text{V}$ $V_R = 75\text{V}, T_J = 125^\circ\text{C}$	-	-	5 80	nA
Capacitance between terminals	$C_T$	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$	-	-	5	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10\text{mA}, I_{rr}=0.1*I_R,$ $R_L=100\Omega$	-	-	3	ns



5. Rating And Characteristic Curves

Fig.1 Forward Characteristics

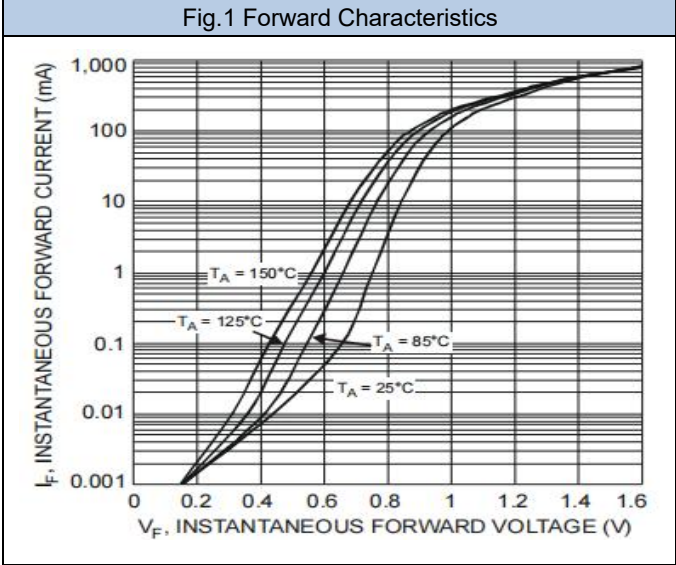


Fig.2 Reverse Characteristics

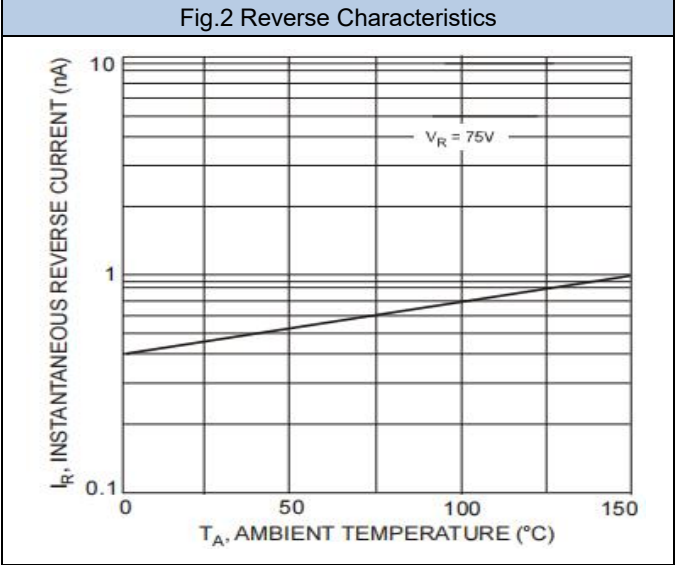
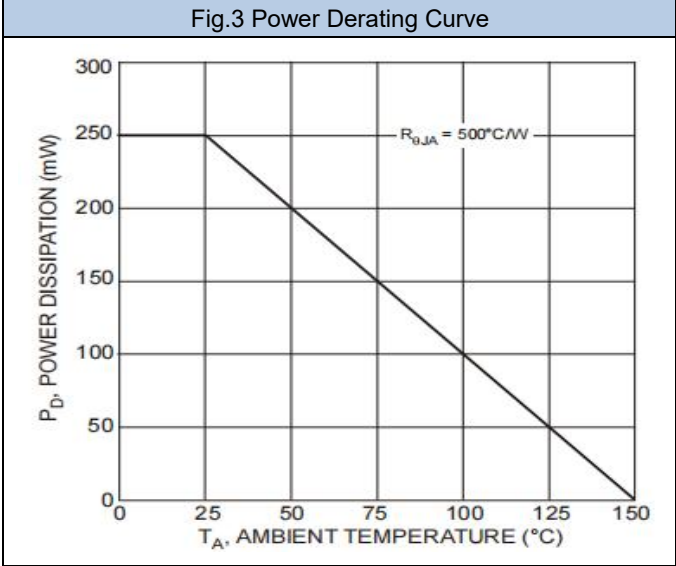
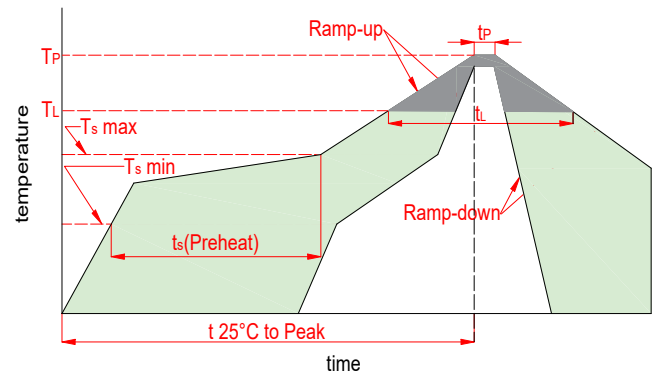


Fig.3 Power Derating Curve



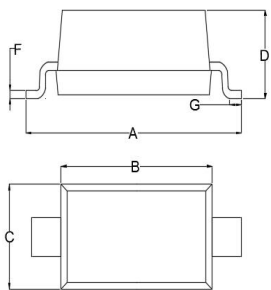


6. Soldering Parameters



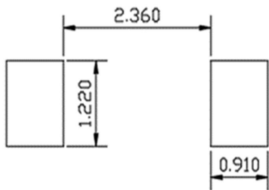
Reflow Condition		Lead-free
Pre Heat	Temp. min( $T_s$ (min))	150℃
	Temp. max( $T_s$ (min))	200℃
	Time(min to max)( $t_s$ )	60~120s
Aver. ramp up rate(Liquidus Temp.)( $T_L$ )to peak		3℃/s max
$T_s$ (max) to $T_L$ -Ramp-up Rate		3℃/s max
Reflow	Temp.( $T_L$ )(Liquidus)	217℃
	Temp.( $t_L$ )(Liquidus)	60~150s
Peak Temp.( $T_P$ )		260 <sup>+0/-5</sup> ℃
Time within actual peak Temp.( $t_p$ )		30s max
Ramp-down Rate		6℃/s max
Time 25℃ to peak Tempe.( $T_p$ )		8 minutes max
Do not exceed		260℃

7. Dimensions

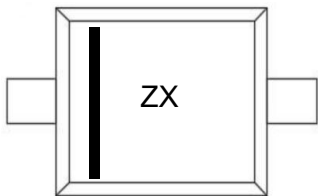


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.136	0.152	3.450	3.850
B	0.100	0.110	2.550	2.800
C	0.059	0.067	1.500	1.700
D	0.035	0.049	0.900	1.250
E	0.018	0.028	0.450	0.700
F	0.004	0.006	0.090	0.150
G	0.008	0.020	0.200	0.500
H	0.000	0.004	0.010	0.100

Mounting PAD Layout



8. Part Marking System



9. Package Information

Package	Type	Tape Width(mm)	Quantity(pcs)
SOD-123	BAV116W	8	3000



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