



1. Features

SOD-123

- High breakdown voltage
- Low forward voltage
- Surface mount device



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:XH
- Marking:marked on body.



3. Maximum Ratings

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

Characteristic	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Forward Current	I_F	150	mA
Repetitive Peak Forward Current	I_{FRM}	350	mA
Non-Repetitive Peak Forward Current $t = 10ms$	I_{FSM}	750	mA
Power Dissipation	P_D	200	mW
Thermal Resistance from Junction to Ambient Air	$R_{\theta JA}$	500	°C/W
Junction Temperature	T_J	-55 to+125	°C
Storage Temperature Range	T_{stg}	-55 to+150	°C

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

Parameters	Symbol	Cindition	Min	TYP	Max	Unit
Forward Voltage	V_F	$I_F = 0.1mA$	-	-	0.25	V
		$I_F = 10mA$			0.45	
		$I_F = 250mA$			1	
Reverse Current	I_R	$V_R = 75V$	-	-	5	μA
Capacitance between terminals	C_T	$V_R = 1\text{ V}, f = 1\text{ MHz}$	-	-	12	pF



5. Rating And Characteristic Curves

Fig.1 Forward Characteristics

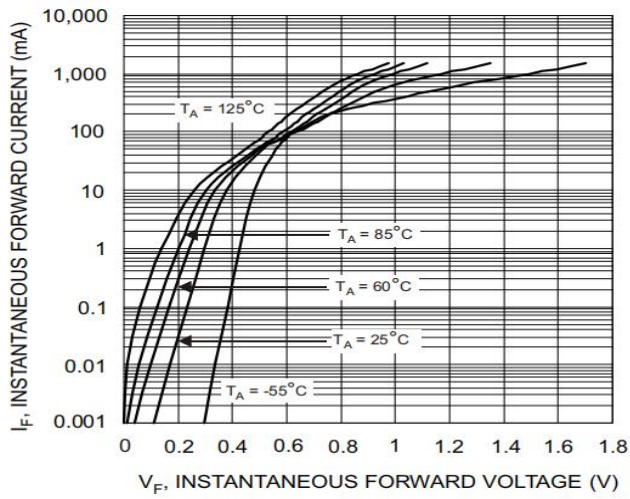


Fig.2 Reverse Characteristics

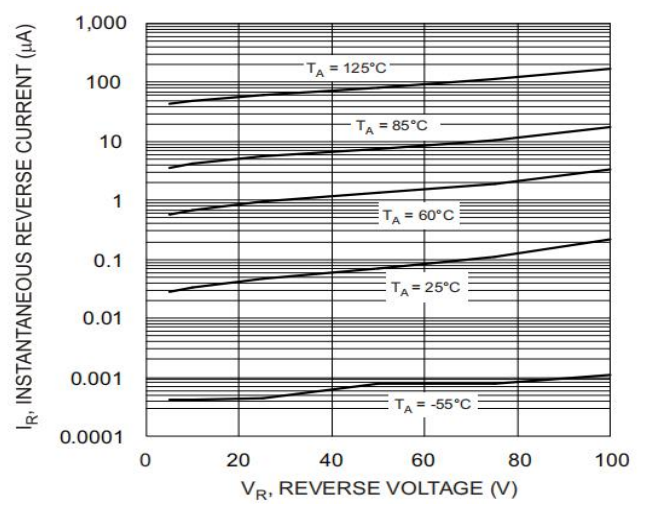


Fig.3 Capacitance Characteristics

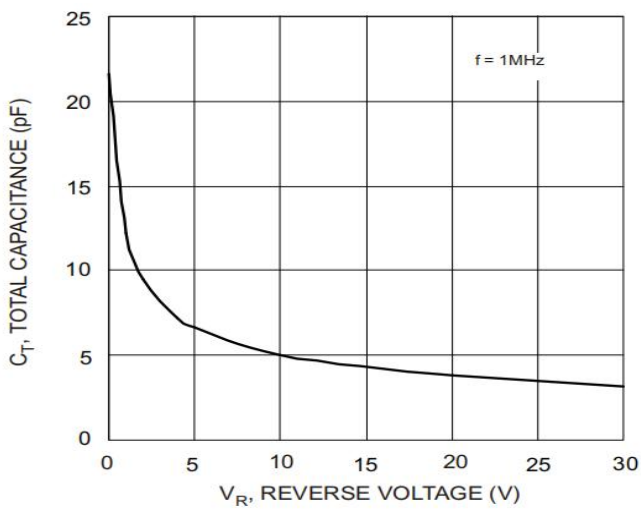
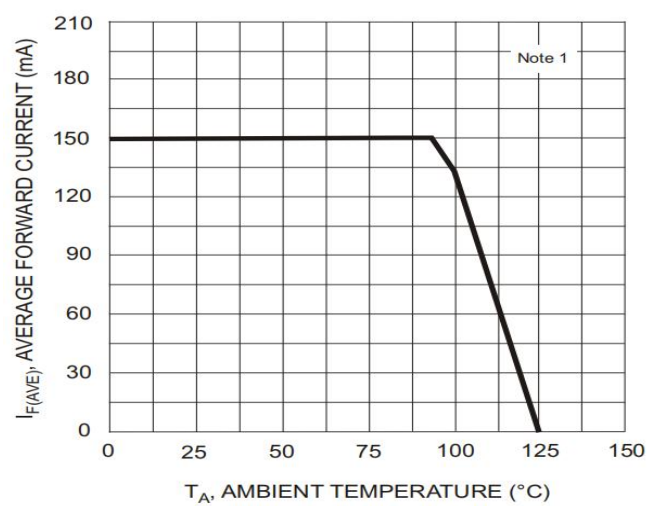
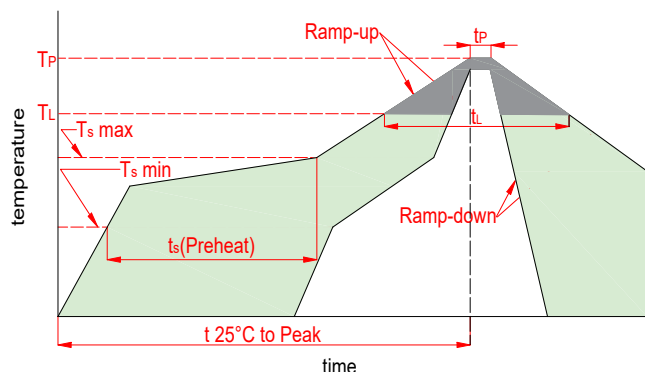


Fig.4 Forward Current Derating



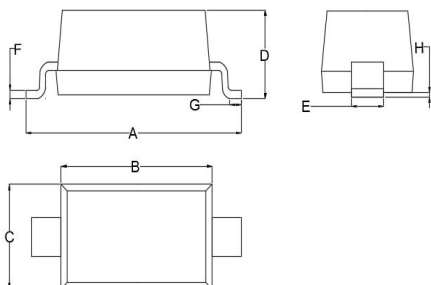


6. Soldering Parameters



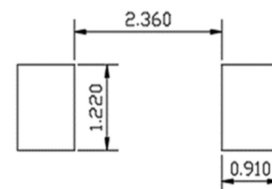
Reflow Condition		Lead-free
Pre Heat	Temp. min(T_s (min))	150°C
	Temp. max(T_s (min))	200°C
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3°C/s max
T_s (max) to T_L -Ramp-up Rate		3°C/s max
Reflow	Temp.(T_L)(Liquidus)	217°C
	Temp.(t_L)(Liquidus)	60~150s
Peak Temp.(T_P)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

7. Dimensions

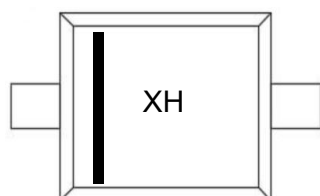


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.136	0.152	3.450	3.850
B	0.100	0.110	2.550	2.800
C	0.059	0.067	1.500	1.700
D	0.035	0.049	0.900	1.250
E	0.018	0.028	0.450	0.700
F	0.004	0.006	0.090	0.150
G	0.008	0.020	0.200	0.500
H	0.000	0.004	0.010	0.100

Mounting PAD Layout



8. Part Marking System



9. Package Information

Package	Type	Tape Width (mm)	Quantity(pcs)
SOD-123	BAT46W	8	3000



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