

**1. Features**

SOD-123

- Low forward voltage
- Fast switching

**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:YJ
- 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	$V_{RRM}$	40	V
DC Blocking Voltage	$V_R$	40	V
Forward Continuous Current	$I_F$	200	mA
Peak Forward Surge Current (at $t_p \leq 8.3$ ms)	$I_{FSM}$	600	mA
Power Dissipation	$P_d$	200	mW
Junction Temperature Range	$T_J$	-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	$V_{(BR)R}$	$I_R = 10\mu\text{A}$	40	-	-	V
Forward Voltage	$V_F$	$I_F = 1\text{mA}$ $I_F = 40\text{mA}$	-	-	0.38 1	V
Reverse Current	$I_R$	$V_R = 30\text{V}$	-	-	200	nA
Total Capacitance	$C_T$	$V_R = 0\text{ V}, f = 1\text{ MHz}$	-	-	5	pF



### 5. Rating And Characteristic Curves

Fig.1 Forward Characteristics

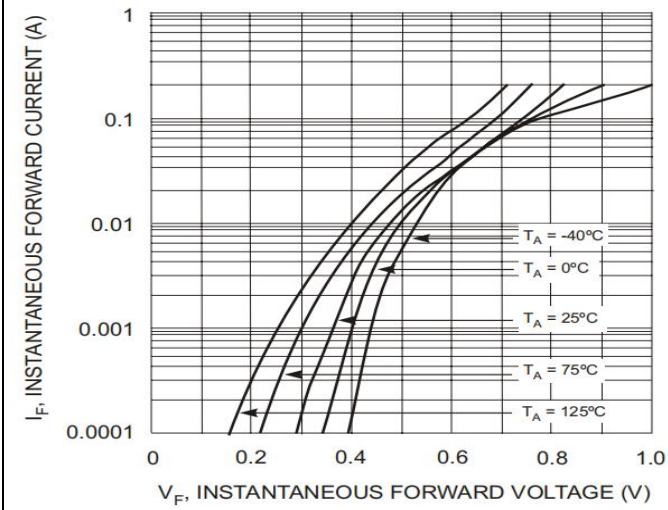


Fig.2 Reverse Characteristics

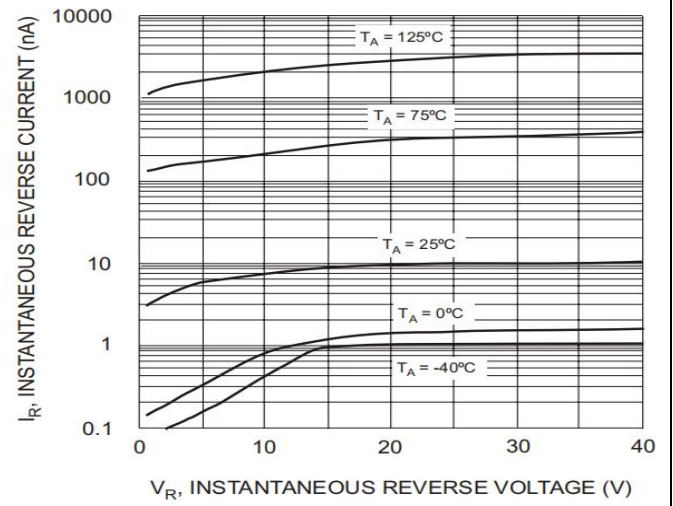


Fig.3 Capacitance Characteristics

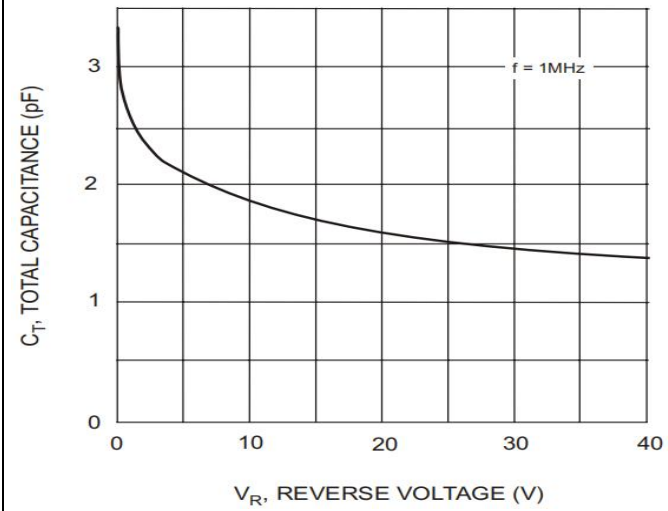
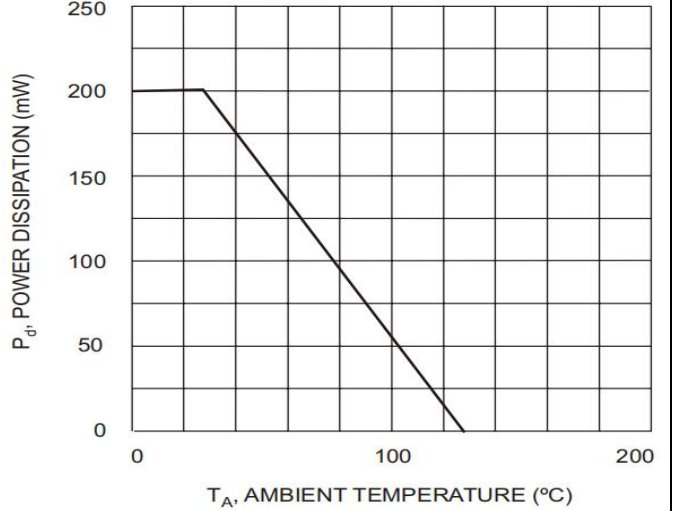
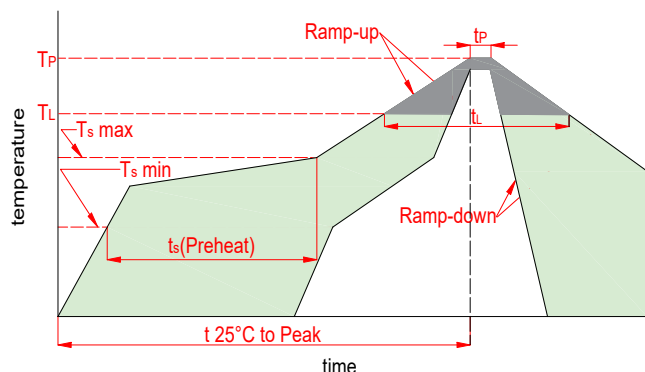


Fig.4 Power Derating Curve



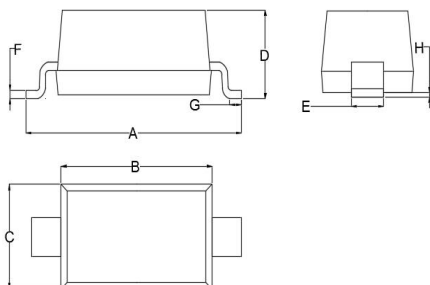


## 6. Soldering Parameters



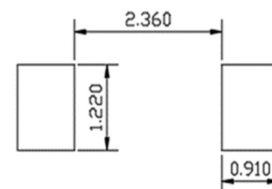
Reflow Condition		Lead-free
Pre Heat	Temp. min( $T_s$ (min))	150℃
	Temp. max( $T_s$ (min))	200℃
	Time(min to max)( $t_s$ )	60~120s
Aver. ramp up rate(Liquidus Temp.)( $T_L$ )to peak		3℃/s max
$T_s$ (max) to $T_L$ -Ramp-up Rate		3℃/s max
Reflow	Temp.( $T_L$ )(Liquidus)	217℃
	Temp.( $t_L$ )(Liquidus)	60~150s
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

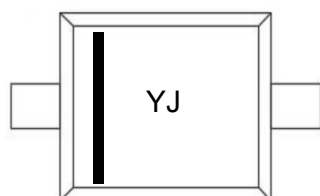


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.136	0.152	3.450	3.850
B	0.100	0.110	2.550	2.800
C	0.059	0.067	1.500	1.700
D	0.035	0.049	0.900	1.250
E	0.018	0.028	0.450	0.700
F	0.004	0.006	0.090	0.150
G	0.008	0.020	0.200	0.500
H	0.000	0.004	0.010	0.100

Mounting PAD Layout



## 8. Part Marking System



## 9. Package Information

Package	Type	Tape Width (mm)	Quantity(pcs)
SOD-123	BAS40W1	8	3000



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