



### 1. Features

- Fast Switching Speed:Max 6ns.
- Silicon Epitaxial Planar Diodes.
- Power Dissipation of 200mW.
- High Stability and High Reliability
- For General Purpose switching Applications.

SOD-323



### 2. Mechanical Data

- Case:Molded Plastic,SOD-323.
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking:A6
- 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	$V_{RRM}$	100	V
DC Blocking Voltage	$V_R$	75	V
Forward Continuous Current(Note 1)	$I_{F(AV)}$	250	mA
Non-Repetitive Peak Forward Current $t = 1.0\text{ s}$	$I_{FSM}$	0.5	A
Non-Repetitive Peak Forward Current $t = 1\text{ms}$		1	
Non-Repetitive Peak Forward Current $t = 1\mu\text{s}$		2	
Power Dissipation(Note 1)	$P_D$	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	635	°C/W
Operating Temperature Range	$T_j$	-65 to+150	°C
Operating And 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
Forward Voltage	$V_F$	$I_F = 1\text{mA}$	-	-	0.715	V
		$I_F = 10\text{mA}$			0.855	
		$I_F = 50\text{mA}$			1	
		$I_F = 100\text{mA}$			1.25	
Leakage current	$I_R$	$V_R = 75\text{V}$	-	-	1	$\mu\text{A}$
		$V_R = 20\text{V } T_a=150^\circ\text{C}$			30	
		$V_R = 75\text{V } T_a=150^\circ\text{C}$			50	
Junction Capacitance	$C_j$	$V_R = 0\text{ V}, f = 1\text{ MHz}$			2	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10\text{mA}, I_{rr}=0.1*I_R,$ $R_L=100\Omega$	-	-	6	ns
Reverse Breakdown Voltage	$V_{BR}$	$I_R = 1\mu\text{A}$	75			V

Notes:1.Valid provided electrodes are kept at ambient temperture.



### 5. Rating And Characteristic Curves

Fig.1 Forward Characteristics

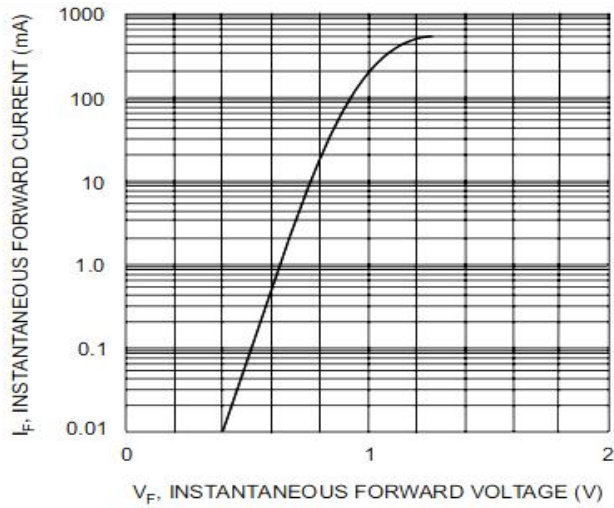


Fig.2 Leakage Current vs Junction Temperature

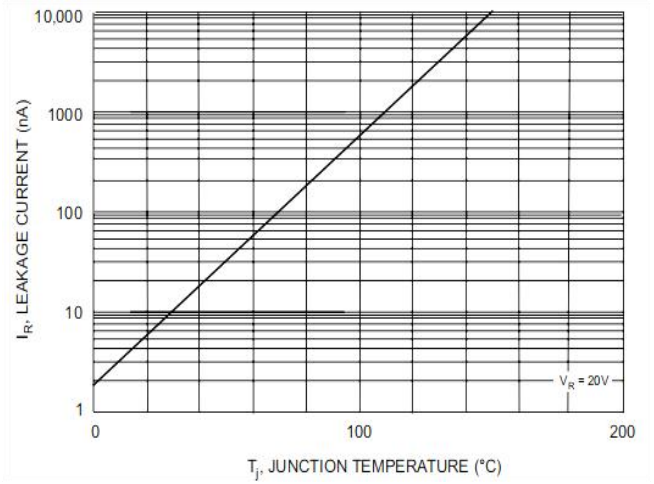
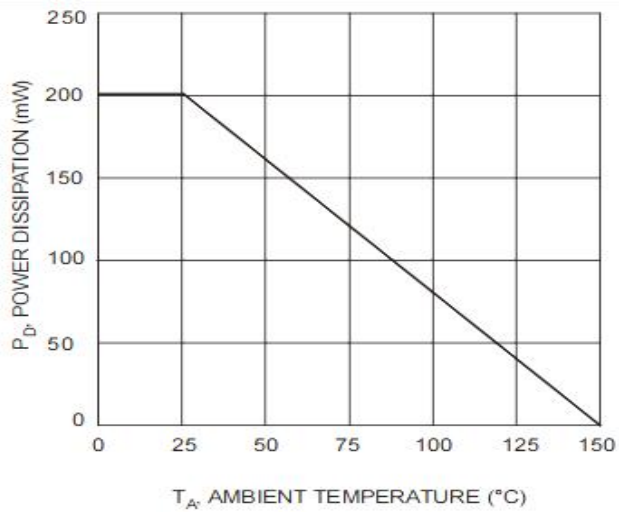
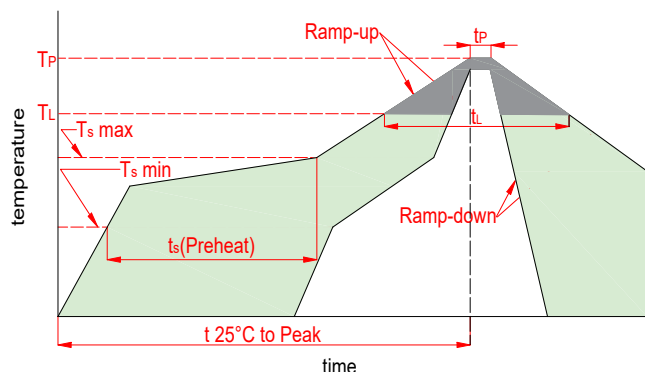


Fig.3 Power Derating Curve



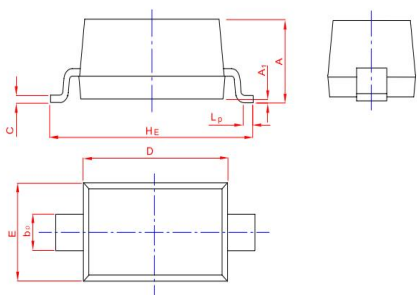


## 6. Soldering Parameters



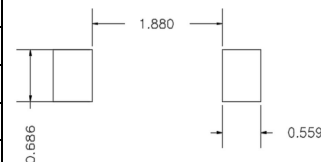
Reflow Condition		Lead-free
Pre Heat	Temp. min( $T_s$ (min))	150℃
	Temp. max( $T_s$ (min))	200℃
	Time(min to max)( $t_s$ )	60~120s
Aver. ramp up rate(Liquidus Temp.)( $T_L$ )to peak		3℃/s max
$T_s$ (max) to $T_L$ -Ramp-up Rate		3℃/s max
Reflow	Temp.( $T_L$ )(Liquidus)	217℃
	Temp.( $t_L$ )(Liquidus)	60~150s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

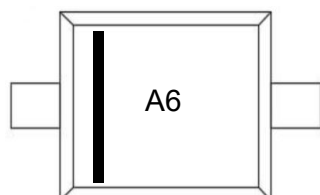


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.031	0.047	0.800	1.200
bp	0.010	0.016	0.250	0.400
C	0.003	0.006	0.080	0.150
D	0.063	0.071	1.600	1.800
E	0.045	0.055	1.150	1.400
HE	0.091	0.110	2.300	2.800
A1	0.000	0.004	0.010	0.100
LP	0.008	0.020	0.200	0.500

Mounting PAD Layout



## 8. Part Marking System



## 9. Package Information

Package	Type	Marking Code	Tape Width (mm)	Quantity(pcs)
SOD-323	BAS16WS	A6	8	3000



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