



BAV19WS THRU BAV21WS

SWITCHING DIODE

1. Features

SOD-323

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance



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:BAV19WS: JX; BAV20WS: T2; BAV21WS: T3
- Marking:marked on body.



3. Maximum Ratings

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

Characteristic	Symbol	BAV19WS	BAV20WS	BAV21WS	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	120	200	250	V
Peak Repetitive Peak Reverse Voltage	V_{RRM}	100	150	200	V
Working Peak Reverse Voltage	V_{RWM}	100	150	200	V
DC Blocking Voltage	V_R	100	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	71	106	141	V
Forward Continuous Current	I_{FM}	400			mA
Average Rectified Output Current	I_O	200			mA
Non-Repetitive Peak Forward Current $t = 1.0 \mu s$	I_{FSM}	4			A
Power Dissipation	P_D	250			mW
Junction Temperature	T_J	-65 to +150			°C
Storage Temperature Range	T_{stg}	-65 to +150			°C

4. Electrical Characteristics ($T_A=25^\circ C$ unless otherwise noted)

Parameters	Symbol	Cindition	Min	TYP	Max	Unit
Forward Voltage	V_F	$I_F = 0.1A$ $I_F = 0.2A$	-	-	1.0 1.25	V
Reverse Current	I_R	BAS19WS $V_R = 100V$	-	-	0.1	μA
		BAS20WS $V_R = 150V$	-	-	0.1	μA
		BAS21WS $V_R = 200V$	-	-	0.1	μA
Capacitance between terminals	C_T	$V_R = 0 V, f = 1 MHz$	-	-	5	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=30mA, I_{rr}=0.1*I_R,$ $R_L=100\Omega$	-	-	50	ns



5. Rating And Characteristic Curves

Fig.1 Forward Characteristics

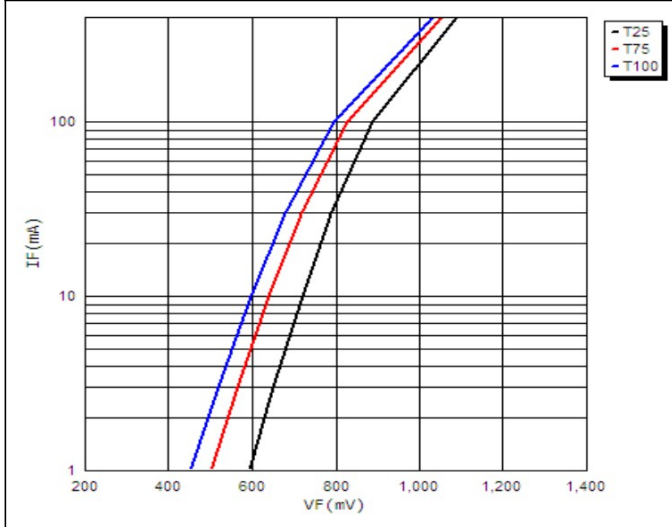


Fig.2 Reverse Characteristics

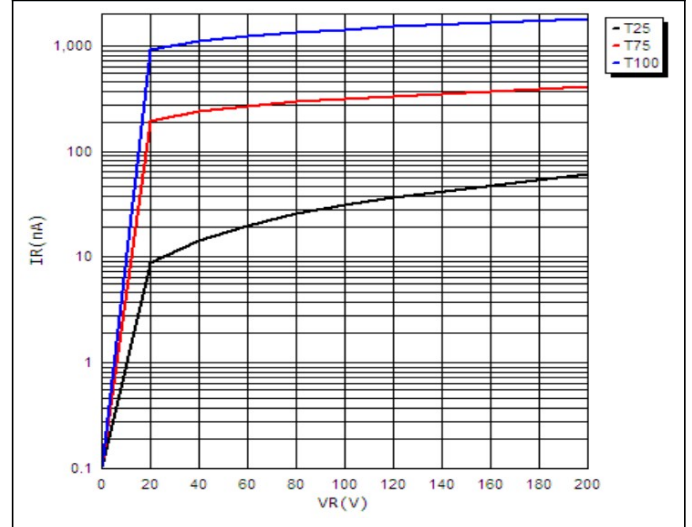


Fig.3 Capacitance Characteristics

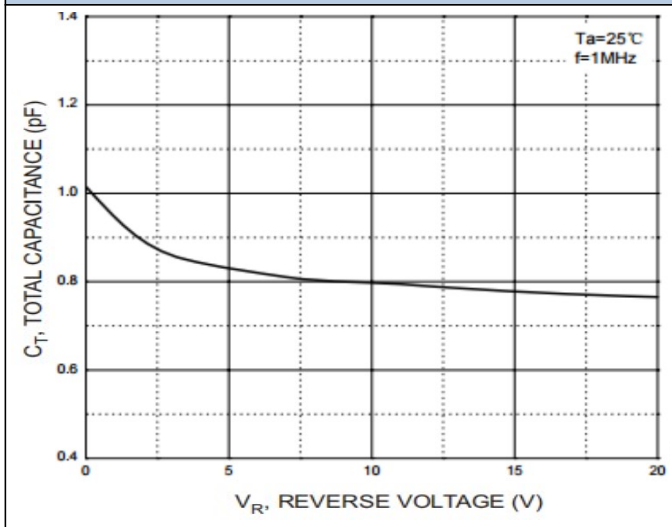
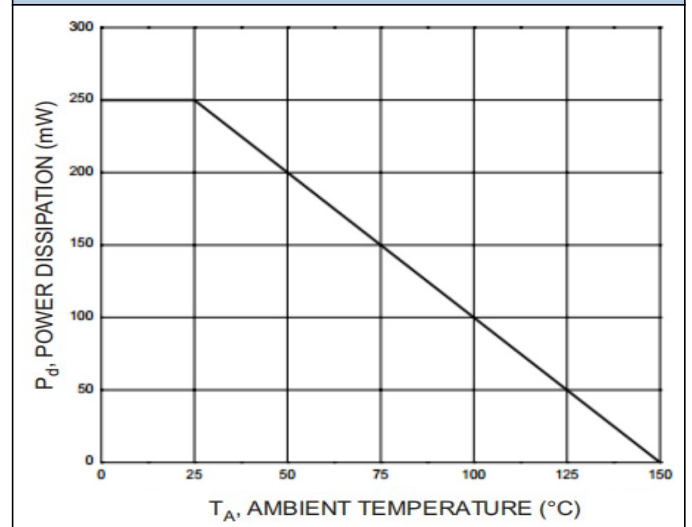
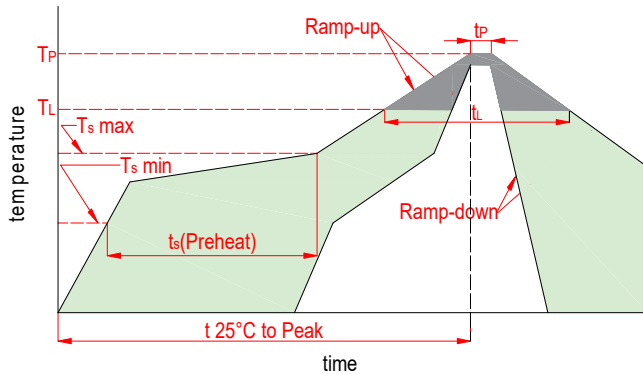


Fig.4 Power Derating Curve



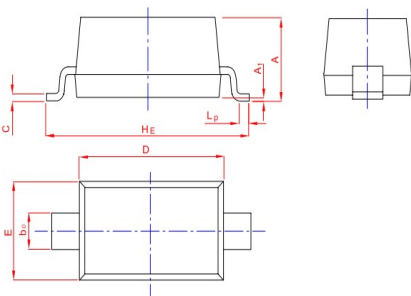


6. Soldering Parameters



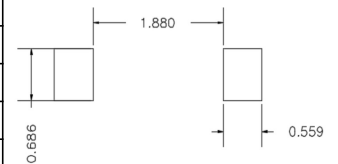
Reflow Condition		Lead-free
Pre Heat	Temp. min(T_s (min))	150°C
	Temp. max(T_s (min))	200°C
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3°C/s max
T_s (max) to T_L -Ramp-up Rate		3°C/s max
Reflow	Temp. (T_L)(Liquidus)	217°C
	Temp. (t_L)(Liquidus)	60~150s
Peak Temp. (T_P)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

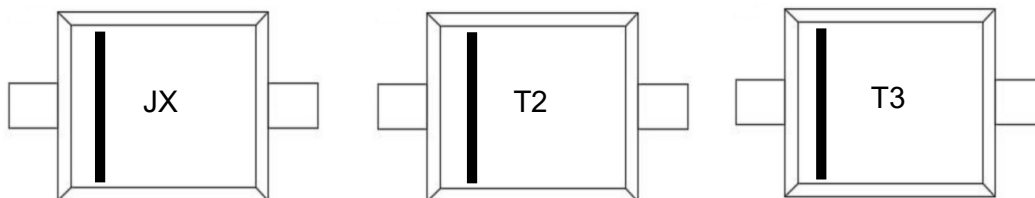


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.031	0.047	0.800	1.200
bp	0.010	0.016	0.250	0.400
C	0.003	0.006	0.080	0.150
D	0.063	0.071	1.600	1.800
E	0.045	0.055	1.150	1.400
HE	0.091	0.110	2.300	2.800
A1	0.000	0.004	0.010	0.100
Lp	0.008	0.020	0.200	0.500

Mounting PAD Layout



8. Part Marking System



9. Package Information

Package	Part Number	Marking Code	Quantity(pcs)
SOD323	BAV19WS	JX	3000
SOD323	BAV20WS	T2	3000
SOD323	BAV21WS	T3	3000



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