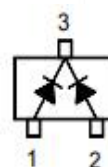
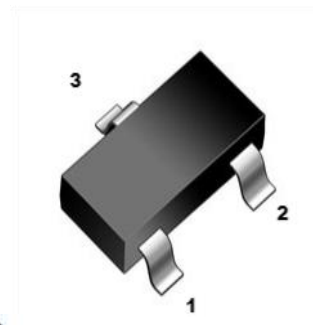




1. Features

- Very low leakage current
- Medium speed switching times
- Series pair configuration

SOT-23



2. Mechanical Data

- Case: Molded Plastic, SOT-23.
- Epoxy: UL 94V-0 rate flame retardant.
- Terminals: Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking: C7
- Mounting Position : Any.

3. Maximum Ratings

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	85	V
Reverse Voltage	V_R	85	V
Forward Current	$I_{F(AV)}$	215 125	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	@ $t=1\mu s$ 4	A
		@ $t=1ms$ 1	
		@ $t=1s$ 0.5	
Power Dissipation	P_D	250	mW
Thermal Resistance from Junction to Ambient Air	$R_{\theta JA}$	500	°C/W
Junction Temperature	T_J	-65 to +150	°C
Storage Temperature Range	T_{stg}	-65 to +150	°C

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

Parameters	Symbol	Condition	Min	TYP	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R = 100\mu A$	85	-	-	V
Forward Voltage	V_F	$I_F = 1mA$	-	-	0.9	V
		$I_F = 10mA$	-	-	1	
		$I_F = 50mA$	-	-	1.1	
		$I_F = 150mA$	-	-	1.25	
Reverse Current	I_R	$V_R = 75V$	-	-	5	nA
		$V_R = 75V, T_J = 150^\circ C$	-	-	80	
Total Capacitance	C_T	$V_R = 0V, f = 1MHz$	-	2	-	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10mA, I_{rr} = 0.1 * I_R, R_L = 100\Omega$	-	-	3	μs



5. Rating And Characteristic Curves

Fig. 1 Typical Forward Characteristics

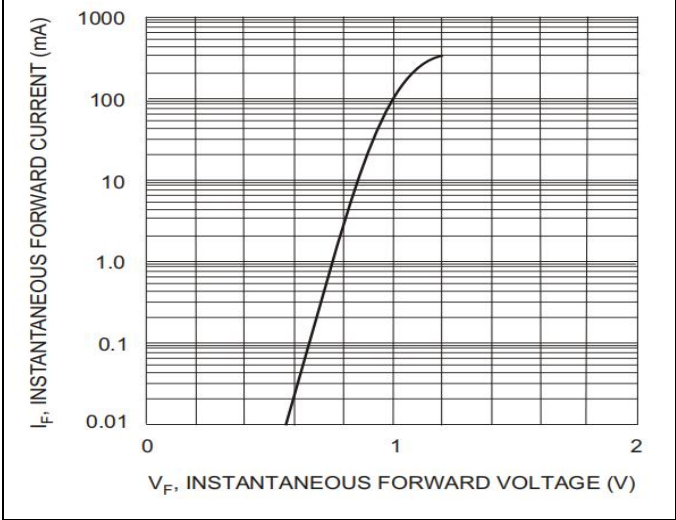


Fig. 2 Typical Reverse Characteristics

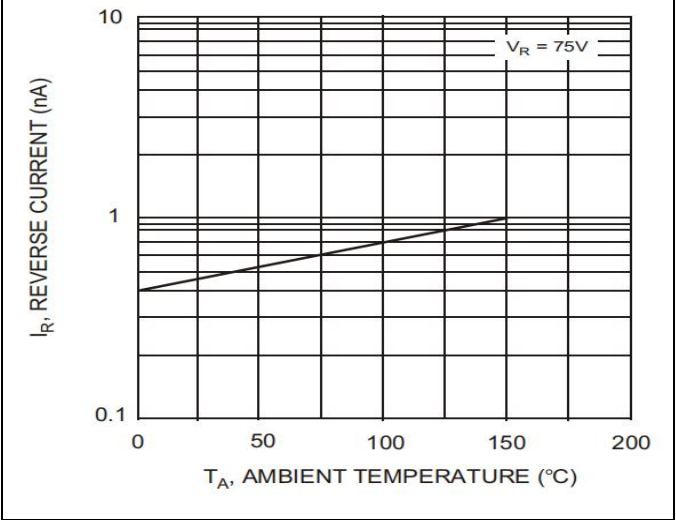


Fig.3 Current Derating Curve

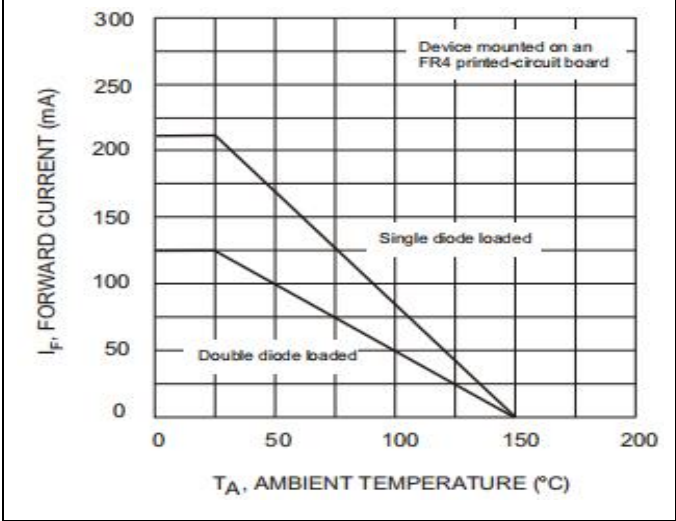
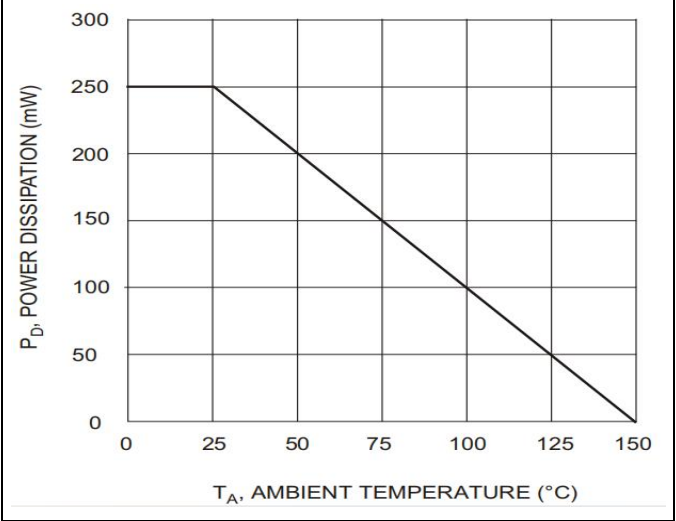
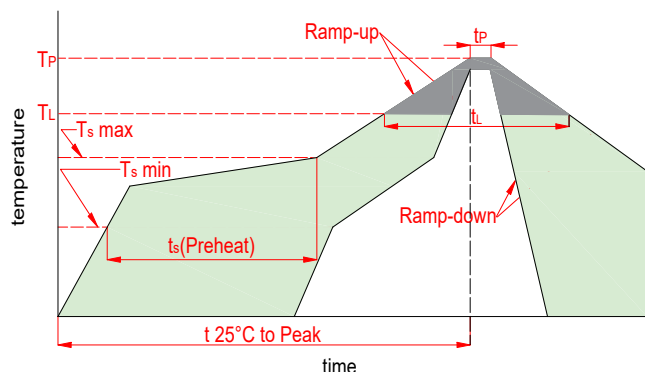


Fig.4 Power Derating Curve



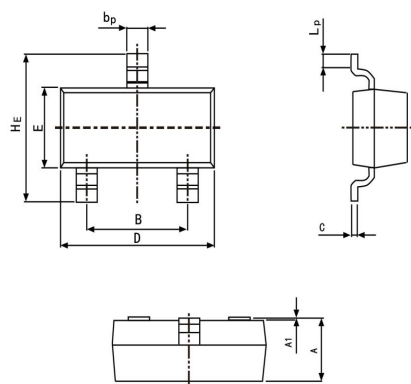


6. Soldering Parameters



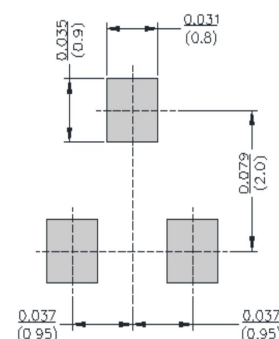
Reflow Condition		Lead-free
Pre Heat	Temp. min(T_s (min))	150℃
	Temp. max(T_s (min))	200℃
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3℃/s max
T_s (max) to T_L -Ramp-up Rate		3℃/s max
Reflow	Temp.(T_L)(Liquidus)	217℃
	Temp.(t_L)(Liquidus)	60~150s
Peak Temp.(T_P)		260 ^{+0/-5} ℃
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

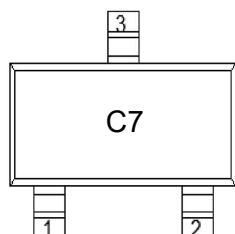


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.035	0.045	0.90	1.15
B	0.070	0.081	1.78	2.05
bp	0.012	0.020	0.30	0.51
C	0.003	0.007	0.08	0.18
D	0.110	0.118	2.80	3.00
E	0.047	0.055	1.20	1.40
HE	0.087	0.110	2.20	2.80
A1	0.000	0.004	0.00	0.10
LP	0.008	0.020	0.20	0.50

Mounting PAD Layout



8. Part Marking System



9. Package Information

Package	Part Number	Tape Width(mm)	Quantity(pcs)
SOT-23	BAV170	8	3000



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