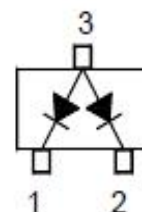
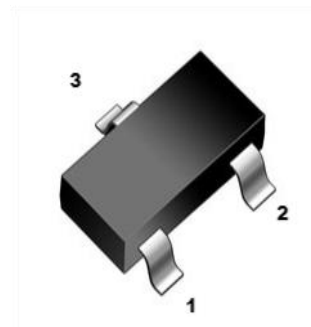




## 1. Features

- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance

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:A1
- 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	$V_{RRM}$	85	V
Reverse Voltage	$V_R$	75	V
Continuous Forward Current(Double Diode Loaded)	$I_F$	125	mA
Continuous Forward Current(Single Diode Loaded)	$I_F$	215	mA
Repetitive Peak Forward Current	$I_{FRM}$	450	mA
Non-Repetitive Peak Forward Current	$I_{FSM}$	0.5	A
		1	
		4	
Power Dissipation	$P_{tot}$	350	mW
Thermal Resistance from Junction to Ambient Air	$R_{\theta JA}$	357	°C/W
Junction Temperature	$T_J$	-65 to+150	°C
Storage Temperature Range	$T_{stg}$	-65 to+150	°C

## 4. Electrical Characteristics ( $T_a=25^\circ\text{C}$ 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	
		$I_F = 150\text{mA}$			1.25	
Reverse Current	$I_R$	$V_R = 25\text{V}$	-	-	30	nA
		$V_R = 75\text{V}$	-	-	1	μA
		$V_R = 25\text{V}, T_J=150^\circ\text{C}$	-	-	30	μA
		$V_R = 75\text{V}, T_J=150^\circ\text{C}$	-	-	50	μA
Diode Capacitance	$C_d$	$V_R = 0\text{V}, f = 1\text{MHz}$	-	-	2	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10\text{mA}$ $R_L=100\Omega$	-	-	4	ns



5. Rating And Characteristic Curves

Fig.1 Forward Characteristics

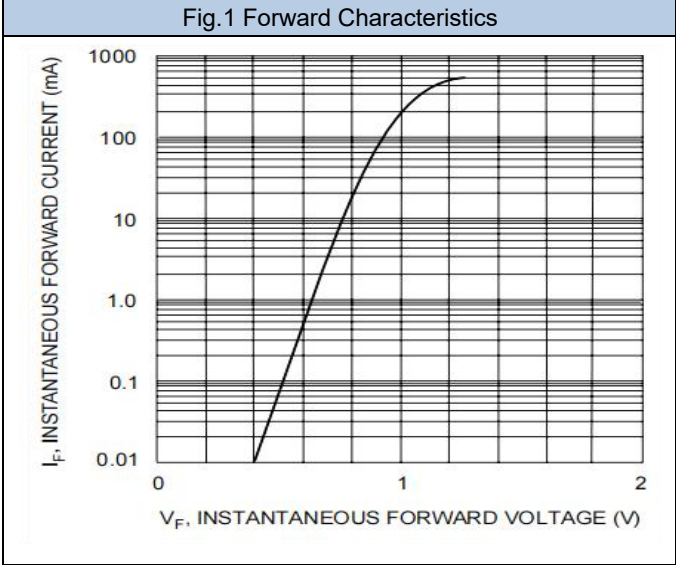


Fig.2 Leakage Current vs Junction Temperature

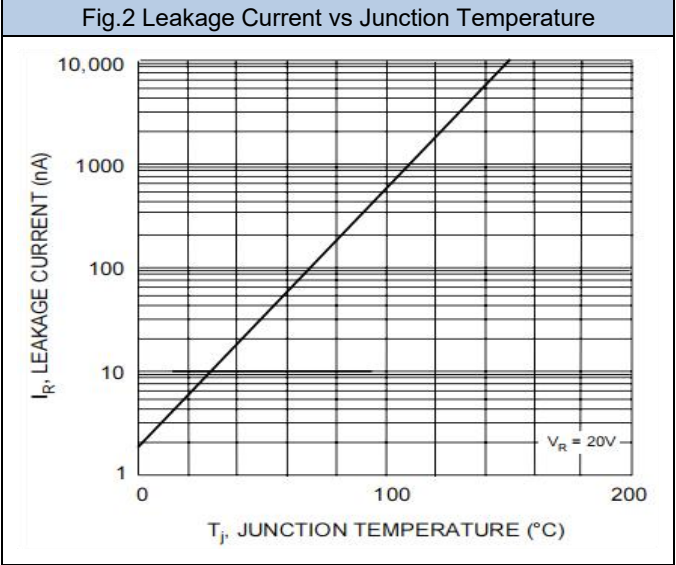
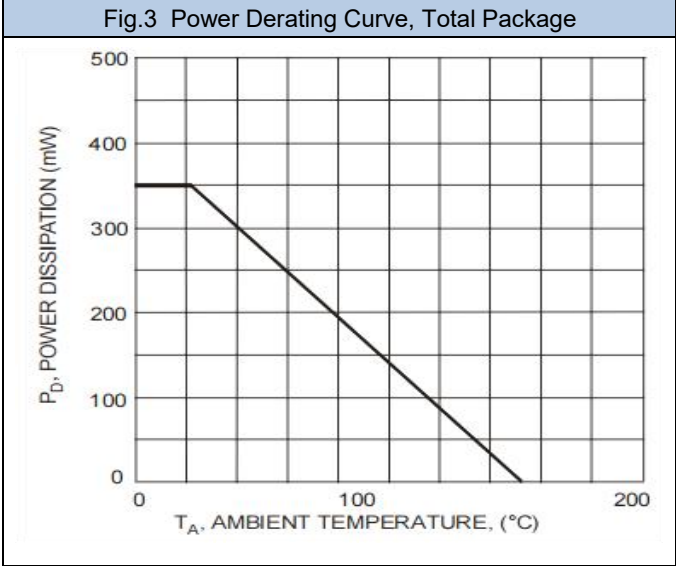
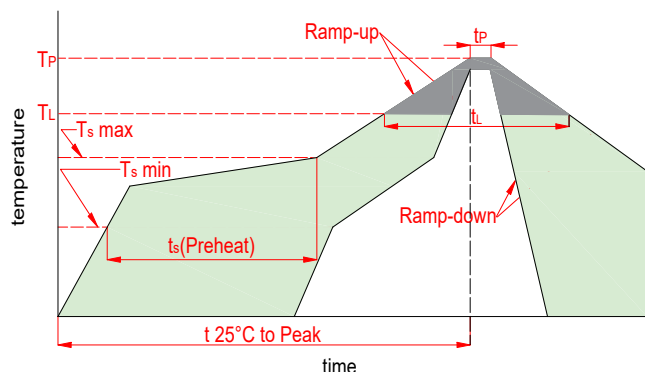


Fig.3 Power Derating Curve, Total Package



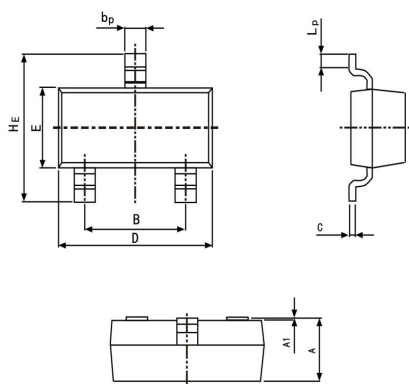


## 6. Soldering Parameters



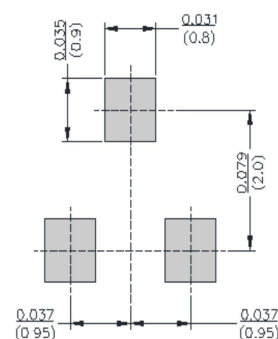
Reflow Condition		Lead-free
Pre Heat	Temp. min( $T_s$ (min))	150°C
	Temp. max( $T_s$ (min))	200°C
	Time(min to max)( $t_s$ )	60~120s
Aver. ramp up rate(Liquidus Temp.)( $T_L$ )to peak		3°C/s max
$T_s$ (max) to $T_L$ -Ramp-up Rate		3°C/s max
Reflow	Temp.( $T_L$ )(Liquidus)	217°C
	Temp.( $t_L$ )(Liquidus)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

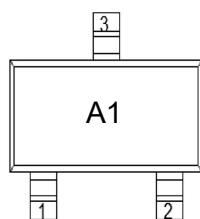


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.035	0.045	0.90	1.15
B	0.070	0.081	1.78	2.05
bp	0.012	0.020	0.30	0.51
C	0.003	0.007	0.08	0.18
D	0.110	0.118	2.80	3.00
E	0.047	0.055	1.20	1.40
HE	0.087	0.110	2.20	2.80
A1	0.000	0.004	0.00	0.10
LP	0.008	0.020	0.20	0.50

Mounting PAD Layout



## 8. Part Marking System



## 9. Package Information

Package	Part Number	Tape Width(mm)	Quantity(pcs)
SOT-23	BAW56	8	3000



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