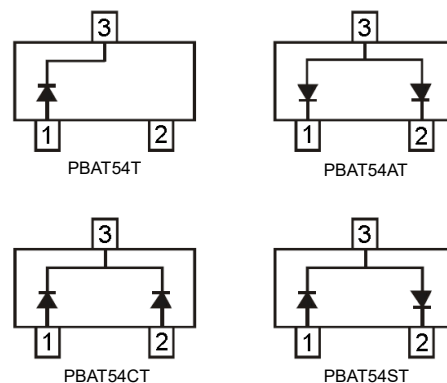


## Features

- Low forward voltage
- Guard ring protected

## Applications

- Ultra high-speed switching
- Voltage clamping
- Protection circuits
- Blocking diodes.



## Mechanical Characteristics

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 um
- Pin flatness : ≤3mil

## Absolute maximum rating@25°C

Parameter	Symbol	limits	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	30	V
Working Peak Reverse Voltage	$V_{RWM}$	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Power Dissipation	$P_D$	150	mW
Operating Junction temperature	$T_J$	125	°C
Storage temperature	$T_{stg}$	-55 to +150	°C
Average Rectified Output Current	$I_O$	600	mA
Repetitive Peak Forward Surge Current @t=8.3ms	$I_{FSM}$	300	mA
Peak Forward Surge Current @tp=1s; δ≤0.5	$I_{FRM}$	2.0	A
Thermal resistance from Junction to Ambient	$R_{\theta JA}$	600	°C/W

## Electrical characteristics per line@25°C

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse voltage	$V_R$	$I_R=100\mu A$	30	-	-	V
Forward voltage	$V_F$	$I_F=1mA$	-	-	0.32	V
		$I_F=10mA$	-	-	0.4	
		$I_F=30mA$	-	-	0.5	
		$I_F=100mA$	-	-	1.0	
Reverse current	$I_R$	$V_R=25V$	-	-	2.0	$\mu A$
Reverse Recovery Time	$T_{RR}$	$I_F=I_R=10mA, R_L=100\Omega, I_{RR}=0.1 \times I_R$	-	-	5.0	nS

## Typical Characteristics

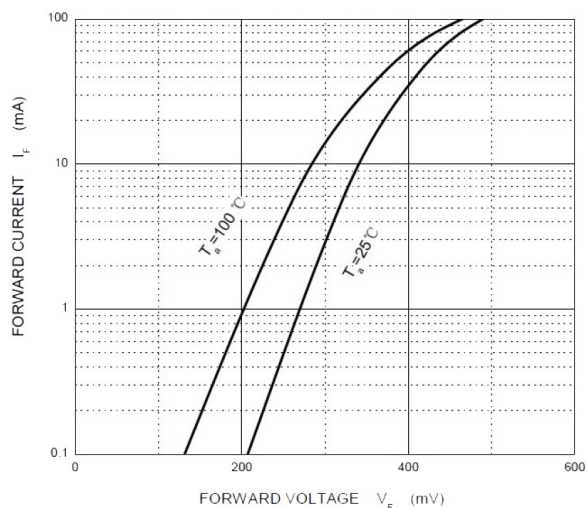


Fig1 Forward Characteristics

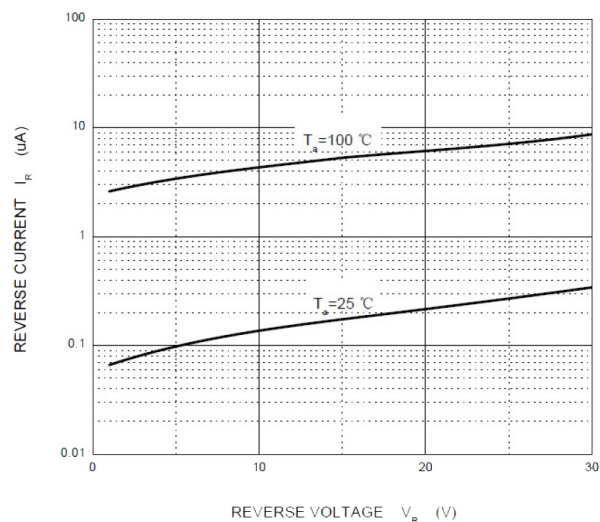


Fig2 Reverse Characteristics

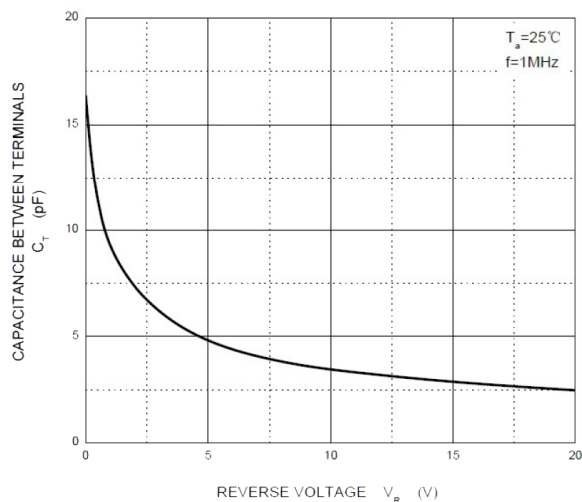


Fig3 Capacitance Characteristics

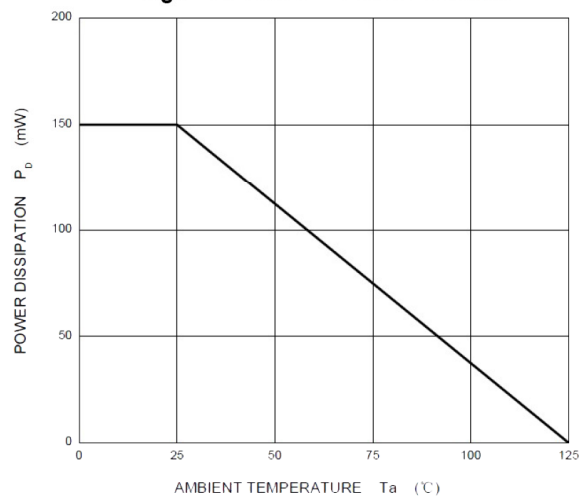
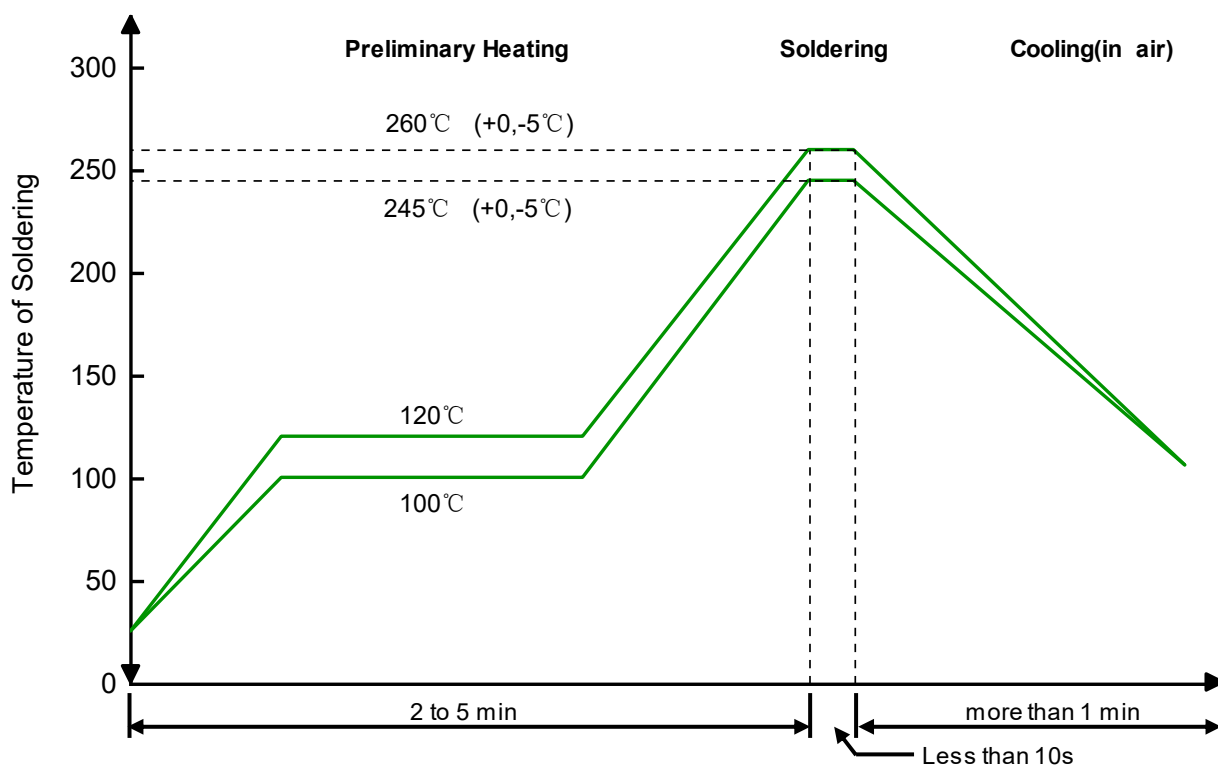


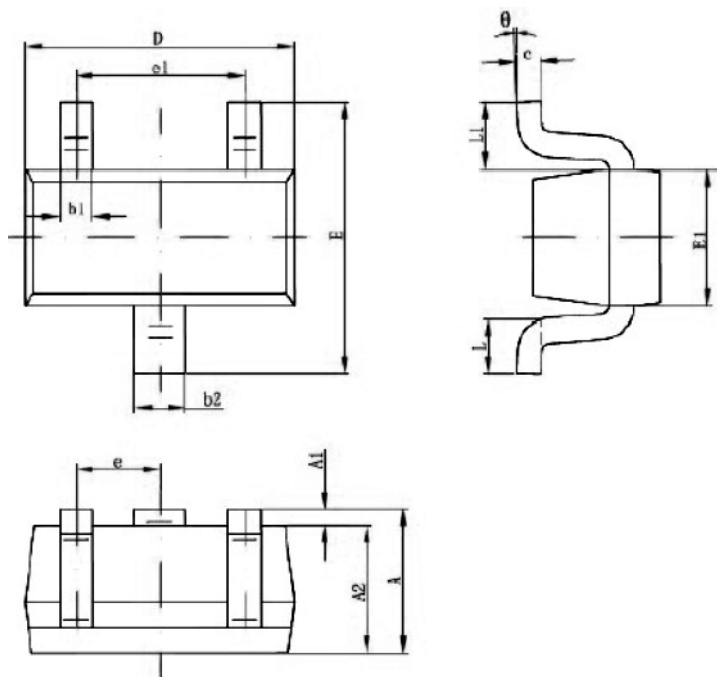
Fig4 Power Derating Curve

## Solder Reflow Recommendation

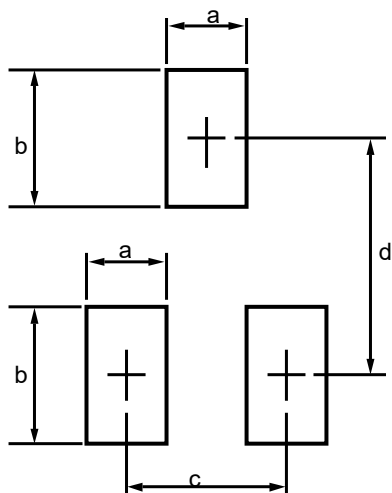


Remark: Pb free for 260°C; Pb for 245°C.

## Product dimension(SOT-523)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.70	0.90	0.028	0.035
A1	0.00	0.10	0.000	0.004
A2	0.70	0.80	0.028	0.031
b1	0.15	0.25	0.006	0.010
b2	0.25	0.35	0.010	0.014
c	0.10	0.20	0.004	0.008
D	1.50	1.70	0.059	0.067
E	1.45	1.75	0.057	0.069
E1	0.70	0.90	0.028	0.035
e	0.50 Typ.		0.020 Typ.	
e1	0.90	1.10	0.035	0.043
L	0.26	0.46	0.010	0.018
L1	0.40 Ref.		0.016 Ref.	
θ	0°	8°	0°	8°

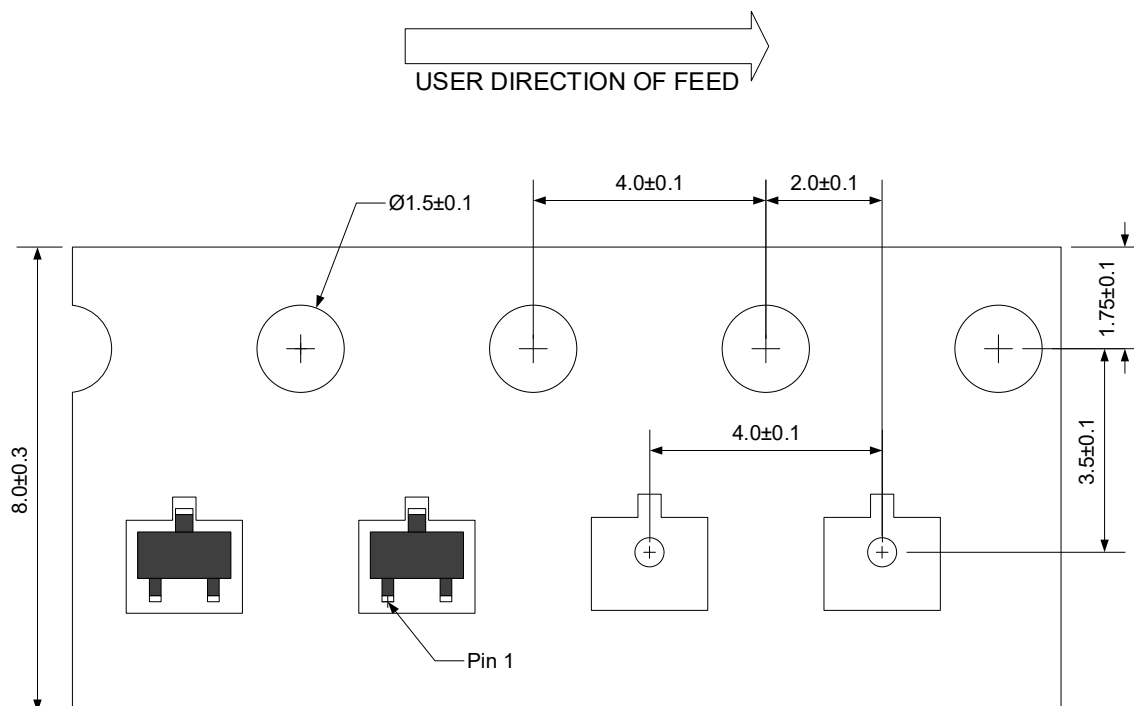


Dim	Millimeters	
	MIN	MAX
a	--	0.4
b	--	0.6
c	--	1.0
d	--	1.24

## Ordering information


Device	Package	Shipping
PBAT54T SERIES	SOT-523	3000 / Tape & Reel

## Ordering information



Unit:mm


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