

## BAT54W / AW / CW / SW

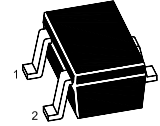
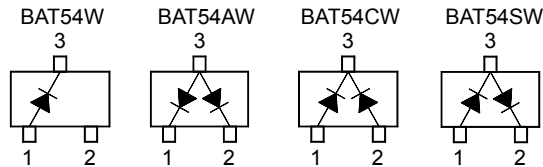
### SURFACE MOUNT SCHOTTKY BARRIER DIODE

#### Features

- Low forward voltage

#### Applications

- Ultra high-speed switching
- Voltage clamping
- Protection circuits



SOT-323 Plastic Package

BAT54W Marking Code: L4  
 BAT54AW Marking Code: L42  
 BAT54CW Marking Code: L43  
 BAT54SW Marking Code: L44

#### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	30	V
Reverse Voltage	$V_R$	30	V
Forward Current	$I_F$	200	mA
Repetitive Peak Forward Current	$I_{FRM}$	300	mA
Peak Forward Surge Current ( $t_p = 10$ ms)	$I_{FSM}$	600	mA
Total Power Dissipation	$P_{tot}$	200	mW
Thermal Resistance from Junction Ambient	$R_{thJA}$	625	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

#### Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 0.1$ mA at $I_F = 1$ mA at $I_F = 10$ mA at $I_F = 30$ mA at $I_F = 100$ mA	$V_F$	-	240 320 400 500 1000	mV
Reverse Breakdown Voltage at $I_R = 100$ $\mu\text{A}$	$V_{(BR)R}$	30	-	V
Reverse Current at $V_R = 25$ V	$I_R$	-	2	$\mu\text{A}$
Total Capacitance at $V_R = 1$ V, $f = 1$ MHz	$C_T$	-	10	pF
Reverse Recovery Time at $I_F = 10$ mA through $I_R = 10$ mA to $I_R = 1$ mA, $R_L = 100$ $\Omega$	$t_{rr}$	-	5	ns



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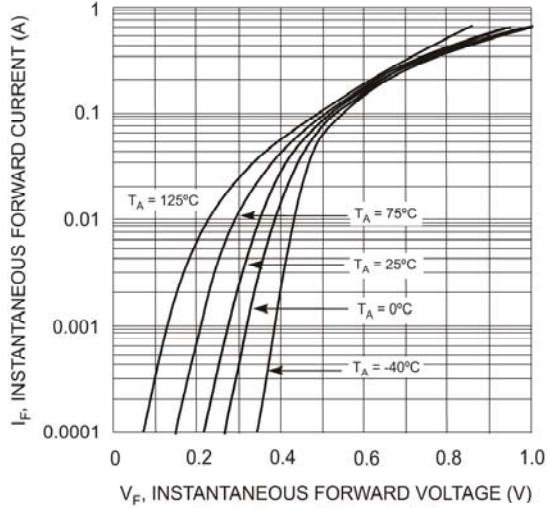


Fig. 1 Forward Characteristics

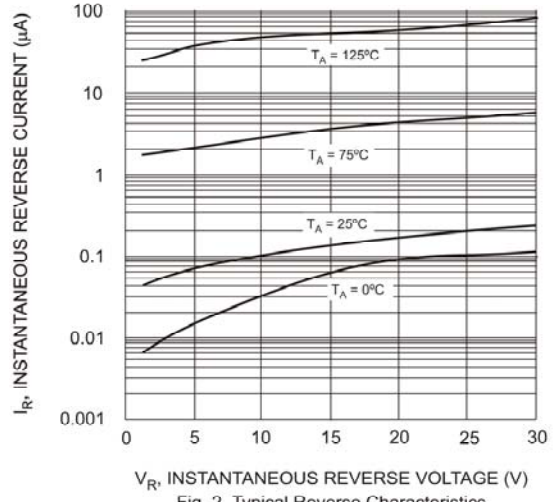


Fig. 2 Typical Reverse Characteristics

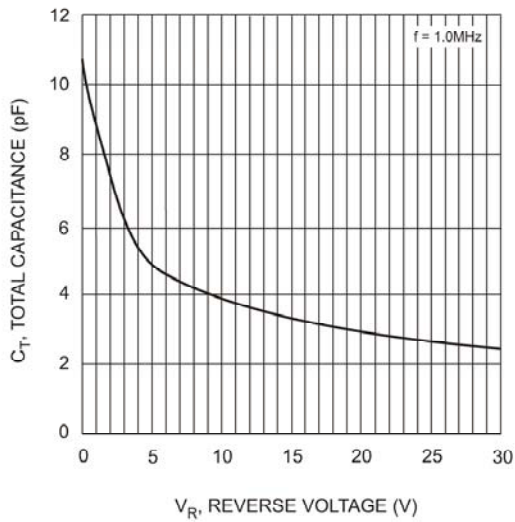


Fig. 3 Typical Capacitance vs. Reverse Voltage

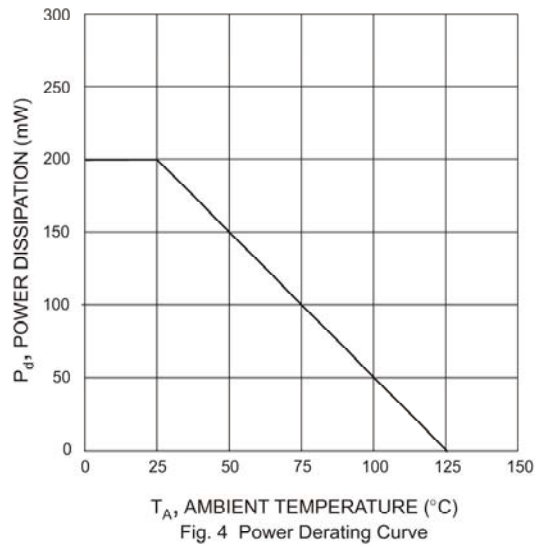
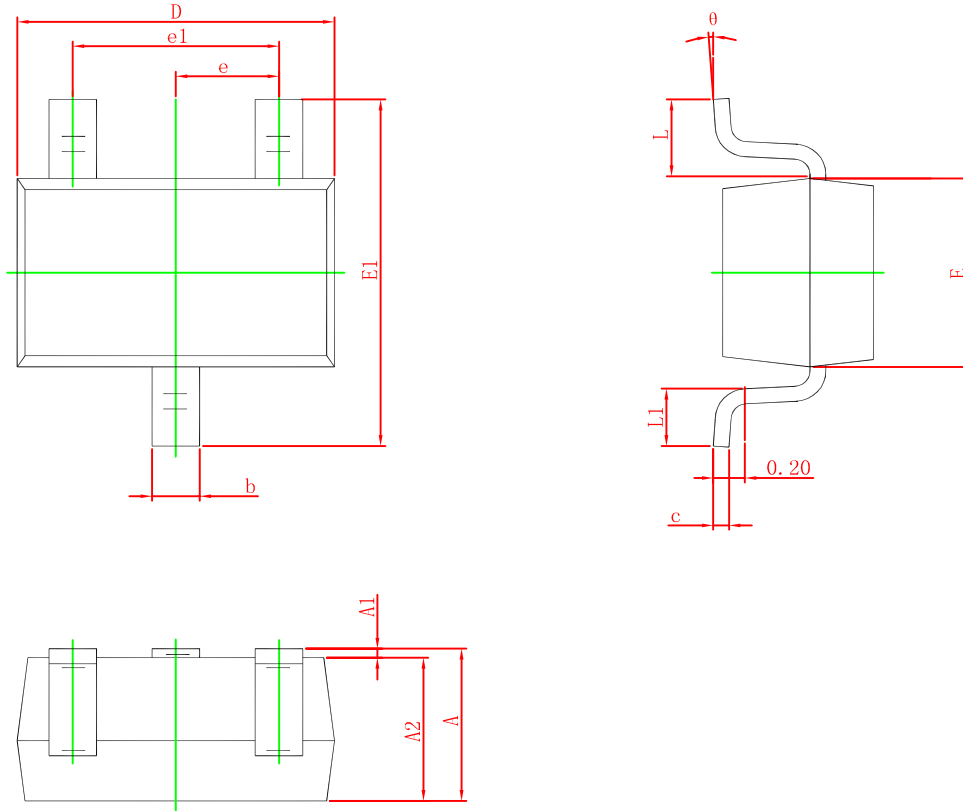


Fig. 4 Power Derating Curve



## SOT-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

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