

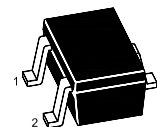
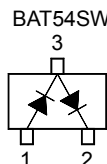
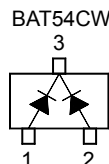
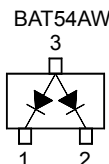
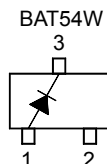
SURFACE MOUNT SCHOTTKY BARRIER DIODE

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

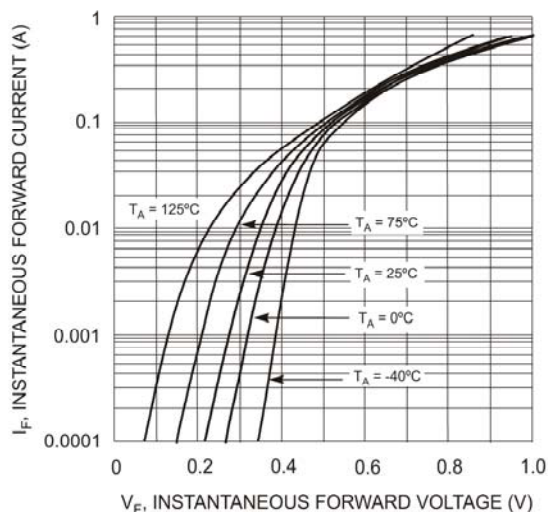


Fig. 1 Forward Characteristics

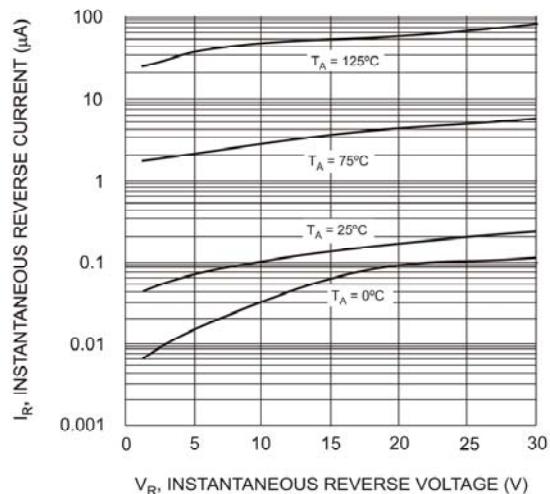


Fig. 2 Typical Reverse Characteristics

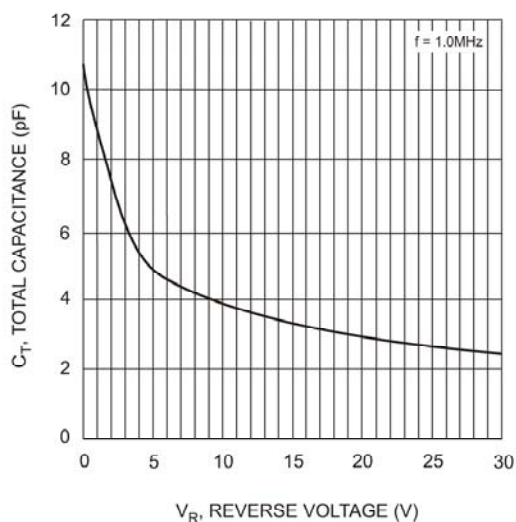


Fig. 3 Typical Capacitance vs. Reverse Voltage

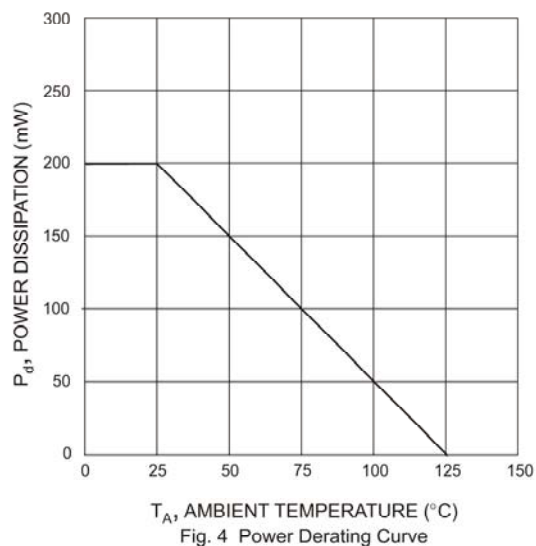
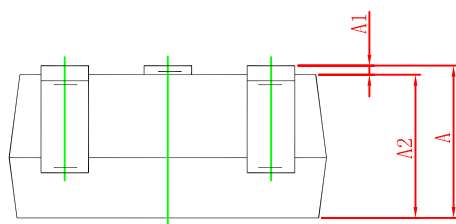
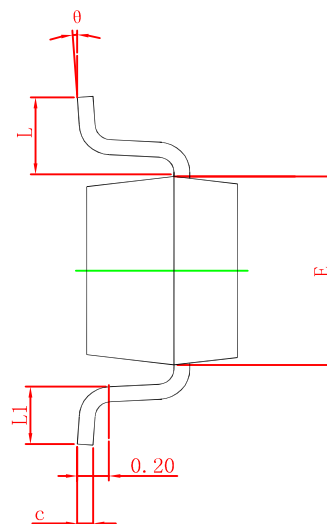
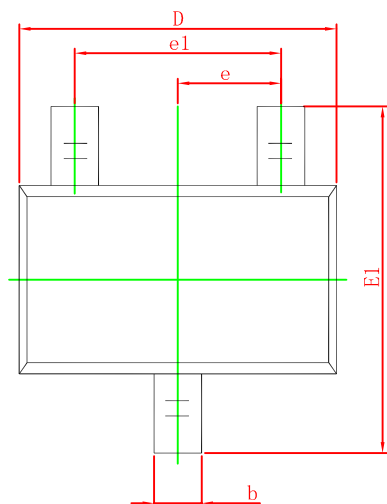


Fig. 4 Power Derating Curve

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°