

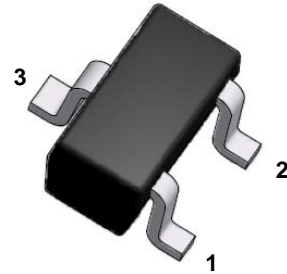


DATA SHEET

SEMICONDUCTOR

BAT54T Series

150mW SOT-523 SURFACE MOUNT Plastic Package Schottky Barrier Diode



SOT-523

Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

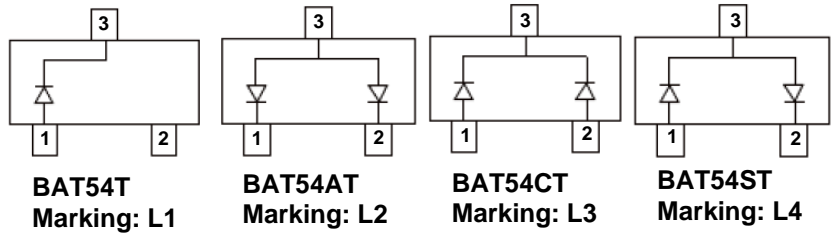
Symbol	Parameter	Value	Units
P_D	Power Dissipation	150	mW
T_{STG}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	+150	$^\circ\text{C}$
V_R	Reverse Voltage	30	V
I_{FO}	Average Rectified Output Current	200	mA

These ratings are limiting values above which the serviceability of the diode may be impaired.

Specification Features:

- Low Forward Voltage Drop
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish

Electrical Symbol & Marking Codes:



Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
VRRM VRWM VR	Peak Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$I_R = 100\mu\text{A}$	30		Volts
I_R	Reverse Leakage Current	$V_R = 25\text{V}$		2	μA
V_F	Forward Voltage	$I_F = 0.1\text{mA}$ $I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 30\text{mA}$ $I_F = 100\text{mA}$		0.24 0.32 0.40 0.50 1	Volts
C_T	Total Capacitance	$V_R = 1\text{V}, f = 1\text{MHz}$		10	pF
T_{rr}	Reverse Recovery Time	$I_F = I_R = 10\text{mA}$ $I_{RR} = 0.1 \times I_R, R_L = 100\Omega$		5	nS

DEVICE CHARACTERISTICS

BAT54T Series

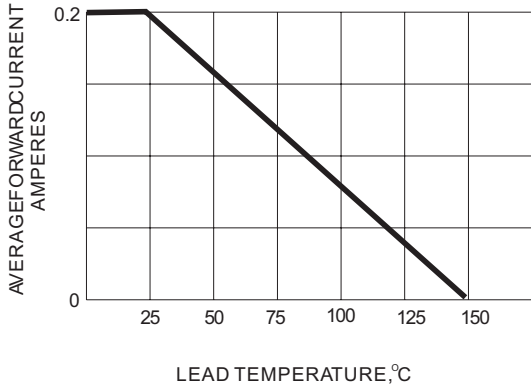


Fig.1-FORWARD CURRENT DERATING CURVE

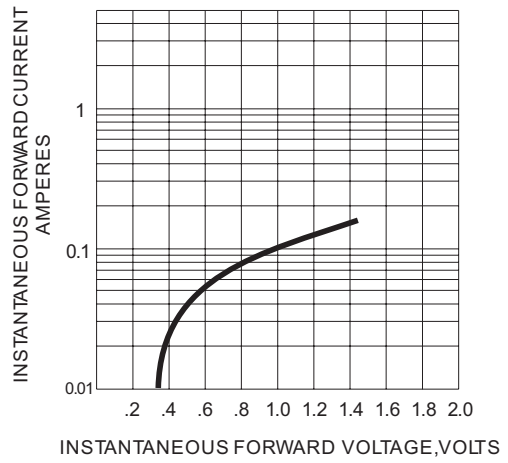


Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

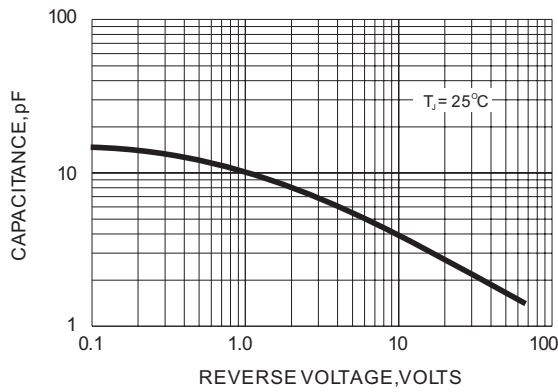


Fig.3-TYPICAL JUNCTION CAPACITANCE

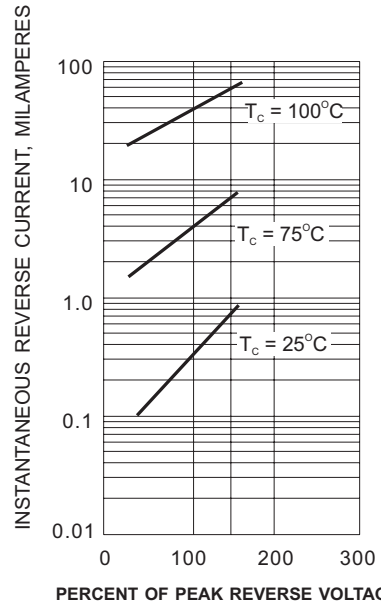
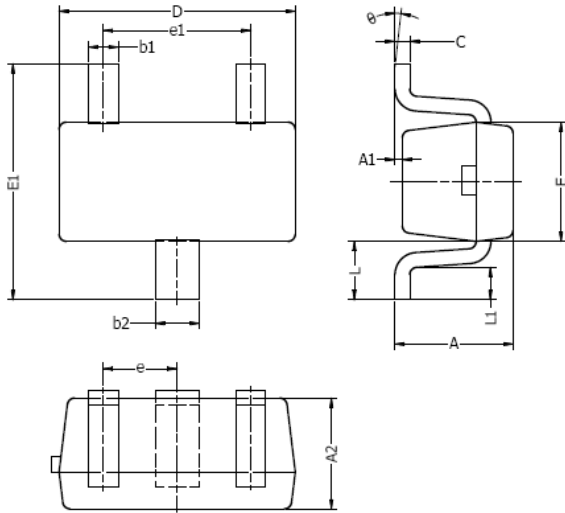


Fig.4-TYPICAL REVERSE CHARACTERISTIC

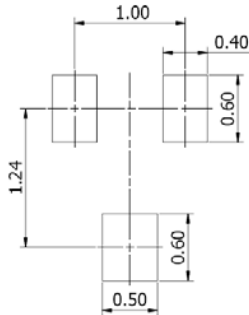
DEVICE CHARACTERISTICS

BAT54T Series

SOT-523 Package Outline



Typical Soldering Pattern:



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	0.70	0.90	0.028	0.035
E1	1.45	1.75	0.057	0.069
e	0.50 TYP.		0.020 TYP.	
e1	0.90	1.10	0.035	0.043
L	0.40 REF.		0.016 REF.	
L1	0.10	0.30	0.004	0.012
θ	0°	8°	0°	8°

NOTES:

1. Above package outline conforms to JEITA EAIJ ED-7500A SC-75A.
2. Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.