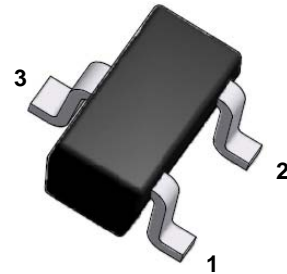


## 150mW SOT-523 SURFACE MOUNT Plastic Package Schottky Barrier Diode

Green Product



SOT-523

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

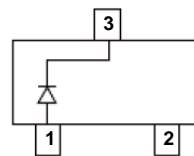
Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	150	mW
$T_{STG}$	Storage Temperature Range	-55 to +125	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	+125	$^\circ\text{C}$
$V_R$	Reverse Voltage	30	V
$I_{FO}$	Average Rectified Output Current	200	mA

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

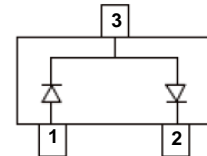
### Specification Features:

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

### Electrical Symbol & Marking Codes:



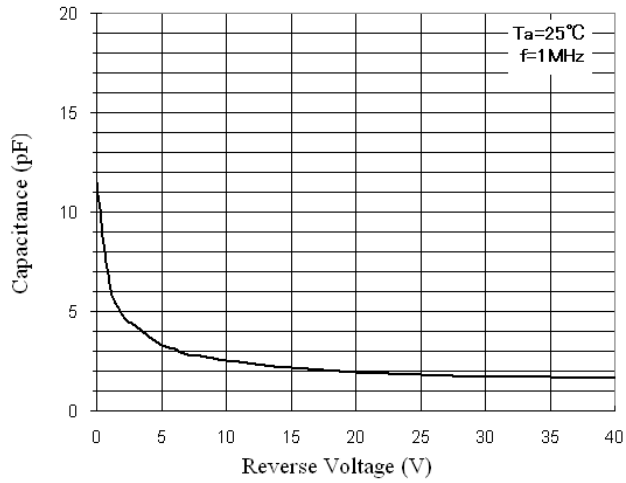
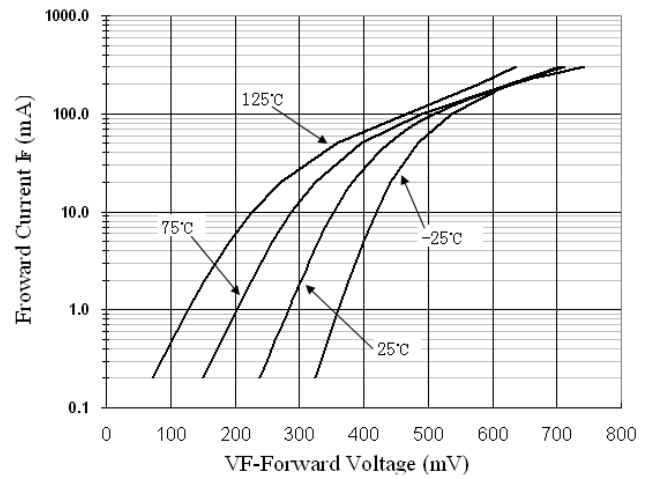
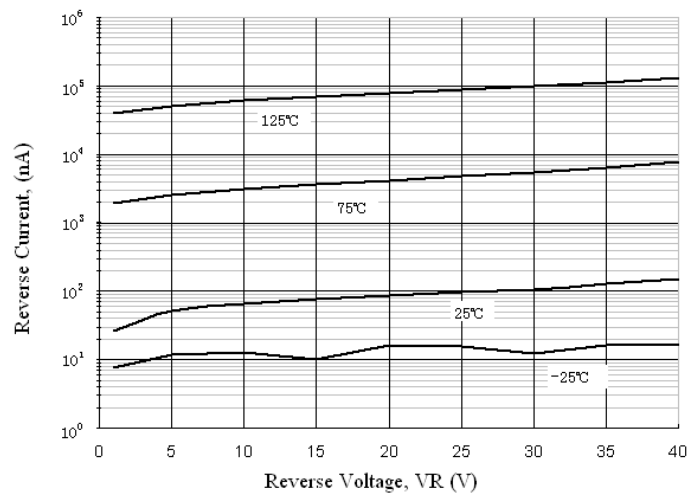
**BAT54T**  
Marking: L1



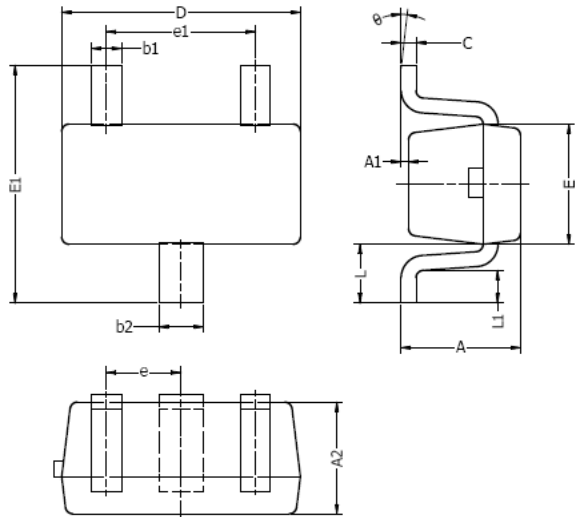
**BAT54ST**  
Marking: L4

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

Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
$V_{(BR)}$	Reverse Breakdown Voltage	$I_R=100\mu\text{A}$	30		Volts
$I_R$	Reverse Leakage Current	$V_R=25\text{V}$		2	$\mu\text{A}$
$V_F$	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

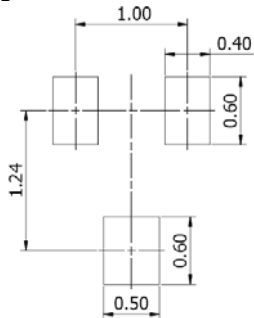
**Typical Performance Characteristics**
**Total Capacitance**

**Forward Voltage vs Ambient Temperature**

**Reverse Current vs Reverse Voltage**


**SOT-523 Package Outline**



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
$\theta$	0°	8°	0°	8°

**Typical Soldering Pattern:**



**NOTES:**

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

## **NOTICE**

The information presented in this document is for reference only. Tak Cheong reserves the right to make changes without notice for the specification of the products displayed herein.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Tak Cheong Semiconductor Co., Ltd., or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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