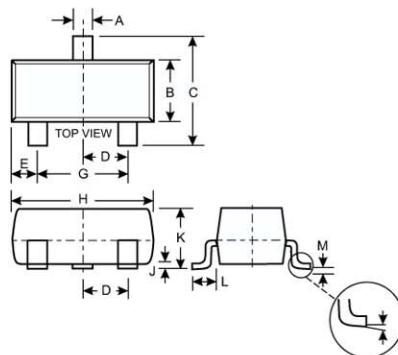


## ● Features

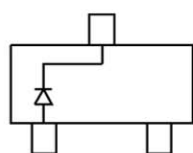
Low Turn-on Voltage  
Fast Switching  
PN Junction Guard Ring for Transient and ESD Protection

## ● Mechanical Data

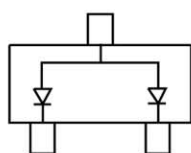
Case: SOT-23, Molded Plastic  
Case material - UL Flammability Rating Classification 94V-0  
Moisture sensitivity: Level 1 per J-STD-020A  
Terminals: Solderable per MIL-STD-202, Method 208  
Polarity: See Diagrams Below  
Weight: 0.008 grams (approx.)  
Marking Code: See Diagrams Below  
Ordering Information: See Page 3



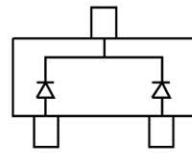
SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.177
$\alpha$	0°	8°
All Dimensions in mm		



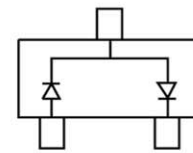
BAT54 Marking: L4



BAT54A Marking: L42



BAT54C Marking: L43



BAT54S Marking: L44

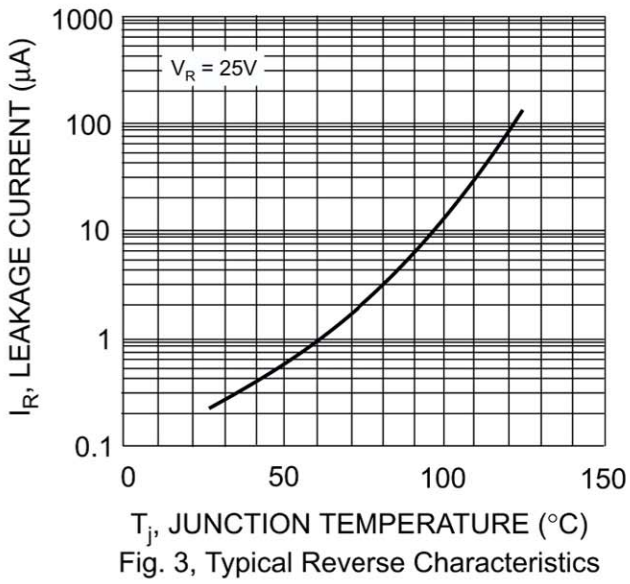
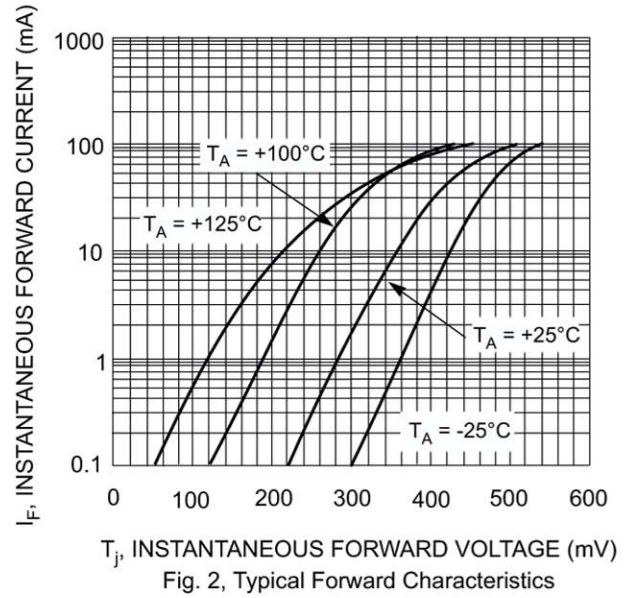
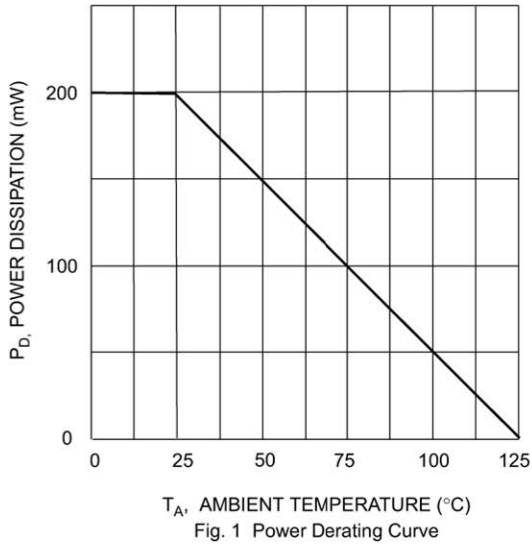
## ● Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWVM}$ $V_R$	30	V
Forward Continuous Current (Note 2)	$I_F$	200	mA
Repetitive Peak Forward Current	$I_{FRM}$	300	mA
Forward Surge Current @ $t < 1.0\text{s}$	$I_{FSM}$	600	mA
Power Dissipation (Note 2)	$P_d$	200	mW
Thermal Resistance, Junction to Ambient Air (Note 2)	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +125	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	30	—	—	V	$I_{RS} = 100\mu\text{A}$
Forward Voltage (Note 1)	$V_F$	—	—	240 320 400 500 1000	mV	$I_F = 0.1\text{mA}$ $I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 30\text{mA}$ $I_F = 100\text{mA}$
Reverse Leakage Current (Note 1)	$I_R$	—	—	2.0	$\mu\text{A}$	$V_R = 25\text{V}$
Total Capacitance	$C_T$	—	—	10	pF	$V_R = 1.0\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	—	—	5.0	ns	$I_F = 10\text{mA}$ through $I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}, R_L = 100\Omega$

Notes: 1. Short duration pulse test used to minimize self-heating effect.  
2. Part mounted on FR-4 board with recommended pad layout



## Ordering Information (Note 3)

Device	Packaging	Shipping
BAT54 BAT54A BAT54C BAT54S	SOT-23	3000/Tape & Reel