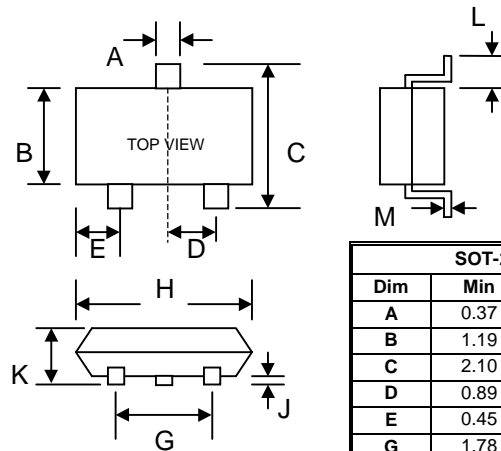


### Features

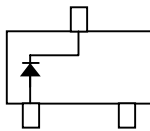
- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-O



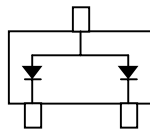
SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.19	1.40
C	2.10	2.50
D	0.89	1.05
E	0.45	0.61
G	1.78	2.05
H	2.65	3.05
J	0.013	0.15
K	0.89	1.10
L	0.45	0.61
M	0.076	0.178
All Dimensions in mm		

### Mechanical Data

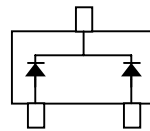
- Case: SOT-23, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.008 grams (approx.)
- Mounting Position: Any



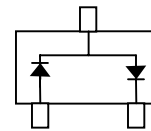
TOP VIEW  
BAT54



TOP VIEW  
BAT54A



TOP VIEW  
BAT54C



TOP VIEW  
BAT54S

### Maximum Ratings and Electrical Characteristics, Single Diode @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	30	V
Average Rectified Output Current	$I_O$	100	mA
Forward Continuous Current (Note 1)	$I_F$	200	mA
Repetitive Peak Forward Current (Note 1)	$I_{FRM}$	300	mA
Forward Surge Current @ $t_p < 1.0\text{s}$ (Note 1)	$I_{FSM}$	600	mA
Power Dissipation (Note 1)	$P_d$	200	mW
Typical Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	500	K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +125	$^\circ\text{C}$

Note: 1. Device on fiberglass substrate.

**Maximum Ratings and Electrical Characteristics, Single Diode** @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	30	—	—	V	I <sub>RS</sub> = 100μA
Forward Voltage	V <sub>F</sub>	—	—	240 320 400 500 1000	mV	tp < 300μs, duty cycle < 2% @ I <sub>F</sub> = 0.1mA @ I <sub>F</sub> = 1mA @ I <sub>F</sub> = 10mA @ I <sub>F</sub> = 30mA @ I <sub>F</sub> = 100mA
Reverse Leakage Current	I <sub>R</sub>	—	—	2.0	μA	tp < 300μs, duty cycle < 2% @ V <sub>R</sub> = 25V
Junction Capacitance	C <sub>j</sub>	—	—	10	pF	V <sub>R</sub> = 1.0V, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	—	—	5.0	nS	I <sub>F</sub> = 10mA through I <sub>R</sub> = 10mA to I <sub>R</sub> = 1.0mA, R <sub>L</sub> = 100Ω