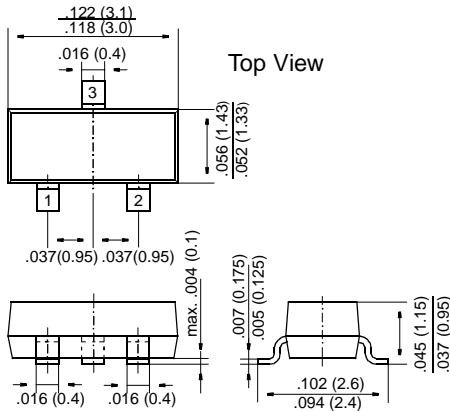


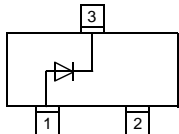
# BAT54 THRU BAT54S

## Schottky Diodes

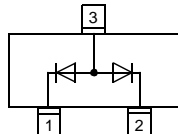
### SOT-23



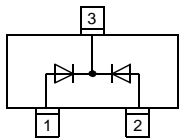
Dimensions in inches and (millimeters)



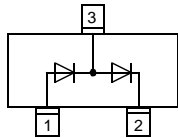
**BAT54**  
Marking: L4



**BAT54A**  
Marking: L42



**BAT54C**  
Marking: L43



**BAT54S**  
Marking: L44

### FEATURES

- ◆ These diodes feature very low turn-on voltage and fast switching.
- ◆ These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges.



### MECHANICAL DATA

**Case:** SOT-23 Plastic Package

**Weight:** approx. 0.008 g

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS FOR ONE DIODE

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	30	V
Forward Continuous Current at $T_{amb} = 25\text{ °C}$	$I_F$	200 <sup>1)</sup>	mA
Repetitive Peak Forward Current at $T_{amb} = 25\text{ °C}$	$I_{FRM}$	300 <sup>1)</sup>	mA
Surge Forward Current at $t_p < 1\text{ s}$ , $T_{amb} = 25\text{ °C}$	$I_{FSM}$	600 <sup>1)</sup>	mA
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_S$	-65 to +150	°C

<sup>1)</sup> Device on fiberglass substrate, see layout.

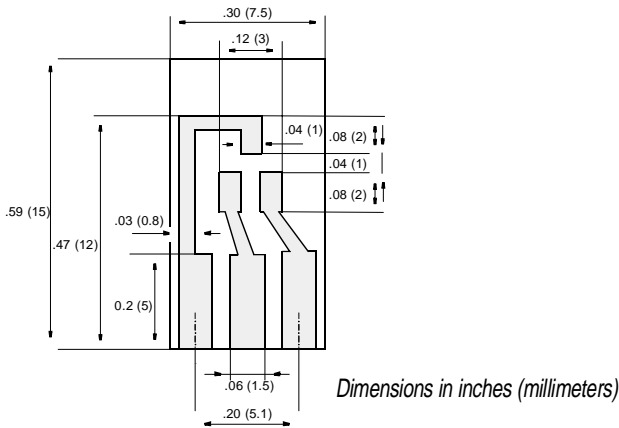
# BAT54 THRU BAT54S

## ELECTRICAL CHARACTERISTICS

Ratings for one diode at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage tested with 100 $\mu$ A Pulses	$V_{(BR)R}$	30	–	–	V
Forward Voltage Pulse Test $t_p < 300 \mu s$ , $\delta < 2\%$ at $I_F = 0.1 \text{ mA}$	$V_F$	–	–	240	mV
at $I_F = 1 \text{ mA}$	$V_F$	–	–	320	mV
at $I_F = 10 \text{ mA}$	$V_F$	–	–	400	mV
at $I_F = 30 \text{ mA}$	$V_F$	–	–	500	mV
at $I_F = 100 \text{ mA}$	$V_F$	–	–	1000	mV
Leakage Current Pulse Test $t_p < 300 \mu s$ , $\delta < 2\%$ at $V_R = 25 \text{ V}$	$I_R$	–	–	2	$\mu$ A
Capacitance at $V_F = 1 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{tot}$	–	–	10	pF
Reverse Recovery Time from $I_F = 10 \text{ mA}$ through $I_R = 10 \text{ mA}$ to $I_R = 1 \text{ mA}$ , $R_L = 100 \Omega$	$t_{rr}$	–	–	5	ns
Thermal Resistance Junction to Ambient Air	$R_{thJA}$	–	–	430 <sup>1)</sup>	K/W

<sup>1)</sup> Device on fiberglass substrate, see layout



### Layout for $R_{thJA}$ test

Thickness: Fiberglass 0.059 in (1.5 mm)

Copper leads 0.012 in (0.3 mm)