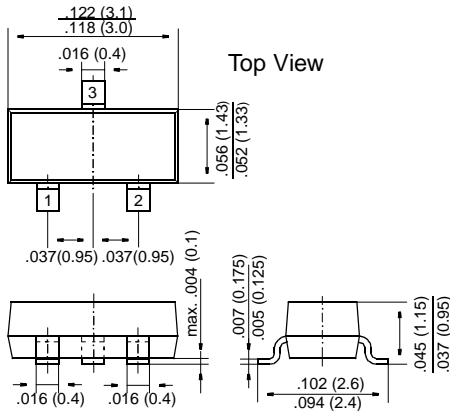


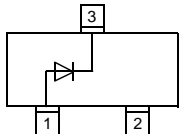
BAT54 THRU BAT54S

Schottky Diodes

SOT-23

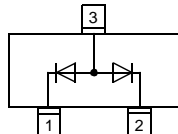


Dimensions in inches and (millimeters)

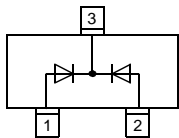


Top View

BAT54
Marking: L4

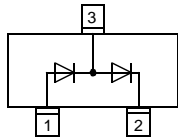


BAT54A
Marking: L42



Top View

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 ¹⁾	mA
Repetitive Peak Forward Current at $T_{amb} = 25\text{ °C}$	I_{FRM}	300 ¹⁾	mA
Surge Forward Current at $t_p < 1\text{ s}$, $T_{amb} = 25\text{ °C}$	I_{FSM}	600 ¹⁾	mA
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	-65 to +150	°C

¹⁾ Device on fiberglass substrate, see layout.

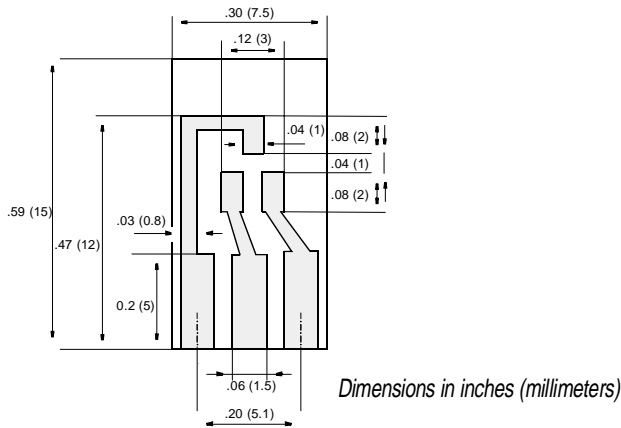
BAT54 THRU BAT54S

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 μ 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	μ 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 ¹⁾	K/W

¹⁾ 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)