

**SURFACT MOUNT SCHOTTKY BARRIER**
**VOLTAGE** 30 Volts

**CURRENT** 0.2 Amperes

**PACKAGE** SOT-23

**FEATURES**

- Low turn-on voltage
- Fast switching
- PN Junction Guard Ring for Transient and ESD Protection.

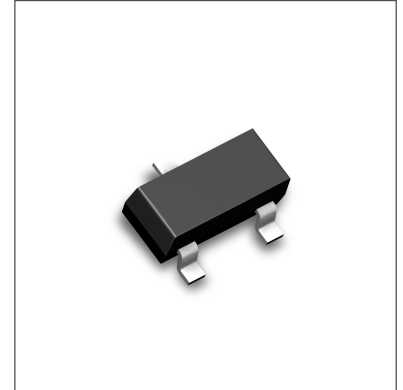
**MECHANICAL DATA**

Case: SOT-23, Plastic

Terminals: Solderable per MIL-STD-202, Method 208

Approx. Weight: 0.008 gram

Marking: L4, L42, L43, L44

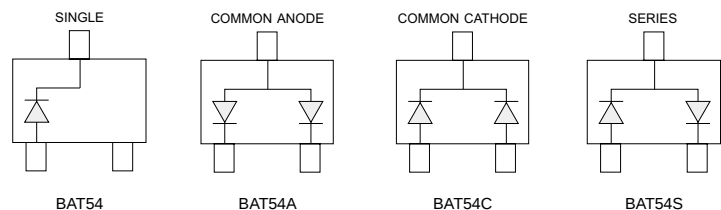

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

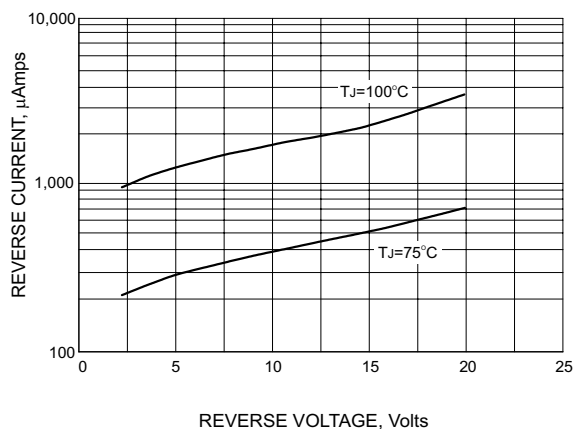
Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

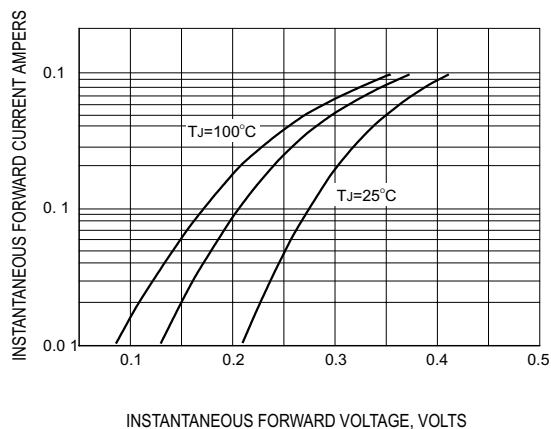
For capacitive load, derate current by 20%.

| Parameter                                                                                         | Symbol          | BAT54                                                 | BAT54A | BAT54C | BAT54S | Units                         |
|---------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------|--------|--------|--------|-------------------------------|
| Peak Repetitive Reverse Voltage                                                                   | $V_{RRM}$       | 30                                                    | 30     | 30     | 30     | V                             |
| Maximum Average Forward Current at $T_a=25^{\circ}\text{C}$                                       | $I_O$           | 0.2                                                   | 0.2    | 0.2    | 0.2    | A                             |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$       | 0.6                                                   | 0.6    | 0.6    | 0.6    | A                             |
| Maximum Instantaneous Forward Voltage                                                             | $V_F$           | 0.32 @ $I_F=0.001\text{A}$<br>1.0 @ $I_F=0.1\text{A}$ |        |        |        | V                             |
| Maximum DC Reverse Current at Rated DC Blocking Voltage                                           | $I_R$           | 0.002 @ $V_R=25\text{V}$                              |        |        |        | mA                            |
| Thermal Resistance, Junction to Ambient Air                                                       | $R_{\theta JA}$ | 635                                                   |        |        |        | $^{\circ}\text{C} / \text{W}$ |
| Operating Junction Temperature Range                                                              | $T_J$           | -55 TO +125                                           |        |        |        | $^{\circ}\text{C}$            |
| Storage Temperature Range                                                                         | $T_{STG}$       | -55 TO +125                                           |        |        |        | $^{\circ}\text{C}$            |

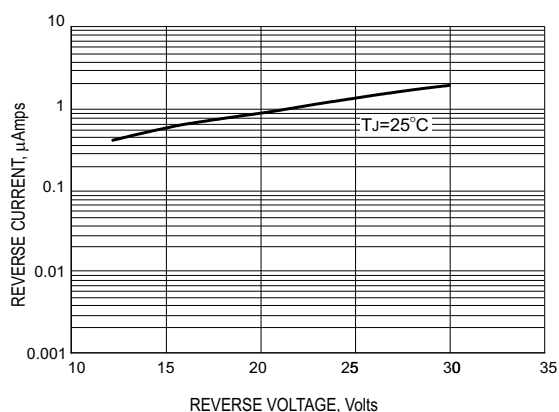




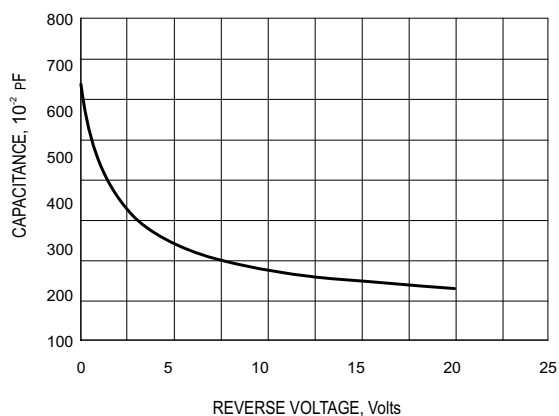
**TYPICAL REVERSE CURRENT**



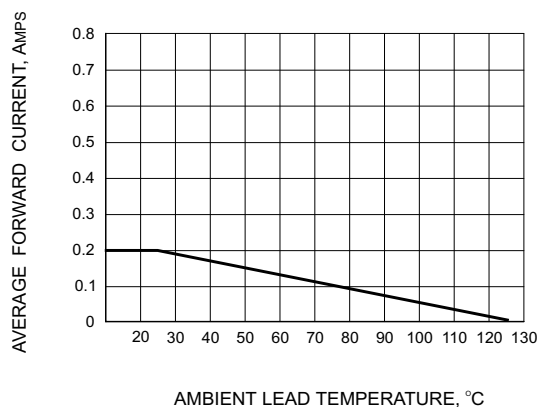
**TYPICAL FORWARD VOLTAGE**



**TYPICAL REVERSE CURRENT**

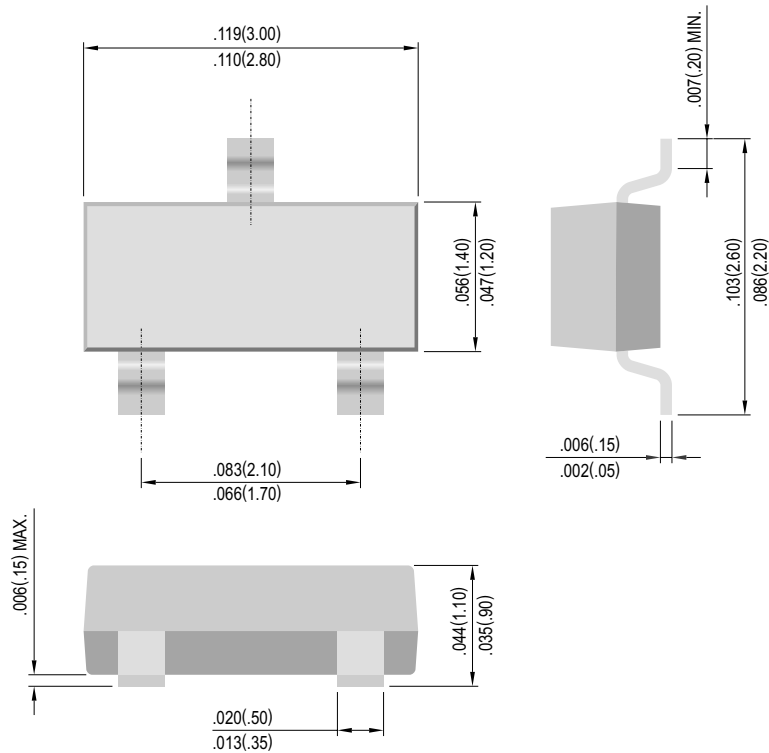


**TYPICAL JUNCTION CAPACITANCE**

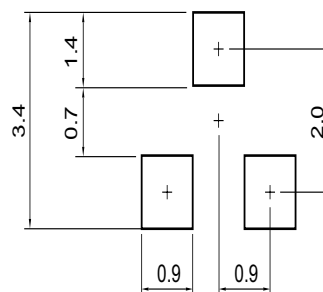


**CURRENT DERATING**

## SOT-23



### Suggested Mounting Pad Layout



Dimensions in (millimeters)

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