

SURFACT MOUNT SCHOTTKY BARRIER

VOLTAGE 30 Volts

CURRENT 0.2 Ampers

PACKAGE SOT-23

FEATURES

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

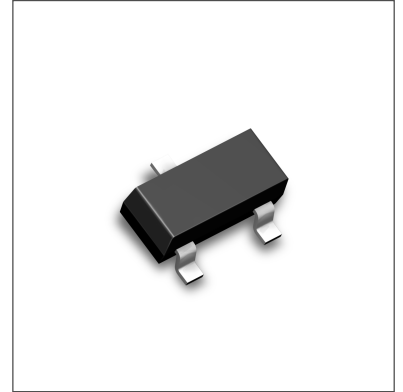
MECHANICAL DATA

Case: SOT-23, Plastic

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

Approx. Weight: 0.008 gram

Marking: L4, L42, L43, L44



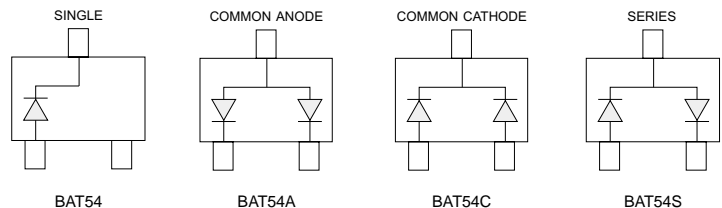
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

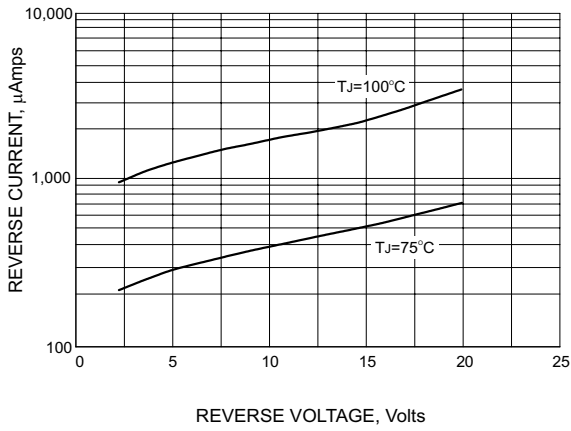
Ratings at 25°C ambient temperature unless otherwise specified.

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

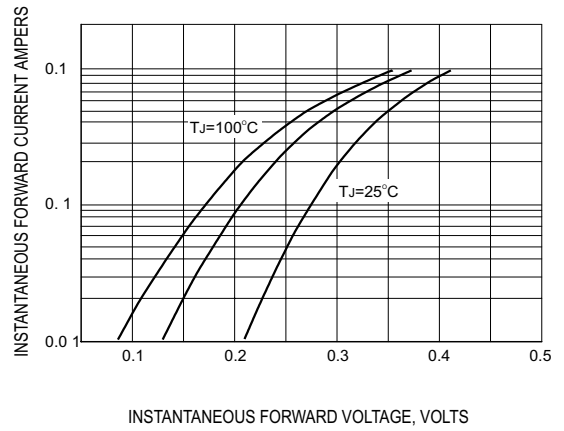
For capacitive load, derate current by 20%.

| 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 @ $I_F=0.001\text{A}$ 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 | | | | $^\circ\text{C}$ |

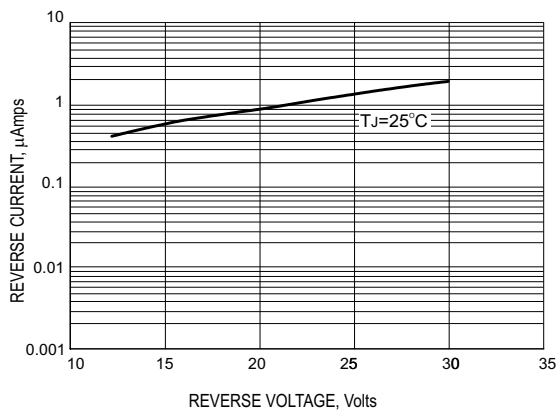




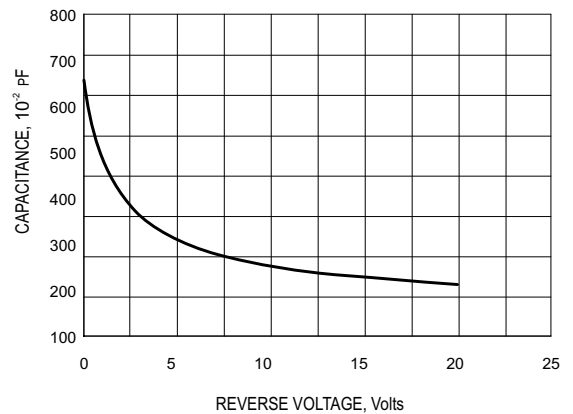
TYPICAL REVERSE CURRENT



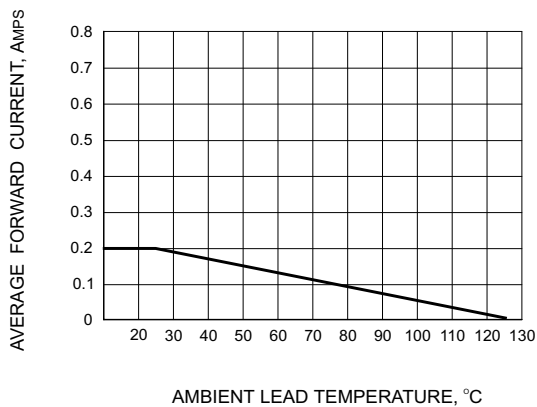
TYPICAL FORWARD VOLTAGE



TYPICAL REVERSE CURRENT

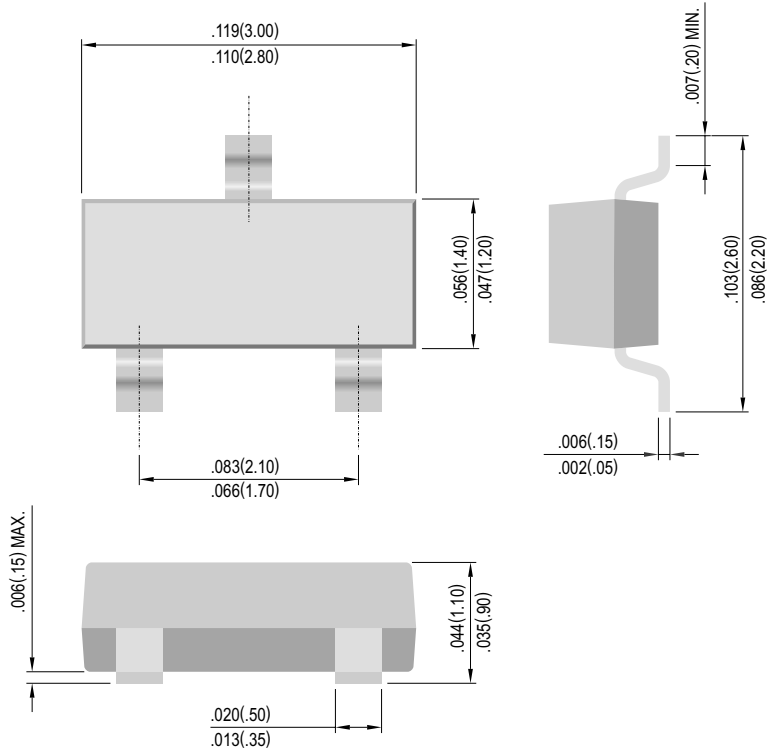


TYPICAL JUNCTION CAPACITANCE

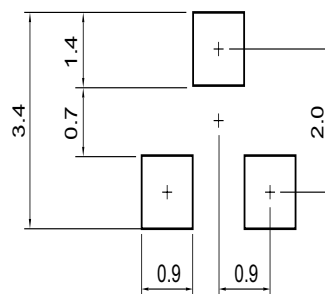


CURRENT DERATING

SOT-23



Suggested Mounting Pad Layout



Dimensions in (millimeters)

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