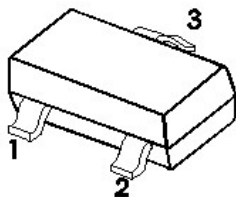


SOT-23 Plastic-Encapsulate Schottky Barrier Diode

SOT-23



Features

- High Current Capability
- Low Forward Voltage Drop
- Extremely Fast Switching Speed

Mechanical Data

- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

MARKING:

| BAT54 | BAT54A | BAT54C | BAT54S |
|-------|--------|--------|--------|
|       |        |        |        |

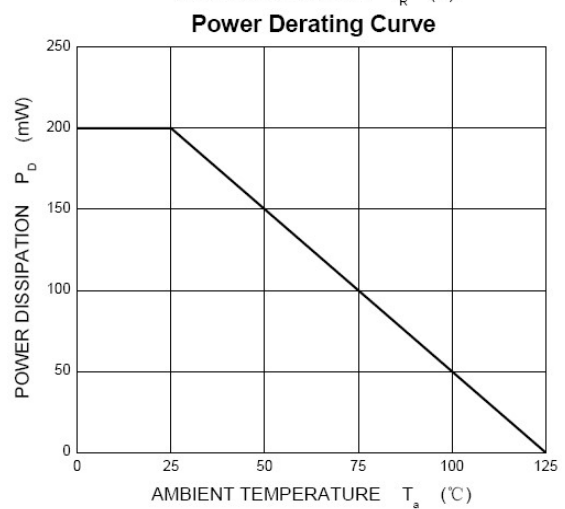
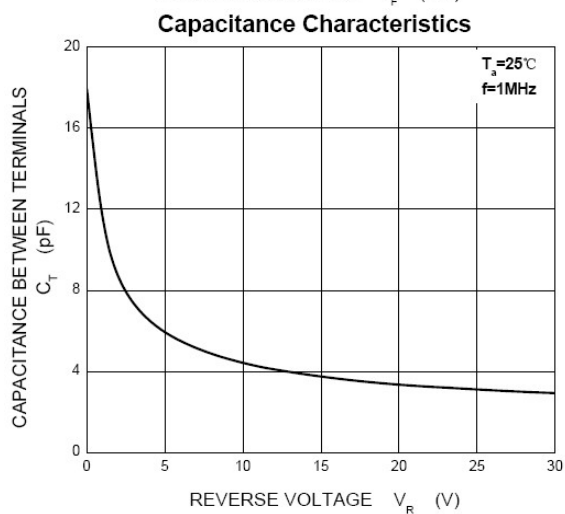
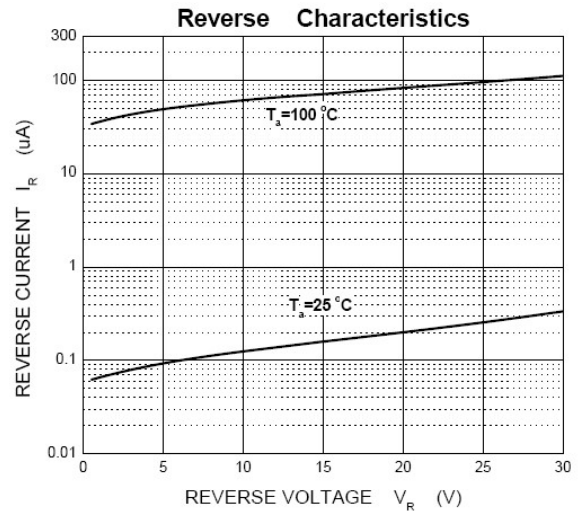
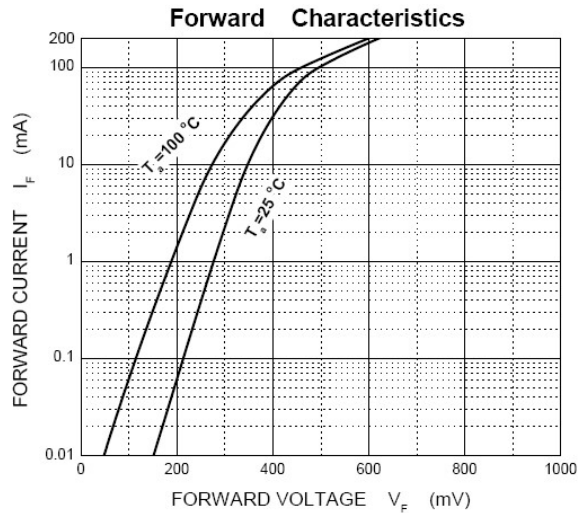
Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

| Parameters                                              | Symbol | Limit    | Unit |
|---------------------------------------------------------|--------|----------|------|
| Maximum repetitive peak reverse voltage                 | VRRM   | 30       | V    |
| Maximum RMS voltage                                     | VRMS   | 21       | V    |
| Maximum DC blocking voltage                             | VDC    | 30       | V    |
| Maximum average forward rectified current               | IFM    | 200      | mA   |
| Peak forward surge current 8.3 ms single half sine-wave | IFSM   | 600      | mA   |
| Typical thermal resistance                              | RθJA   | 500      | ℃/W  |
| Power Dissipation                                       | PD     | 200      | mW   |
| Junction Temperature                                    | Tj     | 125      | ℃    |
| Storage temperature range                               | TSTG   | -50-+150 | ℃    |

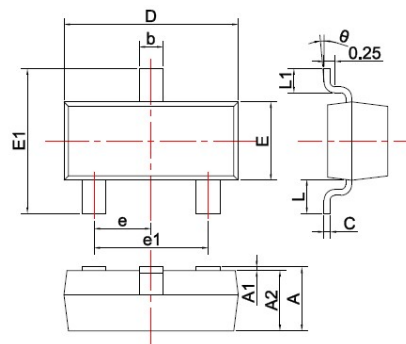
Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

| Parameters                        | Symbol | Test conditions                    | Min | Typ | Max  | Unit |
|-----------------------------------|--------|------------------------------------|-----|-----|------|------|
| Maximum forward voltage           | VF1    | IF = 0.1mA                         |     |     | 240  | mV   |
|                                   | VF2    | IF = 1.0mA                         |     |     | 320  |      |
|                                   | VF3    | IF = 10mA                          |     |     | 400  |      |
|                                   | VF4    | IF = 30mA                          |     |     | 500  |      |
|                                   | VF5    | IF = 100mA                         |     |     | 1000 |      |
| Maximum reverse breakdown voltage | VR     | IR=100uA                           | 30  |     |      | V    |
| Maximum reverse current           | IR     | VR=25V                             |     |     | 2.0  | uA   |
| Type junction capacitance         | Cj     | VR = 1.0V, f = 1MHz                |     |     | 10   | pF   |
| Reverse Recovery time             | trr    | IF=IR=10mA<br>Irr=0.1XIR, RL=100 Ω |     |     | 5    | ns   |

## Typical Characteristics



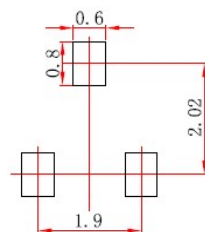
## SOT-23 PACKAGE OUTLINE Plastic surface mounted package



| SYMBOL | DIMENSIONS |       |
|--------|------------|-------|
|        | MIN        | MAX   |
| A      | 0.900      | 1.150 |
| A1     | 0.000      | 0.100 |
| A2     | 0.900      | 1.050 |
| b      | 0.300      | 0.500 |
| c      | 0.080      | 0.150 |
| D      | 2.800      | 3.000 |
| E      | 1.200      | 1.400 |
| E1     | 2.250      | 2.550 |
| e      | 0.950TYP   |       |
| e1     | 1.800      | 2.000 |
| L      | 0.550REF   |       |
| L1     | 0.300      | 0.500 |
| θ      | 0°         | 8°    |

Unit: mm

PCB Design(Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs)



- Note:
1. Controlling dimension; in millimeters.
  2. General tolerance:  $\pm 0.05\text{mm}$ .
  3. The pad layout is for reference purposes only.