

## SOT -23 Plastic-Encapsulate Schottky Barrier Diode

### Features

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

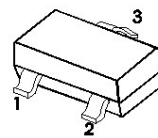


SOT-23

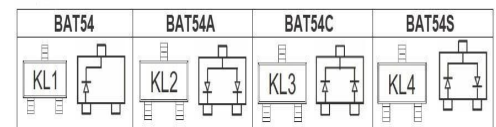
### Mechanical Data

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

#### Pin definition



#### Equivalent circuit



### Maximum Ratings & Thermal Characteristic ( $T_A=25^\circ\text{C}$ unless otherwise noted)

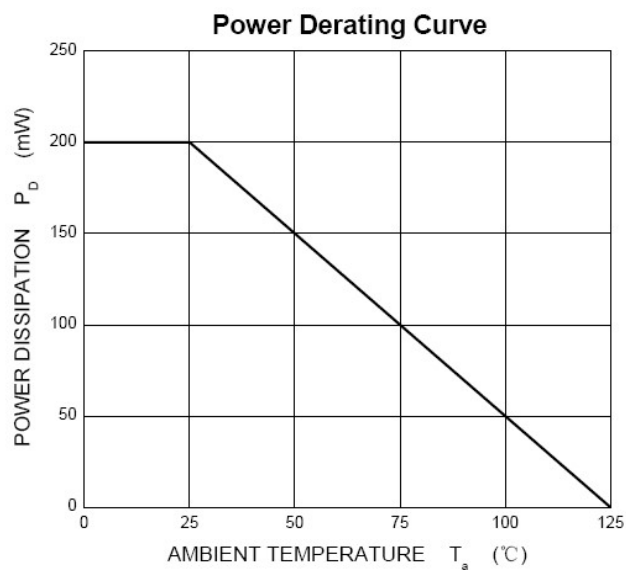
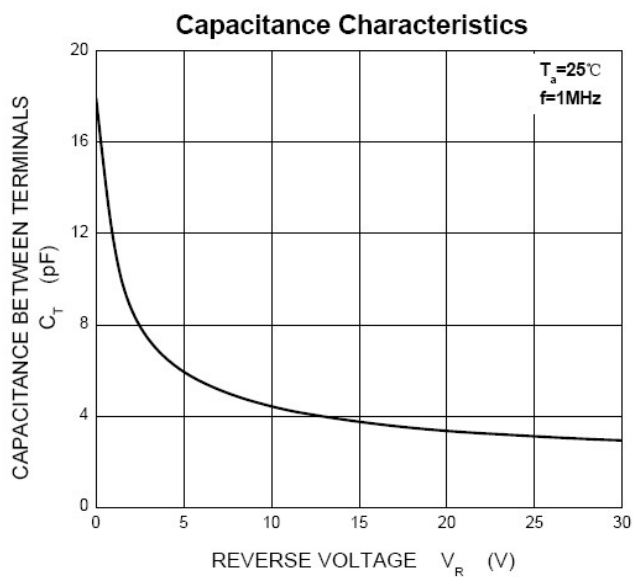
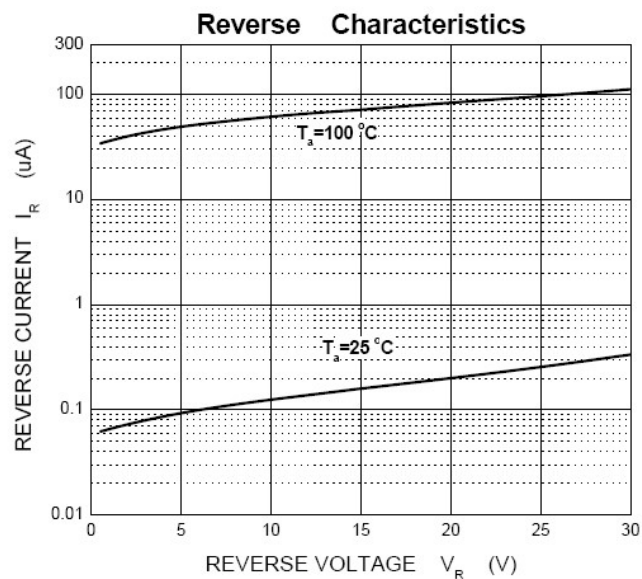
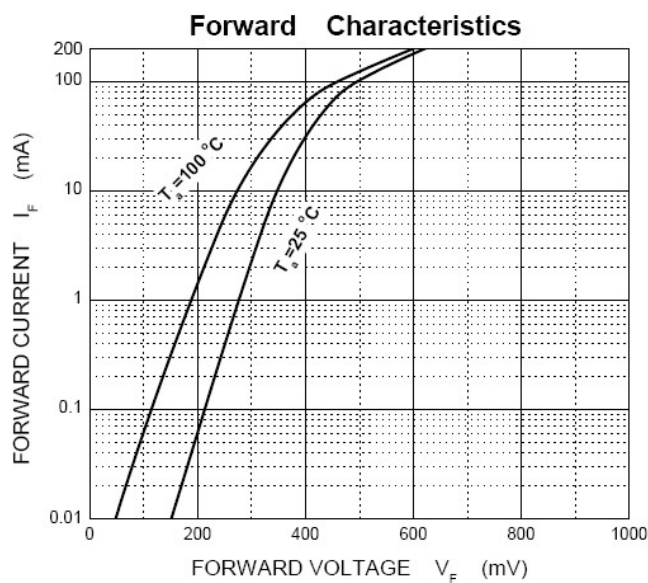
| Parameters                                              | Symbol          | Value    | Unit                      |
|---------------------------------------------------------|-----------------|----------|---------------------------|
| Maximum repetitive peak reverse voltage                 | $V_{RRM}$       | 30       | V                         |
| Maximum RMS voltage                                     | $V_{RMS}$       | 21       | V                         |
| Maximum DC blocking voltage                             | $V_{DC}$        | 30       | V                         |
| Typical thermal resistance                              | $R_{\theta JA}$ | 500      | $^\circ\text{C}/\text{W}$ |
| Junction Temperature                                    | $T_J$           | 125      | $^\circ\text{C}$          |
| Storage temperature range                               | $T_{STG}$       | -55-+150 | $^\circ\text{C}$          |
| Power Dissipation                                       | $P_D$           | 200      | mW                        |
| Non-repetitive Peak Forward Current                     | $I_{FM}$        | 200      | mA                        |
| Peak forward surge current 8.3 ms single half sine-wave | $I_{FSM}$       | 600      | mA                        |

### Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameters                        | Symbol   | Test Condition                 | Limits |      | Unit          |
|-----------------------------------|----------|--------------------------------|--------|------|---------------|
|                                   |          |                                | Min    | Max  |               |
| Maximum forward voltage           | $V_F$    | $I_F=0.1\text{mA}$             |        | 240  | mV            |
|                                   |          | $I_F=1.0\text{mA}$             |        | 320  |               |
|                                   |          | $I_F=10\text{mA}$              |        | 400  |               |
|                                   |          | $I_F=30\text{mA}$              |        | 500  |               |
|                                   |          | $I_F=100\text{mA}$             |        | 1000 |               |
| Maximum reverse breakdown voltage | $V_R$    | $I_R=100\mu\text{A}$           | 30     |      | V             |
| Maximum reverse current           | $I_R$    | $V_R=25\text{V}$               |        | 2.0  | $\mu\text{A}$ |
| Reverse Recovery time             | $T_{RR}$ | $I_F=I_R=10\text{mA}$          |        | 5    | nS            |
|                                   |          | $R_L=100\ \Omega$              |        |      |               |
|                                   |          | $IRR=0.1 \times I_R$           |        |      |               |
| Type junction capacitance         | $C_T$    | $V_R=0\text{V}, f=1\text{MHz}$ |        | 10   | pF            |

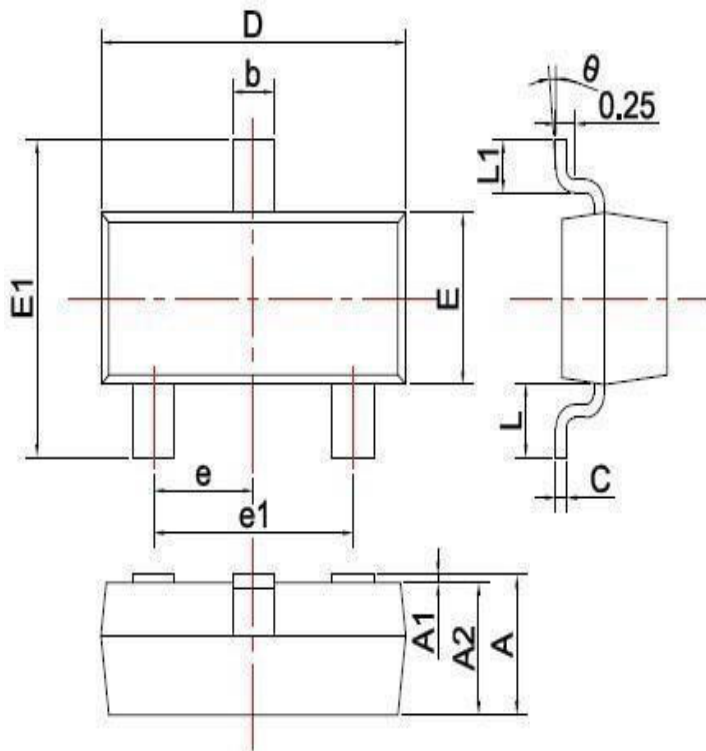
## Ratings and Characteristics Curves

( $T_A = 25^\circ\text{C}$  unless otherwise noted)



## Package Outline Dimensions

millimeters



| 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°    |

## Revision History

| Document Version | Date of release | Description of changes |
|------------------|-----------------|------------------------|
| Rev.A            | 2017.02.16      | First issue            |
|                  |                 |                        |
|                  |                 |                        |

Version:Rev.A

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