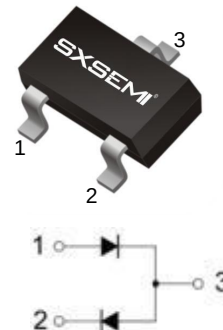


### FEATURES

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance

SOT-523



MARKING:AB

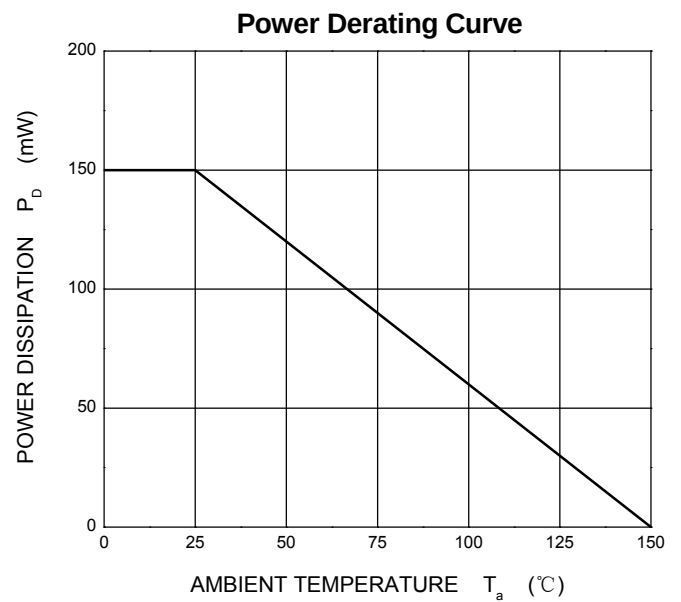
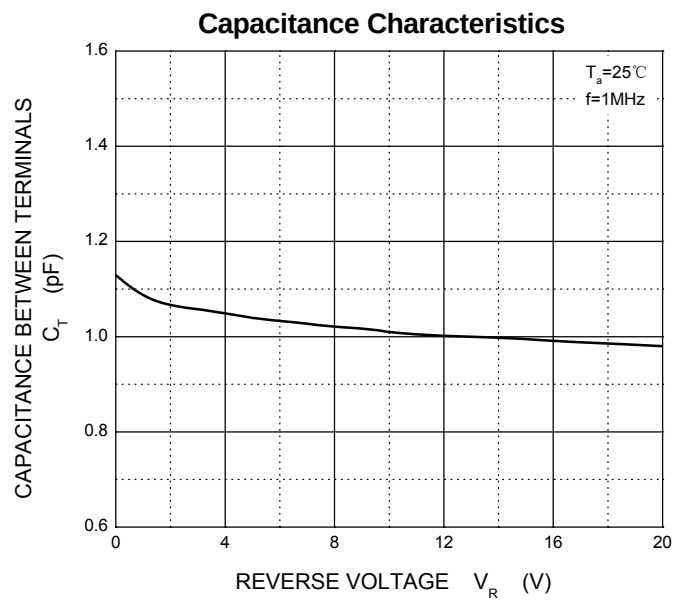
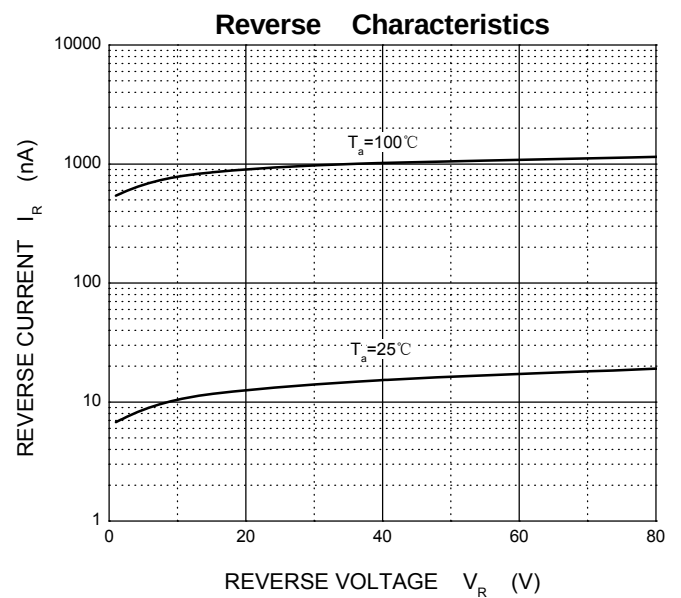
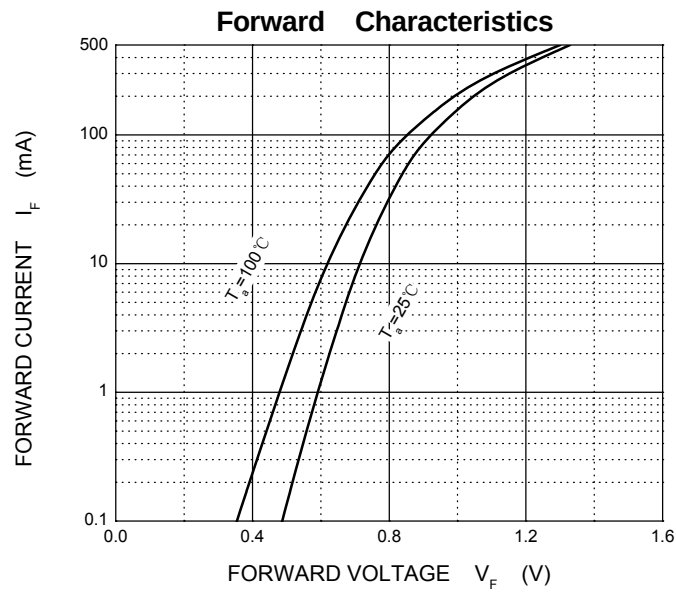
### Maximum Ratings and Electrical Characteristics, Single Diode @T<sub>a</sub>=25 °C

| Parameter                                          | Symbol                            | Limit     | Unit |
|----------------------------------------------------|-----------------------------------|-----------|------|
| Non-Repetitive Peak Reverse Voltage                | V <sub>RM</sub>                   | 100       | V    |
| Peak Repetitive Peak Reverse Voltage               | V <sub>RRM</sub>                  | 80        | V    |
| Working Peak Reverse Voltage                       | V <sub>RWM</sub>                  |           |      |
| DC Blocking Voltage                                | V <sub>R</sub>                    |           |      |
| RMS Reverse Voltage                                | V <sub>R(RMS)</sub>               | 57        | V    |
| Forward Continuous Current                         | I <sub>FM</sub>                   | 500       | mA   |
| Average Rectified Output Current                   | I <sub>O</sub>                    | 250       | mA   |
| Non-Repetitive Peak Forward Surge Current @t=8.3ms | I <sub>FSM</sub>                  | 2.0       | A    |
| Power Dissipation                                  | P <sub>d</sub>                    | 150       | mW   |
| Thermal Resistance from Junction to Ambient        | R <sub>θJA</sub>                  | 833       | °C/W |
| Operation Junction and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub> | -55 ~+150 | °C   |

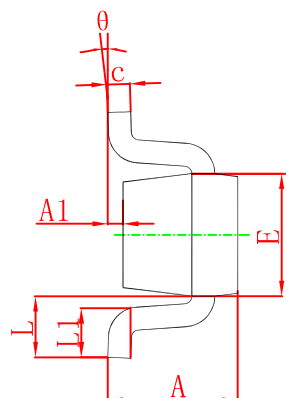
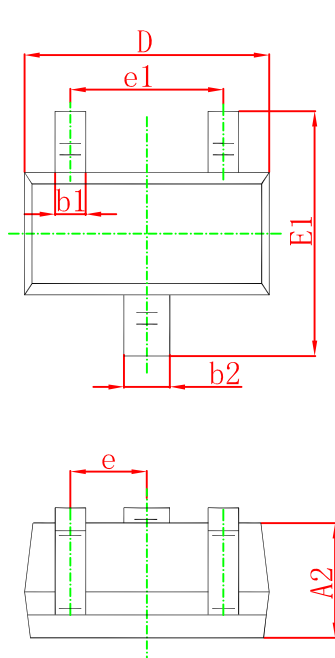
### Electrical Ratings @T<sub>a</sub>=25 °C

| Parameter                     | Symbol          | Min  | Typ | Max   | Unit | Conditions                                                                                          |
|-------------------------------|-----------------|------|-----|-------|------|-----------------------------------------------------------------------------------------------------|
| Reverse breakdown voltage     | V <sub>R</sub>  | 80   |     |       | V    | I <sub>R</sub> =2.5μA                                                                               |
| Forward voltage               | V <sub>F1</sub> | 0.62 |     | 0.72  | V    | I <sub>F</sub> =5mA                                                                                 |
|                               | V <sub>F2</sub> |      |     | 0.855 | V    | I <sub>F</sub> =10mA                                                                                |
|                               | V <sub>F3</sub> |      |     | 1.0   | V    | I <sub>F</sub> =100mA                                                                               |
|                               | V <sub>F4</sub> |      |     | 1.25  | V    | I <sub>F</sub> =150mA                                                                               |
| Reverse current               | I <sub>R1</sub> |      |     | 0.1   | μA   | V <sub>R</sub> =70V                                                                                 |
|                               | I <sub>R2</sub> |      |     | 25    | nA   | V <sub>R</sub> =20V                                                                                 |
| Capacitance between terminals | C <sub>T</sub>  |      |     | 3.5   | pF   | V <sub>R</sub> =6V, f=1MHz                                                                          |
| Reverse recovery time         | t <sub>rr</sub> |      |     | 4     | ns   | I <sub>F</sub> =I <sub>R</sub> =10mA<br>I <sub>rr</sub> =0.1X I <sub>R</sub> , R <sub>L</sub> =100Ω |

## Typical Characteristics

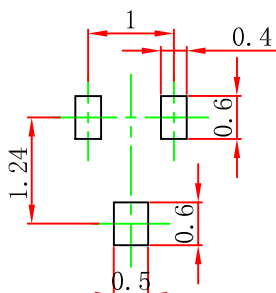


## SOT-523 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min.                      | Max.  | Min.                 | Max.  |
| A      | 0.700                     | 0.900 | 0.028                | 0.035 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.700                     | 0.800 | 0.028                | 0.031 |
| b1     | 0.150                     | 0.250 | 0.006                | 0.010 |
| b2     | 0.250                     | 0.350 | 0.010                | 0.014 |
| c      | 0.100                     | 0.200 | 0.004                | 0.008 |
| D      | 1.500                     | 1.700 | 0.059                | 0.067 |
| E      | 0.700                     | 0.900 | 0.028                | 0.035 |
| E1     | 1.450                     | 1.750 | 0.057                | 0.069 |
| e      | 0.500 TYP.                |       | 0.020 TYP.           |       |
| e1     | 0.900                     | 1.100 | 0.035                | 0.043 |
| L      | 0.400 REF.                |       | 0.016 REF.           |       |
| L1     | 0.260                     | 0.460 | 0.010                | 0.018 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

## SOT-523 Suggested Pad Layout



### Note:

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