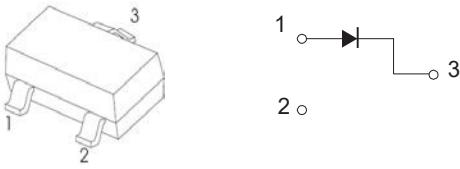
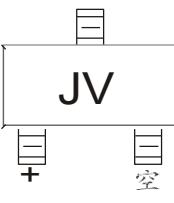
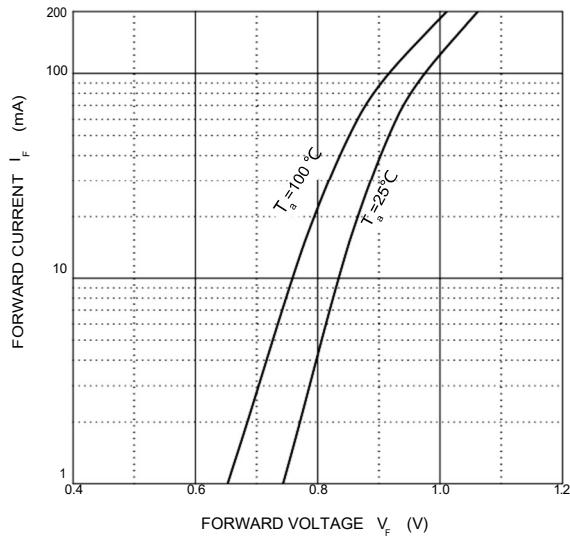


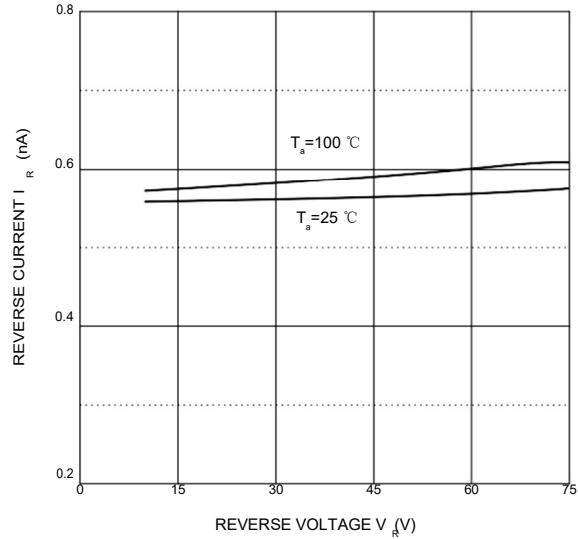
| Switching Diode | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|----------|-------|------|--------------------------------------|--|------------|---------------------------|------------------------------|-----------|----|---|---------------------|----------------|-----------------|----------|----------------------------|----------|-----|----|--|-----------|-----|---|-------------------|-------|------------|----------|--|----------------|----------|----|------------|----------|--|--|------|---|-------------|-----------------|-------|--|--|---|----|-----------|-------------------|-----------|--|---|--|----|------------------|-----------------------|----------|--|--|---|----|--|--|
| <p style="text-align: center;"><u>SOT-23</u></p>   Marking : JV | <p>FEATURES</p> <ul style="list-style-type: none"> • Low leakage current applications • Medium speed switching times | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum Ratings @Ta=25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Parameter</th><th>Symbol</th><th>Limit</th><th>Unit</th></tr> </thead> <tbody> <tr> <td>Peak Repetitive Peak Reverse Voltage</td><td>V_{RRM}</td><td></td><td></td></tr> <tr> <td>Working Peak Reverse Voltage</td><td>V_{RWM}</td><td>75</td><td>V</td></tr> <tr> <td>DC Blocking Voltage</td><td>V_R</td><td></td><td></td></tr> <tr> <td>Forward Continuous Current</td><td>I_{FM}</td><td>200</td><td>mA</td></tr> <tr> <td>Non-Repetitive Peak Forward Surge Current @t=8.3ms</td><td>I_{FSM}</td><td>2.0</td><td>A</td></tr> <tr> <td>Power Dissipation</td><td>P_D</td><td>225</td><td>mW</td></tr> <tr> <td>Operation Junction and Storage Temperature Range</td><td>T_J, T_{STG}</td><td>-55~+150</td><td>°C</td></tr> </tbody> </table> | Parameter | Symbol | Limit | Unit | Peak Repetitive Peak Reverse Voltage | V_{RRM} | | | Working Peak Reverse Voltage | V_{RWM} | 75 | V | DC Blocking Voltage | V_R | | | Forward Continuous Current | I_{FM} | 200 | mA | Non-Repetitive Peak Forward Surge Current @t=8.3ms | I_{FSM} | 2.0 | A | Power Dissipation | P_D | 225 | mW | Operation Junction and Storage Temperature Range | T_J, T_{STG} | -55~+150 | °C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parameter | Symbol | Limit | Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Peak Repetitive Peak Reverse Voltage | V_{RRM} | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Working Peak Reverse Voltage | V_{RWM} | 75 | V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DC Blocking Voltage | V_R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Forward Continuous Current | I_{FM} | 200 | mA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-Repetitive Peak Forward Surge Current @t=8.3ms | I_{FSM} | 2.0 | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power Dissipation | P_D | 225 | mW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operation Junction and Storage Temperature Range | T_J, T_{STG} | -55~+150 | °C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electrical Characteristics @Ta=25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Parameter</th><th>Symbol</th><th>Min</th><th>Typ</th><th>Max</th><th>Unit</th><th>Conditions</th></tr> </thead> <tbody> <tr> <td>Reverse breakdown voltage</td><td>$V_{(BR)}$</td><td>75</td><td></td><td></td><td>V</td><td>$I_R=100\mu A$</td></tr> <tr> <td rowspan="4">Forward voltage</td><td>V_{F1}</td><td></td><td></td><td>0.9</td><td>V</td><td>$I_F=1mA$</td></tr> <tr> <td>V_{F2}</td><td></td><td></td><td>1</td><td>V</td><td>$I_F=10mA$</td></tr> <tr> <td>V_{F3}</td><td></td><td></td><td>1.1</td><td>V</td><td>$I_F=50mA$</td></tr> <tr> <td>V_{F4}</td><td></td><td></td><td>1.25</td><td>V</td><td>$I_F=150mA$</td></tr> <tr> <td>Reverse current</td><td>I_R</td><td></td><td></td><td>5</td><td>nA</td><td>$V_R=75V$</td></tr> <tr> <td>Diode capacitance</td><td>C_{tot}</td><td></td><td>2</td><td></td><td>pF</td><td>$V_R=0V, f=1MHz$</td></tr> <tr> <td>Reverse recovery time</td><td>t_{rr}</td><td></td><td></td><td>3</td><td>μs</td><td>$I_F=I_R=10mA, I_{rr}=0.1 \times I_R, R_L=100\Omega$</td></tr> </tbody> </table> | Parameter | Symbol | Min | Typ | Max | Unit | Conditions | Reverse breakdown voltage | $V_{(BR)}$ | 75 | | | V | $I_R=100\mu A$ | Forward voltage | V_{F1} | | | 0.9 | V | $I_F=1mA$ | V_{F2} | | | 1 | V | $I_F=10mA$ | V_{F3} | | | 1.1 | V | $I_F=50mA$ | V_{F4} | | | 1.25 | V | $I_F=150mA$ | Reverse current | I_R | | | 5 | nA | $V_R=75V$ | Diode capacitance | C_{tot} | | 2 | | pF | $V_R=0V, f=1MHz$ | Reverse recovery time | t_{rr} | | | 3 | μs | $I_F=I_R=10mA, I_{rr}=0.1 \times I_R, R_L=100\Omega$ | |
| Parameter | Symbol | Min | Typ | Max | Unit | Conditions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reverse breakdown voltage | $V_{(BR)}$ | 75 | | | V | $I_R=100\mu A$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Forward voltage | V_{F1} | | | 0.9 | V | $I_F=1mA$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | V_{F2} | | | 1 | V | $I_F=10mA$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | V_{F3} | | | 1.1 | V | $I_F=50mA$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | V_{F4} | | | 1.25 | V | $I_F=150mA$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reverse current | I_R | | | 5 | nA | $V_R=75V$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diode capacitance | C_{tot} | | 2 | | pF | $V_R=0V, f=1MHz$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reverse recovery time | t_{rr} | | | 3 | μs | $I_F=I_R=10mA, I_{rr}=0.1 \times I_R, R_L=100\Omega$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Typical Characteristics

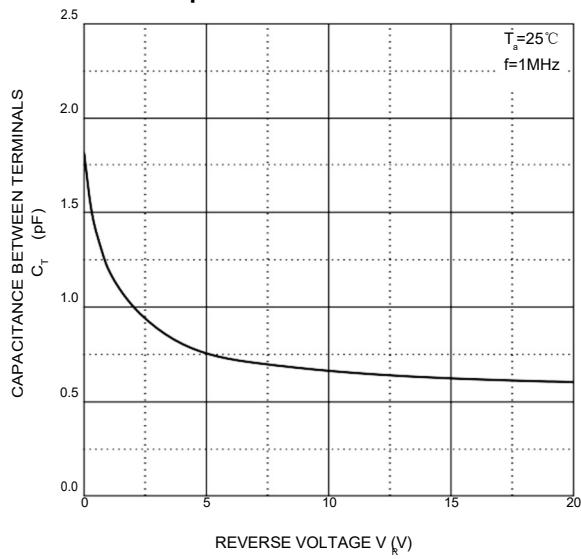
Forward Characteristics



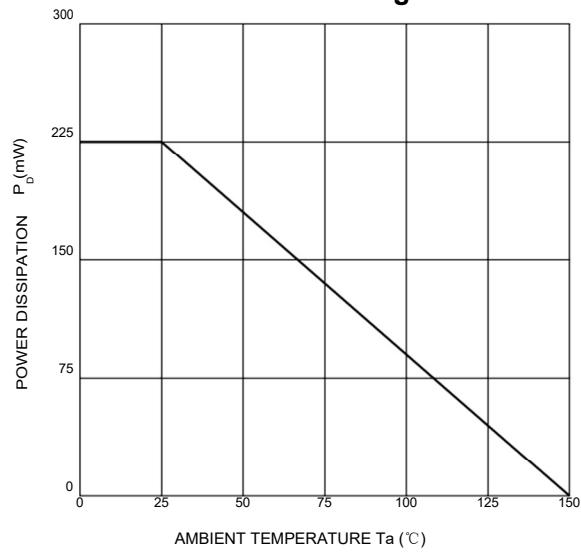
Reverse Characteristics



Capacitance Characteristics



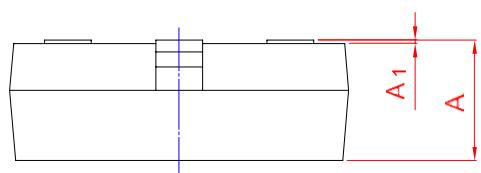
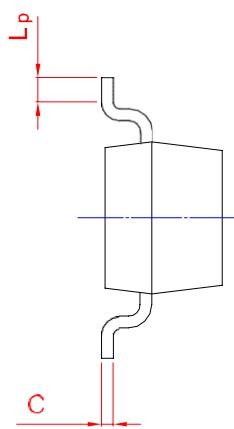
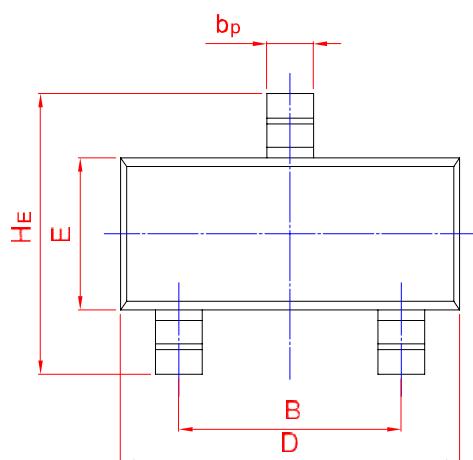
Power Derating Curve



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



| UNIT | A | B | b _p | C | D | E | H _E | A ₁ | L _p |
|------|--------------|--------------|----------------|--------------|--------------|--------------|----------------|----------------|----------------|
| mm | 1.40 0.95 | 2.04 1.78 | 0.50 0.35 | 0.19 0.08 | 3.10 2.70 | 1.65 1.20 | 3.00 2.20 | 0.100 0.013 | 0.50 0.20 |