## Features

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


SOT-23


## Maxmim Ratings ( $\mathbf{T a}=\mathbf{2 5}{ }^{\circ} \mathrm{C}$ unless otherwise noted)

| Symbol | Parameter | Value | Unit |
| :---: | :---: | :---: | :---: |
| $\mathrm{V}_{\text {RRM }}$ | Peak Repetitive Reverse Voltage | 250 | V |
| $\mathrm{V}_{\text {RWM }}$ | Working Peak Reverse Voltage |  |  |
| $\mathrm{V}_{\mathrm{R} \text { (RMS) }}$ | RMS Reverse Voltage | 175 | V |
| 10 | Average Rectified Output Current | 225 | mA |
| $\mathrm{I}_{\text {FSM }}$ | Non-repetitive Peak Forward Surge Current @ t=8.3ms | 1.7 | A |
| $\mathrm{P}_{\mathrm{D}}$ | Power Dissipation | 350 | mW |
| R OJA | Thermal Resistance from Junction to Ambient | 357 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
| $\mathrm{T}_{\mathrm{j}}$ | Junction Temperature | 150 | ${ }^{\circ} \mathrm{C}$ |
| $\mathrm{T}_{\text {stg }}$ | Storage Temperature | -55~+150 | ${ }^{\circ} \mathrm{C}$ |

Electrcal Charcteristics ( $\mathrm{Ta}=25^{\circ} \mathrm{C}$ unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reverse voltage | $\mathrm{V}_{\text {(BR) }}$ | $\mathrm{I}_{\mathrm{R}}=100 \mu \mathrm{~A}$ | 250 |  |  | V |
| Reverse current | $\mathrm{I}_{\mathrm{R}}$ | $\mathrm{V}_{\mathrm{R}}=250 \mathrm{~V}$ |  |  | 0.1 | $\mu \mathrm{A}$ |
| Forward voltage | $V_{F}$ | $\mathrm{I}_{\mathrm{F}}=100 \mathrm{~mA}$ |  |  | 1 | V |
|  |  | $\mathrm{l}_{\mathrm{F}}=200 \mathrm{~mA}$ |  |  | 1.25 |  |
| Total capacitance | $\mathrm{C}_{\text {tot }}$ | $\mathrm{V}_{\mathrm{R}}=0 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz}$ |  |  | 5 | pF |
| Reverse recovery time | $\mathrm{t}_{\mathrm{r}}$ | $\mathrm{I}_{\mathrm{F}}=\mathrm{I}_{\mathrm{R}}=30 \mathrm{~mA}, \mathrm{I}_{\text {rr }}=0.1 \times \mathrm{I}_{\mathrm{R}}, \mathrm{R}_{\mathrm{L}}=100 \Omega$ |  |  | 50 | ns |

## Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with $0.2^{\prime \prime} \times 0.2^{\prime \prime}(5.0 \mathrm{~mm} \times 5.0 \mathrm{~mm})$ copper pad areas

## Typical Characteristics






## SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |  | Dimensions In Inches |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Min | Max | Min | Max |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950 TYP |  | 0.037 TYP |  |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 REF |  | 0.022 REF |  |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| $\theta$ | $0^{\circ}$ | $8^{\circ}$ | $00^{\circ}$ | $8^{\circ}$ |

SOT-23 Suggested Pad Layout


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

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