## Schottky Diodes

## MiniMELF



Dimensions in inches and（millimeters）

## FEATURES

－For general purpose applications．
－This diode features low turn－on voltage and high breakdown volt－ age．These devices are protected by a PN junction guard ring against excessive voltage，such as electrostatic discharges．
－This diode is also available in the DO－35 case with type designation BAT41．

MECHANICAL DATA
Case：MiniMELF Glass Case（SOD－80）
Weight：approx． 0.05 g

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at $25^{\circ} \mathrm{C}$ ambient temperature unless otherwise specified

|  | Symbol | Value | Unit |
| :--- | :--- | :--- | :---: |
| Repetitive Peak Reverse Voltage | $\mathrm{V}_{\text {RRM }}$ | 100 | V |
| Forward Continuous Current at $\mathrm{T}_{\text {amb }}=25^{\circ} \mathrm{C}$ | $\mathrm{I}_{\mathrm{F}}$ | $100^{1)}$ | mA |
| Repetitive Peak Forward Current <br> at $\mathrm{t}_{\mathrm{p}}<1 \mathrm{~s}, @<0.5, \mathrm{~T}_{\mathrm{amb}}=25^{\circ} \mathrm{C}$ | $\mathrm{I}_{\text {FRM }}$ | $350^{1)}$ | mA |
| Surge Forward Current <br> at $\mathrm{t}_{\mathrm{p}}=10 \mathrm{~ms}, \mathrm{~T}_{\text {amb }}=25^{\circ} \mathrm{C}$ | $\mathrm{I}_{\text {SFM }}$ | $750^{1)}$ | mA |
| Power Dissipation， $\mathrm{T}_{\text {amb }}=25^{\circ} \mathrm{C}$ | $\mathrm{P}_{\text {tot }}$ | $400^{1)}$ | mW |
| Junction Temperature | $\mathrm{T}_{\mathrm{j}}$ | 125 | ${ }^{\circ} \mathrm{C}$ |
| Ambient Operating Temperature Range | $\mathrm{T}_{\text {amb }}$ | -65 to +125 | ${ }^{\circ} \mathrm{C}$ |
| Storage Temperature Range | $\mathrm{T}_{\mathrm{S}}$ | $-65 \mathrm{to}+150$ | ${ }^{\circ} \mathrm{C}$ |
| 1）Valid provided that electrodes are kept at ambient temperature． |  |  |  |

## LL41

## ELECTRICAL CHARACTERISTICS

Ratings at $25^{\circ} \mathrm{C}$ ambient temperature unless otherwise specified

| Test Conditions | Symbol | Min. | Typ. | Max. | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Reverse Breakdown Voltage tested with $100 \mu \mathrm{~A} / 300 \mu \mathrm{~s}$ Pulses | $\mathrm{V}_{(\mathrm{BR}) \mathrm{R}}$ | 100 | 110 | - | V |
| Forward Voltage <br> Pulse Test $t_{p}=300 \mu \mathrm{~s}$ <br> at $\mathrm{I}_{\mathrm{F}}=1 \mathrm{~mA}$ <br> at $I_{F}=200 \mathrm{~mA}$ | $\begin{aligned} & V_{F} \\ & V_{F} \end{aligned}$ | - | 0.40 - | $\begin{aligned} & 0.45 \\ & 1.0 \end{aligned}$ | $\begin{aligned} & \mathrm{V} \\ & \mathrm{~V} \end{aligned}$ |
| Leakage Current <br> Pulse Test $\mathrm{t}_{\mathrm{p}}=300 \mu \mathrm{~s}$ <br> at $\mathrm{V}_{\mathrm{R}}=50 \mathrm{~V}$, at $\mathrm{T}_{\mathrm{j}}=25^{\circ} \mathrm{C}$ <br> at $\mathrm{V}_{\mathrm{R}}=50 \mathrm{~V}$, at $\mathrm{T}_{\mathrm{j}}=100^{\circ} \mathrm{C}$ | $\begin{aligned} & I_{R} \\ & I_{R} \end{aligned}$ | - | - | $\begin{array}{r} 100 \\ 20 \end{array}$ | $\begin{aligned} & \mathrm{nA} \\ & \mu \mathrm{~A} \end{aligned}$ |
| Capacitance at $\mathrm{V}_{\mathrm{R}}=1 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz}$ | $\mathrm{C}_{\text {tot }}$ | - | 2 | - | pF |
| Reverse Recovery Time from $I_{F}=10 \mathrm{~mA}$, to $\mathrm{I}_{\mathrm{R}}=10 \mathrm{~mA}$ to $\mathrm{I}_{\mathrm{R}}=1 \mathrm{~mA}$ $\mathrm{R}_{\mathrm{L}}=100 \mathrm{Ohm}$ | $\mathrm{t}_{\mathrm{rr}}$ | - | 5 | - | ns |
| Thermal Resistance Junction to Ambient Air | $\mathrm{R}_{\text {thJA }}$ | - | - | $300{ }^{1)}$ | K/W |
| ${ }^{1)}$ Valid provided that electrodes are kept at ambient temperature. |  |  |  |  |  |

