## BAS521WT

High Voltage Switching Diode

## Applications

- high speed switching
- high voltage switching


Top View
Marking Code: "a"
Simplified outline SOD-523 and symbol

Absolute Maximum Ratings ( $\mathrm{T}_{\mathrm{a}}=25^{\circ} \mathrm{C}$ )

| Parameter | Symbol | Value | Unit |
| :--- | :---: | :---: | :---: |
| Repetitive Peak Reverse Voltage | $\mathrm{V}_{\text {RRM }}$ | 300 | V |
| Reverse Voltage | $\mathrm{V}_{\mathrm{R}}$ | 300 | V |
| Continuous Forward Current | $\mathrm{I}_{\mathrm{F}}$ | 225 | mA |
| Repetitive Peak Forward Current | $\mathrm{I}_{\text {FRM }}$ | 625 | mA |
| Non-Repetitive Peak Forward Current $(1 \mu \mathrm{~s})$ | $\mathrm{I}_{\text {FSM }}$ | 4 | A |
| Power Dissipation | $\mathrm{P}_{\text {tot }}$ | 250 | mW |
| Junction Temperature | $\mathrm{T}_{\mathrm{J}}$ | 150 | ${ }^{\circ} \mathrm{C}$ |
| Storage Temperature Range | $\mathrm{T}_{\mathrm{s}}$ | -65 to +150 | ${ }^{\circ} \mathrm{C}$ |

Characteristics at $\mathrm{T}_{\mathrm{a}}=25^{\circ} \mathrm{C}$

| Parameter | Symbol | Min. | Max. | Unit |
| :---: | :---: | :---: | :---: | :---: |
| Forward Voltage <br> at $\mathrm{I}_{\mathrm{F}}=100 \mathrm{~mA}$ | $\mathrm{~V}_{\mathrm{F}}$ | - | 1.1 | V |
| Reverse Breakdown Voltage <br> at $\mathrm{I}_{\mathrm{R}}=100 \mu \mathrm{~A}$ | $\mathrm{~V}_{(\mathrm{BR}) \mathrm{R}}$ | 300 | - | V |
| Reverse Current <br> at $\mathrm{V}_{\mathrm{R}}=250 \mathrm{~V}$ | $\mathrm{I}_{\mathrm{R}}$ | - | 150 | nA |
| Reverse Recovery Time <br> at $\mathrm{I}_{\mathrm{F}}=\mathrm{I}_{\mathrm{R}}=30 \mathrm{~mA}, \mathrm{R}_{\mathrm{L}}=100 \Omega, \mathrm{i}_{\mathrm{rr}}=0.1 \mathrm{I}_{\mathrm{R}}$ | $\mathrm{t}_{\mathrm{rr}}$ | - | 50 | ns |
| Total Capacitance <br> at $\mathrm{V}_{\mathrm{R}}=0 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz}$ | $\mathrm{C}_{T}$ | - | 5 | pF |


(1) $\mathrm{T}_{\text {amb }}=150^{\circ} \mathrm{C}$.
(2) $\mathrm{T}_{\text {amb }}=75^{\circ} \mathrm{C}$.
(3) $\mathrm{T}_{\text {amb }}=25^{\circ} \mathrm{C}$.

Forward current as a function of forward voltage; typical values.


Maximum permissible continuous forward current as a function of ambient temperature

$V_{R}=V_{R m a x}$; typical values
Reverse current as a function of junction temperature.


Diode capacitance as a function of reverse voltage; typical values.

## PACKAGE OUTLINE



| UNIT | A | $\mathrm{b}_{\mathrm{p}}$ | C | D | E | $\mathrm{H}_{\mathrm{E}}$ | V | $\angle$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0.70 | 0.4 | 0.135 | 1.25 | 0.85 | 1.7 | 0.1 | $5^{\circ}$ |
|  | 0.60 | 0.3 | 0.127 | 1.15 | 0.75 | 1.5 |  |  |

