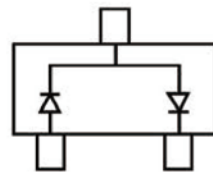


## Features

- Low Forward Voltage
- Fast Switching



SOT-323



Equivalent Circuit

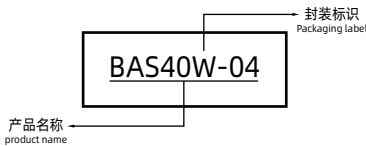
## Absolute Maximum Ratings(TA=25℃)

| Symbol           | Parameter                                   | Value    | Unit |
|------------------|---------------------------------------------|----------|------|
| V <sub>RRM</sub> | Peak Repetitive Peak Reverse Voltage        | 40       | V    |
| V <sub>RWM</sub> | Working Peak Reverse Voltage                |          |      |
| V <sub>R</sub>   | DC Blocking Voltage                         |          |      |
| I <sub>FM</sub>  | Forward Continuous Current                  | 200      | mA   |
| P <sub>d</sub>   | Power Dissipation                           | 150      | mW   |
| R <sub>θJA</sub> | Thermal Resistance From Junction To Ambient | 667      | ℃/W  |
| T <sub>J</sub>   | Operating Junction Temperature Range        | -40~+125 | ℃    |
| T <sub>stg</sub> | Storage Temperature Range                   | -55~+150 | ℃    |

## Electrical Characteristics (TA=25℃ unless otherwise specified)

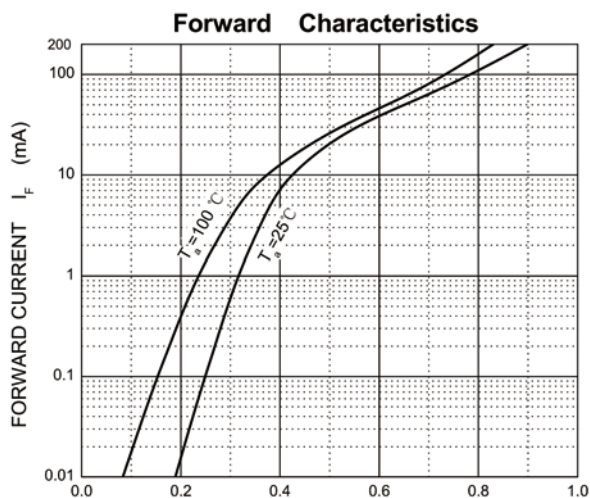
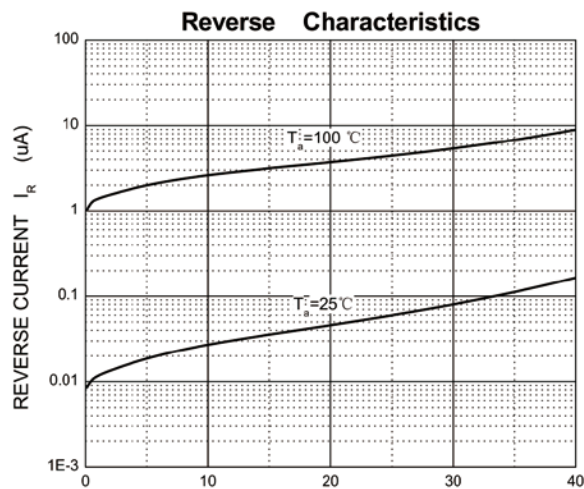
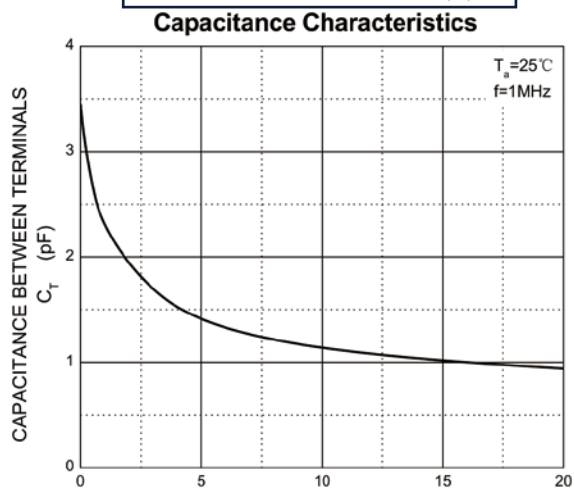
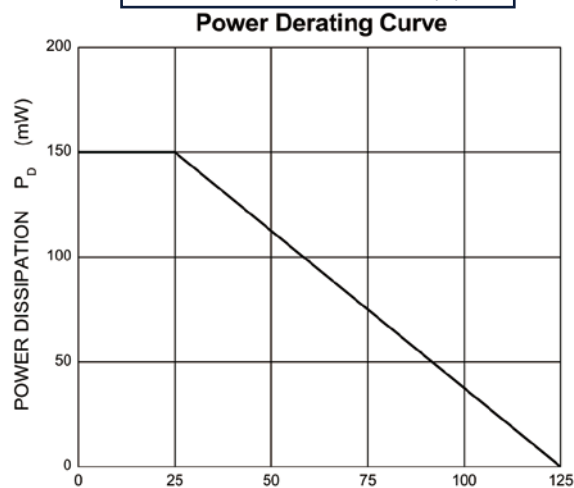
| Symbol            | Parameter                 | Test conditions                                                                  | Min | Max  | Unit |
|-------------------|---------------------------|----------------------------------------------------------------------------------|-----|------|------|
| V <sub>(BR)</sub> | Reverse breakdown voltage | I <sub>R</sub> =10μA                                                             | 40  |      | V    |
| I <sub>R</sub>    | Reverse current           | V <sub>R</sub> =30V                                                              |     | 200  | nA   |
| V <sub>F</sub>    | Forward voltage           | I <sub>F</sub> =1mA                                                              |     | 380  | mV   |
|                   |                           | I <sub>F</sub> =40mA                                                             |     | 1000 | mV   |
| C <sub>D</sub>    | Diode capacitance         | V <sub>R</sub> =0V, f=1MHz                                                       |     | 5    | pF   |
| t <sub>rr</sub>   | Reverse recovery time     | I <sub>rr</sub> =1mA, I <sub>R</sub> =I <sub>F</sub> =10mA, R <sub>L</sub> =100Ω |     | 5    | nS   |

## Ordering information

| Product ID | Marking | Naming rule                                                                          | Pack    | Qty(PCS) |
|------------|---------|--------------------------------------------------------------------------------------|---------|----------|
| BAS40W-04  | 44      |  | SOT-323 | 3000     |

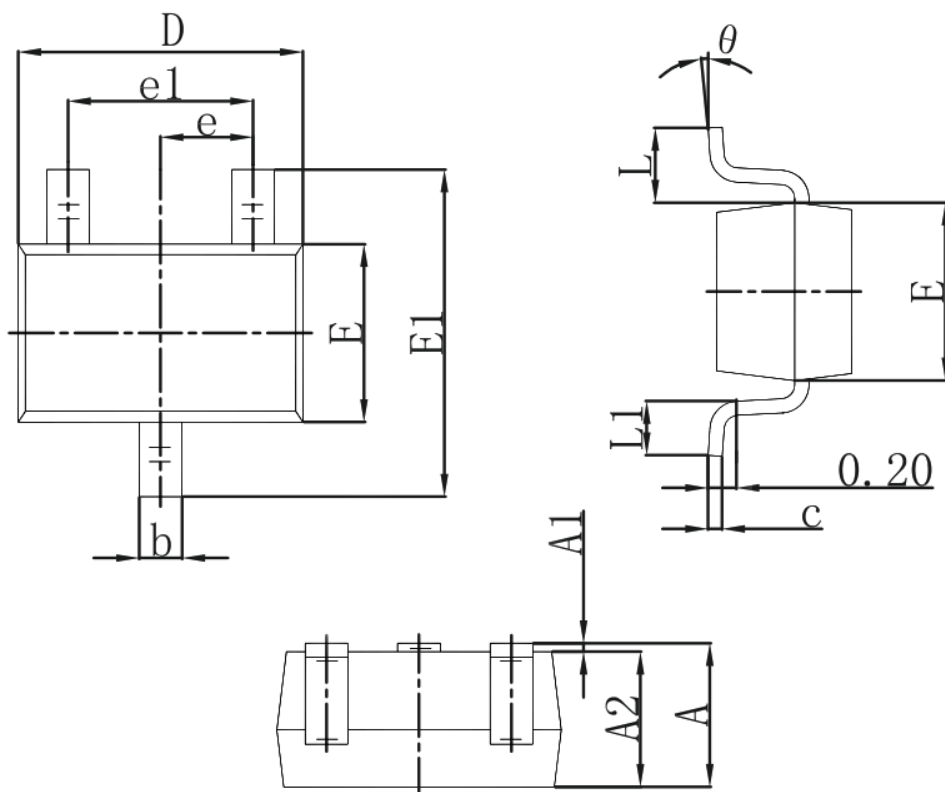


## Typical Characteristics

FORWARD VOLTAGE  $V_F$  (V)REVERSE VOLTAGE  $V_R$  (V)REVERSE VOLTAGE  $V_R$  (V)AMBIENT TEMPERATURE  $T_a$  ( $^\circ\text{C}$ )



## SOT-323 Package Outline Dimensions



| Symbol   | Dimensions in Millimeters |       | Dimensions In Inches |       |
|----------|---------------------------|-------|----------------------|-------|
|          | Min                       | Max   | Min                  | Max   |
| A        | 0.900                     | 1.100 | 0.035                | 0.043 |
| A1       | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2       | 0.900                     | 1.000 | 0.035                | 0.039 |
| b        | 0.200                     | 0.400 | 0.008                | 0.016 |
| c        | 0.080                     | 0.150 | 0.003                | 0.006 |
| D        | 2.000                     | 2.200 | 0.079                | 0.087 |
| E        | 1.150                     | 1.350 | 0.045                | 0.053 |
| E1       | 1.350                     | 2.450 | 0.085                | 0.096 |
| e        | 0.650 TYP                 |       | 0.026 TYP            |       |
| e1       | 1.200                     | 1.400 | 0.047                | 0.055 |
| L        | 0.525 REF                 |       | 0.021 REF            |       |
| L1       | 0.260                     | 0.460 | 0.010                | 0.018 |
| $\theta$ | 0°                        | 8°    | 0°                   | 8°    |