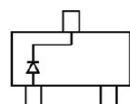


# SOT-323 Plastic-Encapsulate Diodes

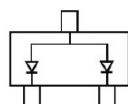
SCHOTTKY BARRIER DIODE

## FEATURES

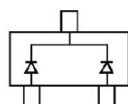
- Low Forward Voltage
- Fast Switching



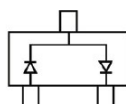
BAS40W MARKING: 43



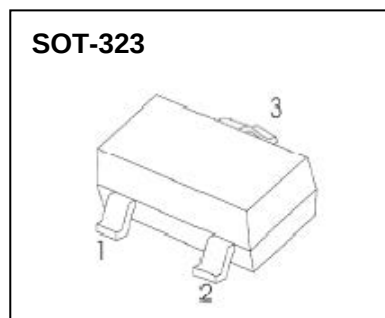
BAS40W-06 MARKING: 46



BAS40W-05 MARKING: 45



BAS40W-04 MARKING: 44



SOT-323

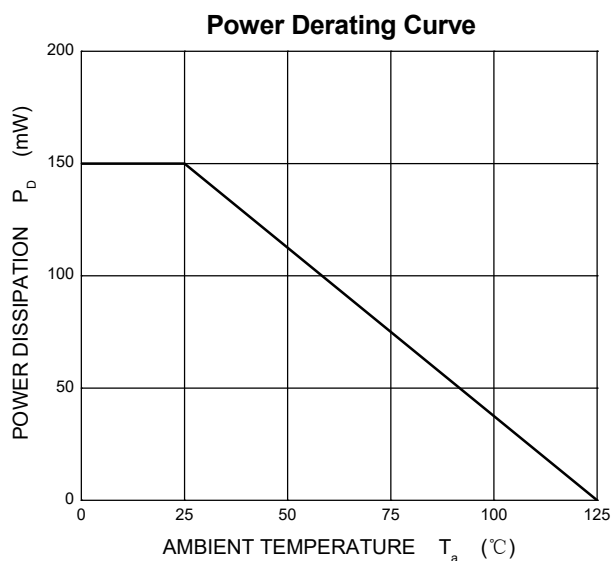
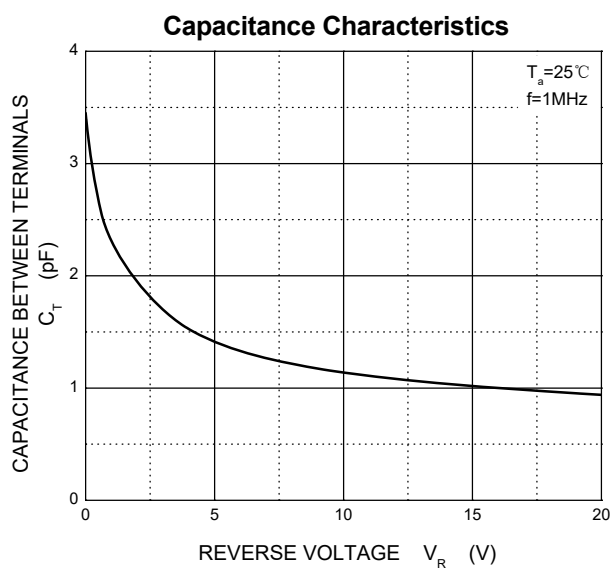
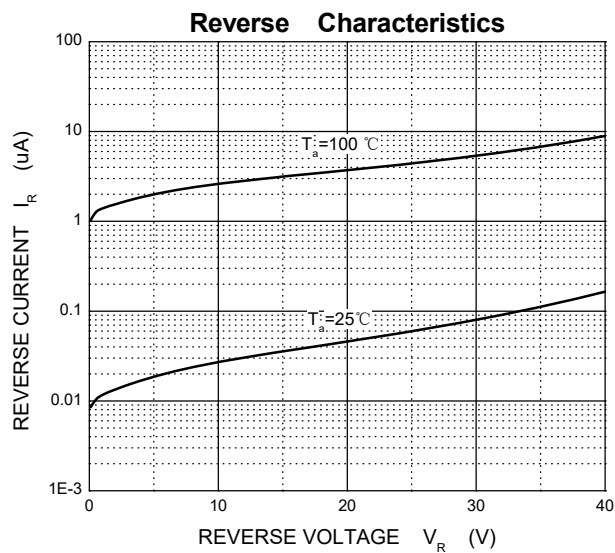
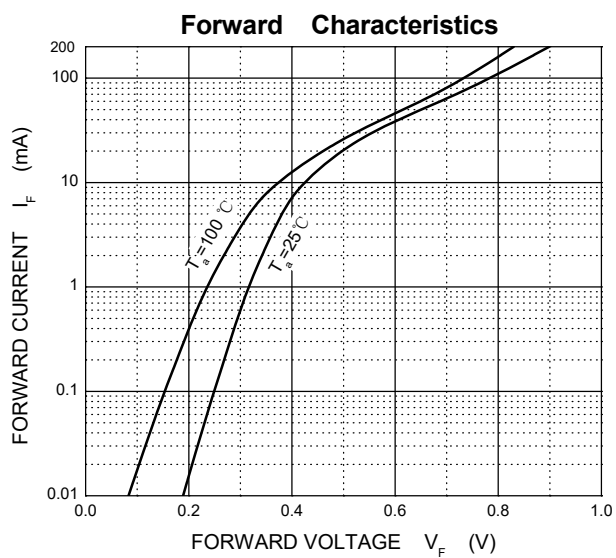
## Maximum Ratings @Ta=25°C

| Parameter                              | Symbol          | Limit      | Unit |
|----------------------------------------|-----------------|------------|------|
| Peak repetitive peak reverse voltage   | $V_{RRM}$       | 40         | V    |
| Working peak reverse voltage           | $V_{RWM}$       |            |      |
| DC blocking voltage                    | $V_R$           |            |      |
| Forward continuous current             | $I_{FM}$        | 200        | mA   |
| Power dissipation                      | $P_D$           | 150        | mW   |
| Thermal resistance junction to ambient | $R_{\theta JA}$ | 667        | °C/W |
| Operating Junction Temperature Range   | $T_J$           | -40 ~ +125 | °C   |
| Storage Temperature Range              | $T_{STG}$       | -55 ~ +150 | °C   |

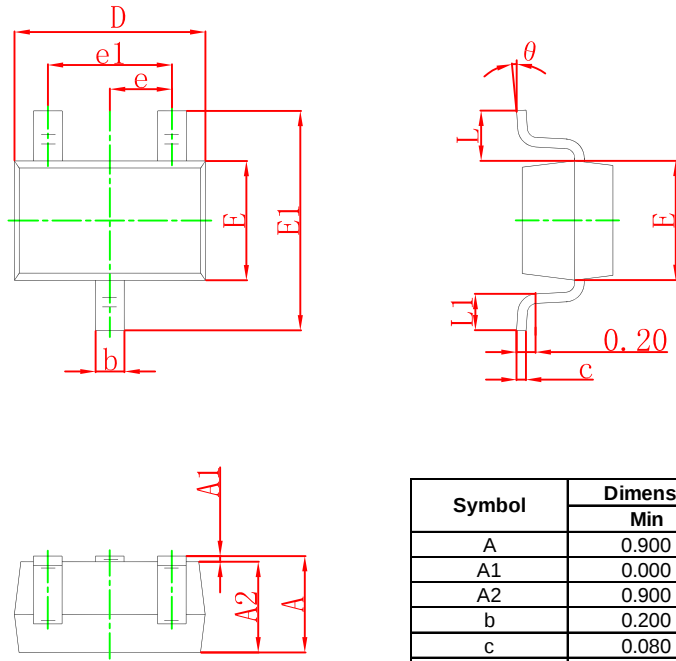
## ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

| Parameter                       | Symbol     | Test conditions                                       | Min | Max         | Unit |
|---------------------------------|------------|-------------------------------------------------------|-----|-------------|------|
| Reverse breakdown voltage       | $V_{(BR)}$ | $I_R = 10\mu A$                                       | 40  |             | V    |
| Reverse voltage leakage current | $I_R$      | $V_R = 30V$                                           |     | 200         | nA   |
| Forward voltage                 | $V_F$      | $I_F = 1mA$<br>$I_F = 40mA$                           |     | 380<br>1000 | mV   |
| Diode capacitance               | $C_D$      | $V_R = 0, f = 1MHz$                                   |     | 5           | pF   |
| Reverse recovery time           | $t_{rr}$   | $I_{rr} = 1mA, I_R = I_F = 10mA$<br>$R_L = 100\Omega$ |     | 5           | ns   |

## Typical Characteristics

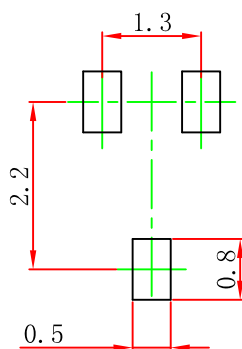


## SOT-323 Package Outline Dimensions



| 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       | 2.150                     | 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°    |

## SOT-323 Suggested Pad Layout



Note:

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

### NOTICE

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