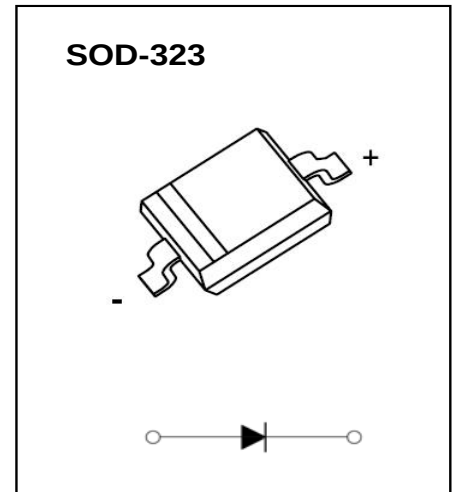
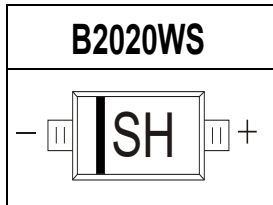


**SOD-323 Plastic-Encapsulate Diodes****B2020WS****SCHOTTKY BARRIER DIODE****FEATURES**

- Low Forward Voltage Drop
- Low Voltage Rectification

**MARKING****MAXIMUM RATINGS** ( $T_a=25^{\circ}\text{C}$  unless otherwise noted)

| Symbol          | Parameter                                                    | Value        | Unit                 |
|-----------------|--------------------------------------------------------------|--------------|----------------------|
| $V_{RRM}$       | Peak Repetitive Reverse Voltage                              | 20           | V                    |
| $V_{RWM}$       | Working Peak Reverse Voltage                                 |              |                      |
| $V_{R(RMS)}$    | RMS Reverse Voltage                                          | 14           | V                    |
| $I_F$           | Continuous Forward Current                                   | 2            | A                    |
| $I_{FSM}$       | Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$ | 9            | A                    |
| $P_D$           | Power Dissipation                                            | Note1<br>250 | mW                   |
|                 |                                                              | Note2<br>480 |                      |
| $R_{\theta JA}$ | Thermal Resistance from Junction to Ambient                  | Note1<br>400 | $^{\circ}\text{C/W}$ |
|                 |                                                              | Note2<br>208 |                      |
| $T_j$           | Operating Junction Temperature Range                         | -40 ~ +125   | $^{\circ}\text{C}$   |
| $T_{stg}$       | Storage Temperature Range                                    | -55 ~ +150   | $^{\circ}\text{C}$   |

1: Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.

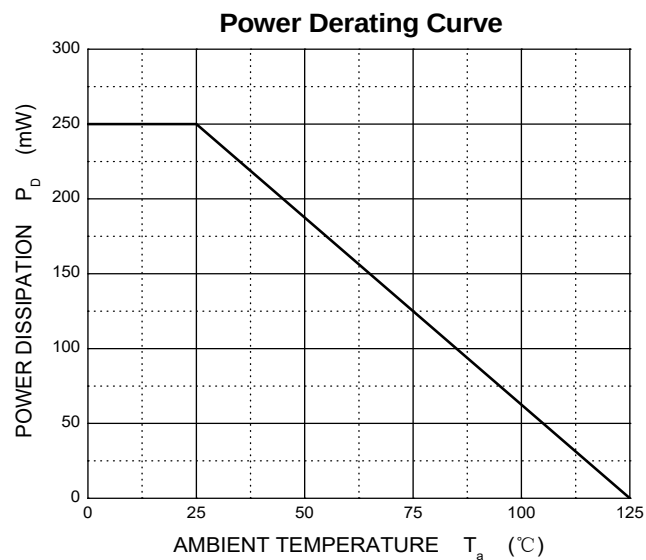
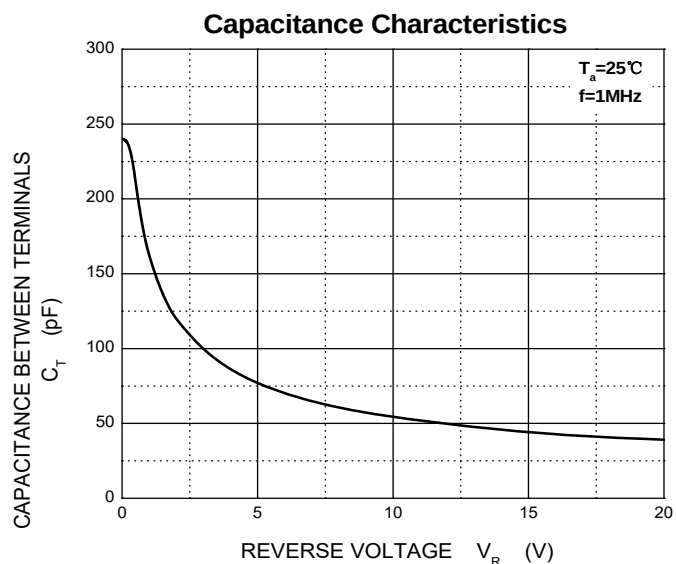
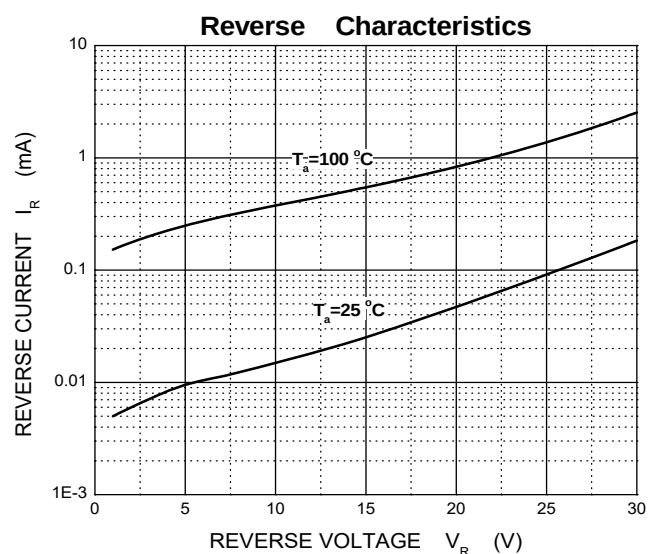
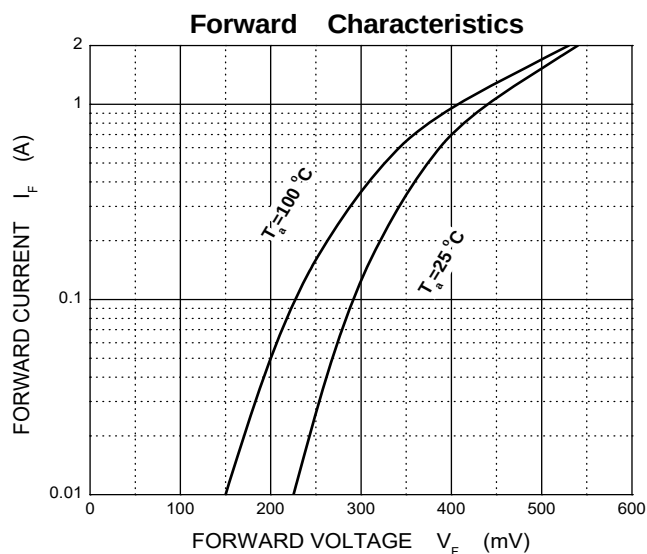
2: Device mounted on an FR4 PCB with copper pad 10 x 10 mm.

**ELECTRICAL CHARACTERISTICS** ( $T_a=25^{\circ}\text{C}$  unless otherwise specified)

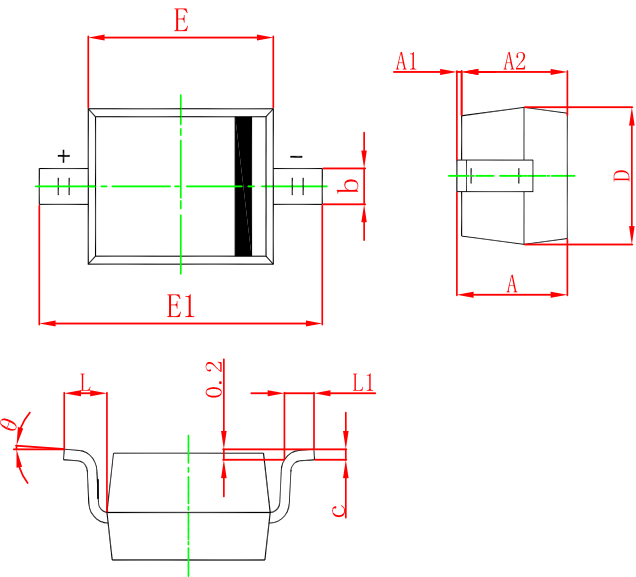
| Parameter                 | Symbol     | Test conditions                | Min | Typ | Max  | Unit          |
|---------------------------|------------|--------------------------------|-----|-----|------|---------------|
| Reverse breakdown voltage | $V_{(BR)}$ | $I_R=1\text{mA}$               | 20  |     |      | V             |
| Reverse current           | $I_R$      | $V_R=10\text{V}$               |     |     | 80   | $\mu\text{A}$ |
|                           |            | $V_R=20\text{V}$               |     |     | 100  |               |
| Forward voltage           | $V_F^*$    | $I_F=1\text{A}$                |     |     | 0.45 | V             |
|                           |            | $I_F=2\text{A}$                |     |     | 0.55 |               |
| Total capacitance         | $C_{tot}$  | $V_R=4\text{V}, f=1\text{MHz}$ |     |     | 120  | pF            |

\*Pulse test:  $t_p \leq 300 \mu\text{s}$ ;  $\delta \leq 0.02$ .

## Typical Characteristics

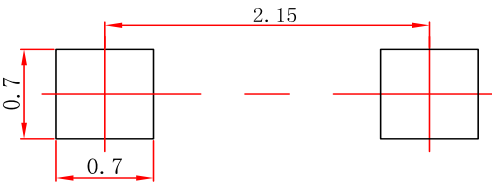


Package Outline Dimensions (SOD-323)



| Symbol   | Dimensions In Millimeters |       | Dimensions In Inches |       |
|----------|---------------------------|-------|----------------------|-------|
|          | Min                       | Max   | Min                  | Max   |
| A        |                           | 1.100 |                      | 0.043 |
| A1       | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2       | 0.800                     | 1.000 | 0.031                | 0.039 |
| b        | 0.250                     | 0.350 | 0.010                | 0.014 |
| c        | 0.080                     | 0.150 | 0.003                | 0.006 |
| D        | 1.200                     | 1.400 | 0.047                | 0.055 |
| E        | 1.600                     | 1.800 | 0.063                | 0.071 |
| E1       | 2.500                     | 2.750 | 0.098                | 0.108 |
| L        | 0.475 REF                 |       | 0.019 REF            |       |
| L1       | 0.250                     | 0.400 | 0.010                | 0.016 |
| $\theta$ | 0°                        | 8°    | 0°                   | 8°    |

Suggested Pad Layout (SOD-323)



- Note:
- 1.Controlling dimension:in millimeters.
  - 2.General tolerance:± 0.05mm.
  - 3.The pad layout is for reference purposes only.