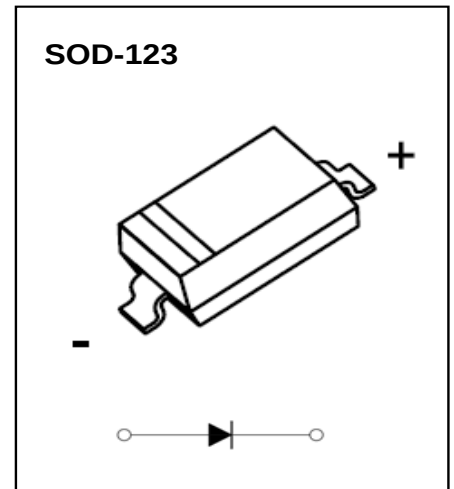
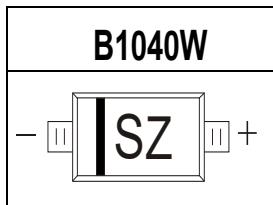


**SOD-123 Plastic-Encapsulate Diodes****B1040W****SCHOTTKY BARRIER DIODE****FEATURES**

- Low Forward Voltage Drop
- Very Small SMD Package

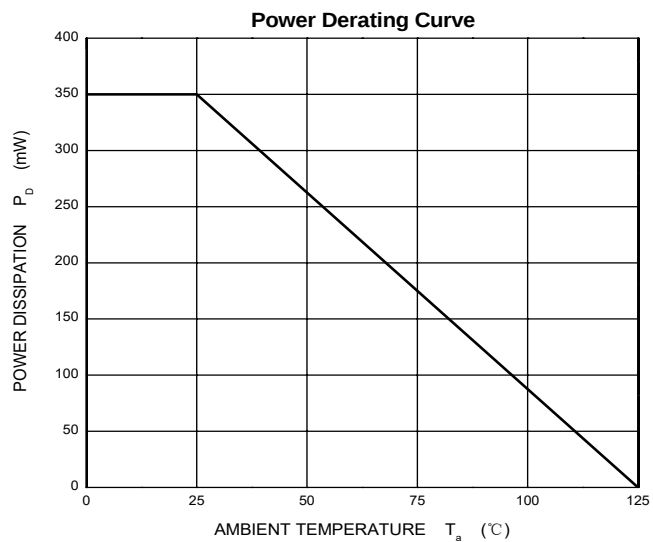
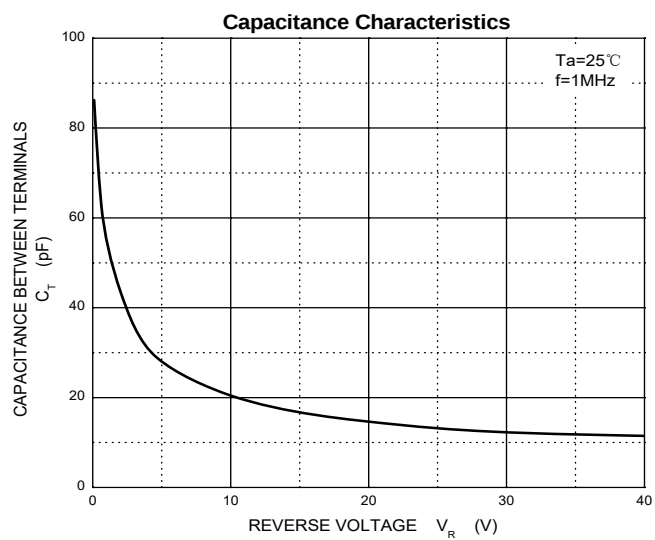
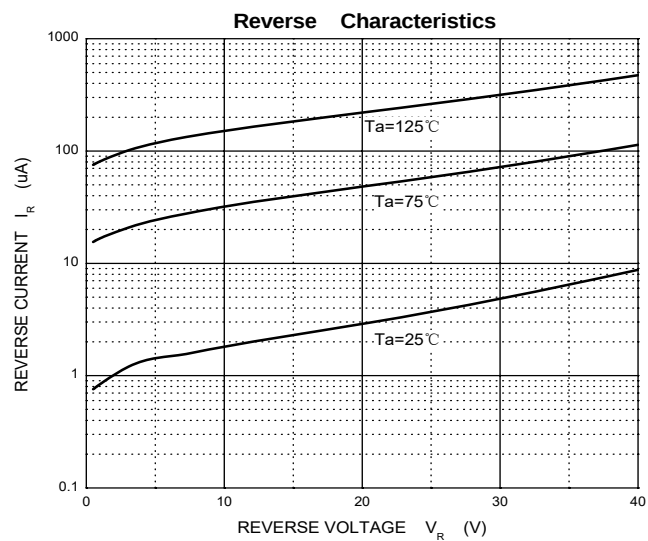
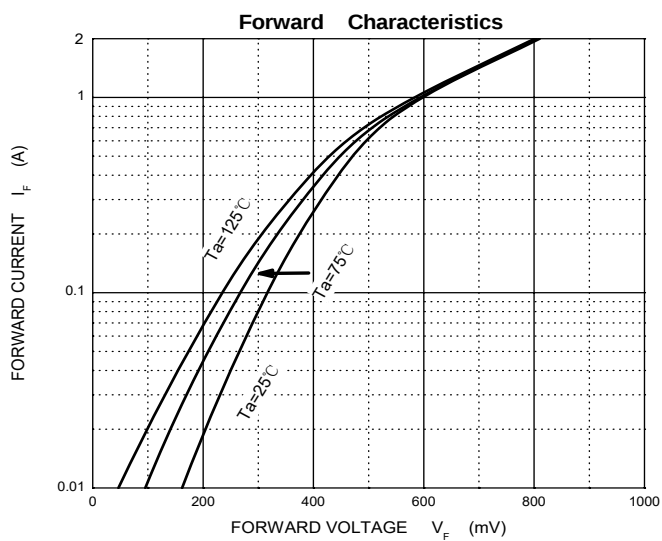
**MARKING****MAXIMUM RATINGS** ( $T_a=25^{\circ}\text{C}$  unless otherwise noted)

| Symbol          | Parameter                                                    | Value           | Unit                 |
|-----------------|--------------------------------------------------------------|-----------------|----------------------|
| $V_{RRM}$       | Peak Repetitive Reverse Voltage                              | 40              | V                    |
| $V_{RWM}$       | Working Peak Reverse Voltage                                 |                 |                      |
| $V_{R(RMS)}$    | RMS Reverse Voltage                                          | 28              | V                    |
| $I_o$           | Average Rectified Output Current                             | 1               | A                    |
| $I_{FSM}$       | Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$ | 5               | A                    |
| $P_D$           | Power Dissipation                                            | 350             | mW                   |
| $R_{\theta JA}$ | Thermal Resistance from Junction to Ambient                  | 400             | $^{\circ}\text{C/W}$ |
| $T_j$           | Operating Junction Temperature Range                         | $-40 \sim +125$ | $^{\circ}\text{C}$   |
| $T_{stg}$       | Storage Temperature Range                                    | $-55 \sim +150$ | $^{\circ}\text{C}$   |

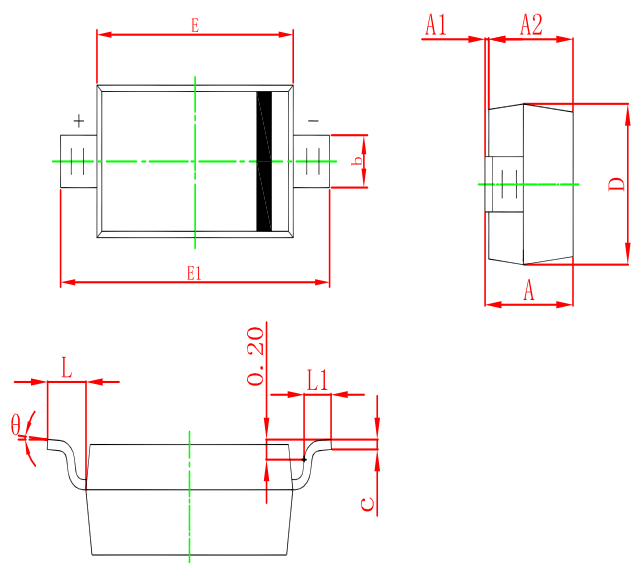
**ELECTRICAL CHARACTERISTICS** ( $T_a=25^{\circ}\text{C}$  unless otherwise specified)

| Parameter                 | Symbol     | Test conditions                 | Min | Typ | Max  | Unit          |
|---------------------------|------------|---------------------------------|-----|-----|------|---------------|
| Reverse breakdown voltage | $V_{(BR)}$ | $I_R=1\text{mA}$                | 40  |     |      | V             |
| Reverse current           | $I_R$      | $V_R=20\text{V}$                |     |     | 50   | $\mu\text{A}$ |
| Forward voltage           | $V_F$      | $I_F=0.5\text{A}$               |     |     | 0.51 | V             |
|                           |            | $I_F=0.7\text{A}$               |     |     | 0.55 |               |
| Total capacitance         | $C_{tot}$  | $V_R=10\text{V}, f=1\text{MHz}$ |     |     | 20   | pF            |

## Typical Characteristics

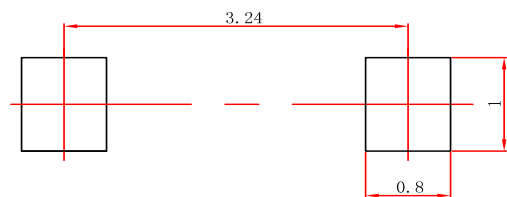


Package Outline Dimensions (SOD-123)



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 1.050                     | 1.250 | 0.041                | 0.049 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 1.050                     | 1.150 | 0.041                | 0.045 |
| b      | 0.450                     | 0.650 | 0.018                | 0.026 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 1.500                     | 1.700 | 0.059                | 0.067 |
| E      | 2.600                     | 2.800 | 0.102                | 0.110 |
| E1     | 3.550                     | 3.850 | 0.140                | 0.152 |
| L      | 0.500 REF                 |       | 0.020 REF            |       |
| L1     | 0.250                     | 0.450 | 0.010                | 0.018 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

Suggested Pad Layout (SOD-123)



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