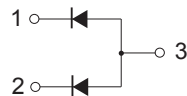
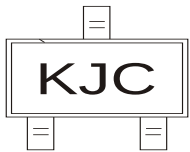
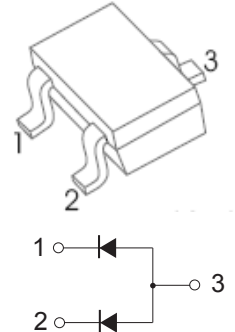


SOT-323 Plastic-Encapsulate Diodes**BAW56W****Switching Diodes****FEATURES**

- Fast Switching Speed, High Conductance
- For General Purpose Switching Applications

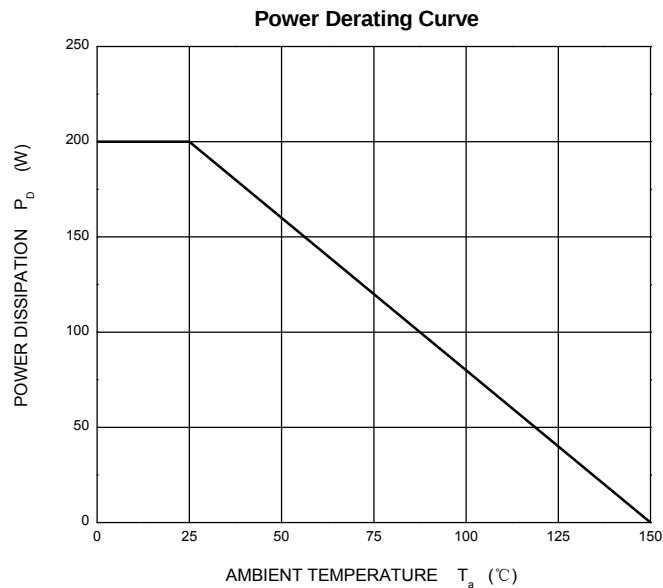
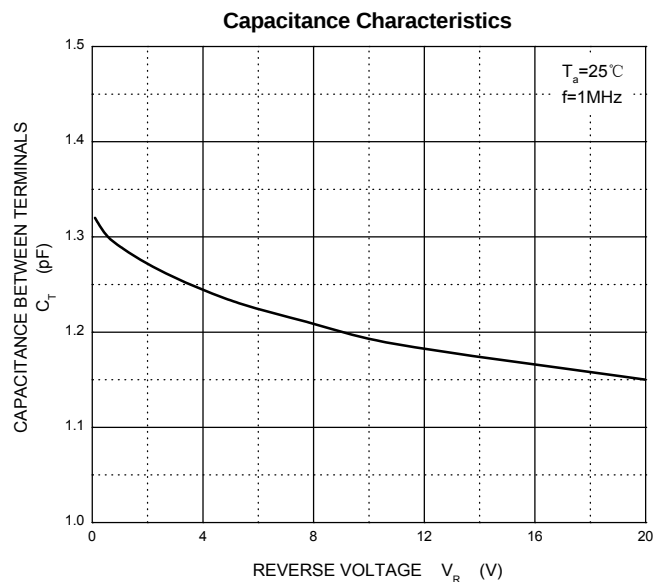
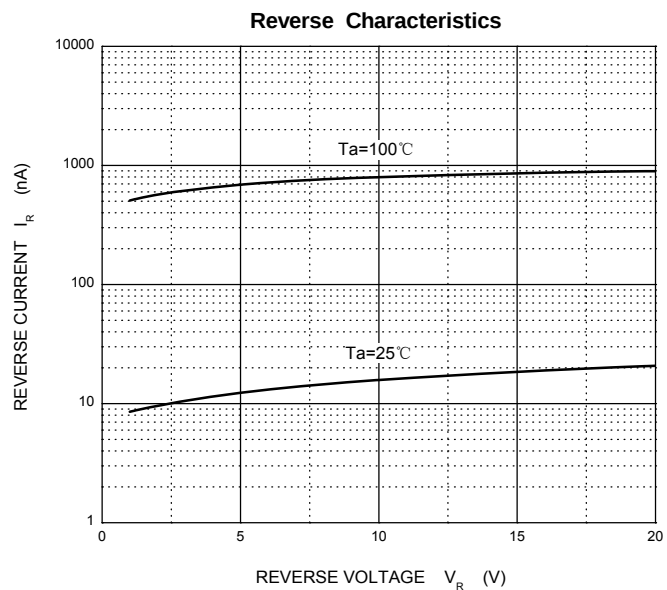
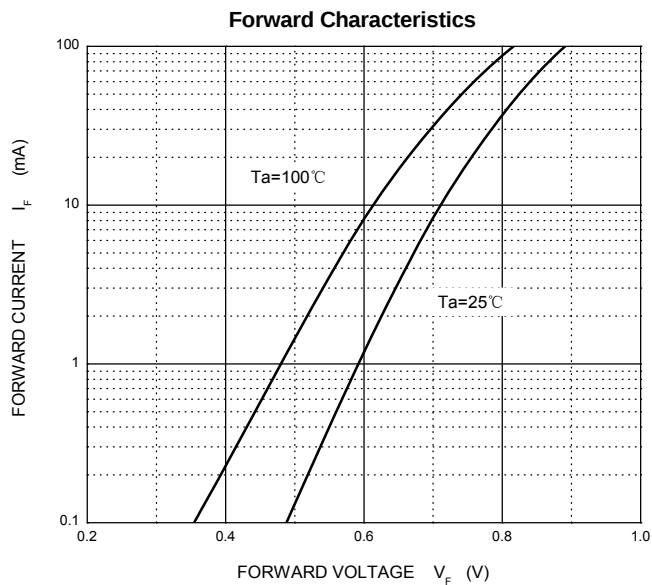
**MARKING****Equivalent Circuit****SOT-323****MAXIMUM RATINGS** ( $T_a=25^{\circ}\text{C}$  unless otherwise noted)

| Parameter                                             | Symbol          | Limit    | Unit                 |
|-------------------------------------------------------|-----------------|----------|----------------------|
| Non-Repetitive Peak Reverse Voltage                   | $V_{RM}$        | 100      | V                    |
| Peak Repetitive Peak Reverse Voltage                  | $V_{RRM}$       | 75       | V                    |
| Working Peak Reverse Voltage                          | $V_{RWM}$       |          |                      |
| DC Blocking Voltage                                   | $V_R$           |          |                      |
| RMS Reverse Voltage                                   | $V_{R(RMS)}$    | 53       | V                    |
| Forward Continuous Current                            | $I_{FM}$        | 300      | mA                   |
| Average Rectified Output Current                      | $I_O$           | 150      | mA                   |
| Non-Repetitive Peak Forward Surge Current<br>@t=8.3ms | $I_{FSM}$       | 2.0      | A                    |
| Power Dissipation                                     | $P_D$           | 200      | mW                   |
| Thermal Resistance Junction to Ambient                | $R_{\theta JA}$ | 625      | $^{\circ}\text{C/W}$ |
| Operation Junction and Storage Temperature Range      | $T_J, T_{STG}$  | -55~+150 | $^{\circ}\text{C}$   |

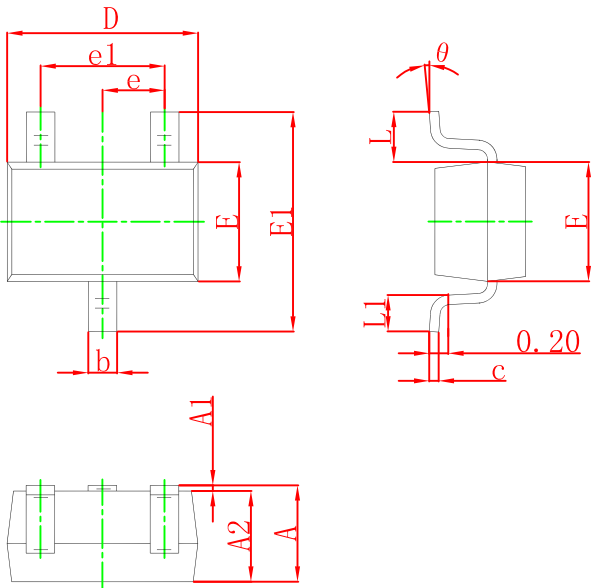
**ELECTRICAL CHARACTERISTICS** ( $T_a=25^{\circ}\text{C}$  unless otherwise specified)

| Parameter                     | Symbol     | Min | Typ | Max   | Unit          | Conditions                                                      |
|-------------------------------|------------|-----|-----|-------|---------------|-----------------------------------------------------------------|
| Reverse breakdown voltage     | $V_{(BR)}$ | 75  |     |       | V             | $I_R=2.5\mu\text{A}$                                            |
| Forward voltage               | $V_{F1}$   |     |     | 0.715 | V             | $I_F=1\text{mA}$                                                |
|                               | $V_{F2}$   |     |     | 0.855 | V             | $I_F=10\text{mA}$                                               |
|                               | $V_{F3}$   |     |     | 1.0   | V             | $I_F=50\text{mA}$                                               |
|                               | $V_{F4}$   |     |     | 1.25  | V             | $I_F=150\text{mA}$                                              |
| Reverse current               | $I_{R1}$   |     |     | 2.5   | $\mu\text{A}$ | $V_R=75\text{V}$                                                |
|                               | $I_{R2}$   |     |     | 25    | nA            | $V_R=20\text{V}$                                                |
| Capacitance between terminals | $C_T$      |     |     | 2     | pF            | $V_R=0\text{V}, f=1\text{MHz}$                                  |
| Reverse recovery time         | $t_{rr}$   |     |     | 4     | ns            | $I_F=I_R=10\text{mA}$<br>$I_{rr}=0.1 \times I_R, R_L=100\Omega$ |

## Typical Characteristics

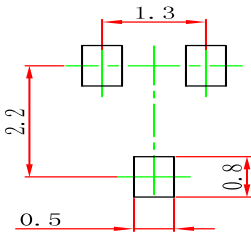


Package Outline Dimensions (SOT-323)



| 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 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

Suggested Pad Layout (SOT-323)



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