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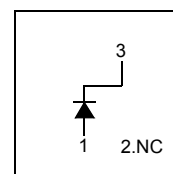
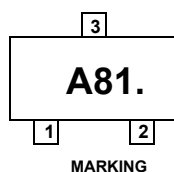
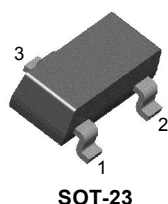
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# BAS20

## General Purpose High Voltage Diode

Connection Diagram



### Absolute Maximum Ratings \* $T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol      | Parameter                                                                                              | Value       | Units            |
|-------------|--------------------------------------------------------------------------------------------------------|-------------|------------------|
| $V_{RRM}$   | Maximum Repetitive Reverse Voltage                                                                     | 200         | V                |
| $I_{F(AV)}$ | Average Rectified Forward Current                                                                      | 200         | mA               |
| $I_{FSM}$   | Non-repetitive Peak Forward Surge Current<br>Pulse Width = 1.0 second<br>Pulse Width = 1.0 microsecond | 1.0<br>2.0  | A<br>A           |
| $T_{STG}$   | Storage Temperature Range                                                                              | -55 to +150 | $^\circ\text{C}$ |
| $T_J$       | Operating Junction Temperature                                                                         | -55 to +150 | $^\circ\text{C}$ |

\* These ratings are limiting values above which the serviceability of the diode may be impaired.

#### NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

### Thermal Characteristics

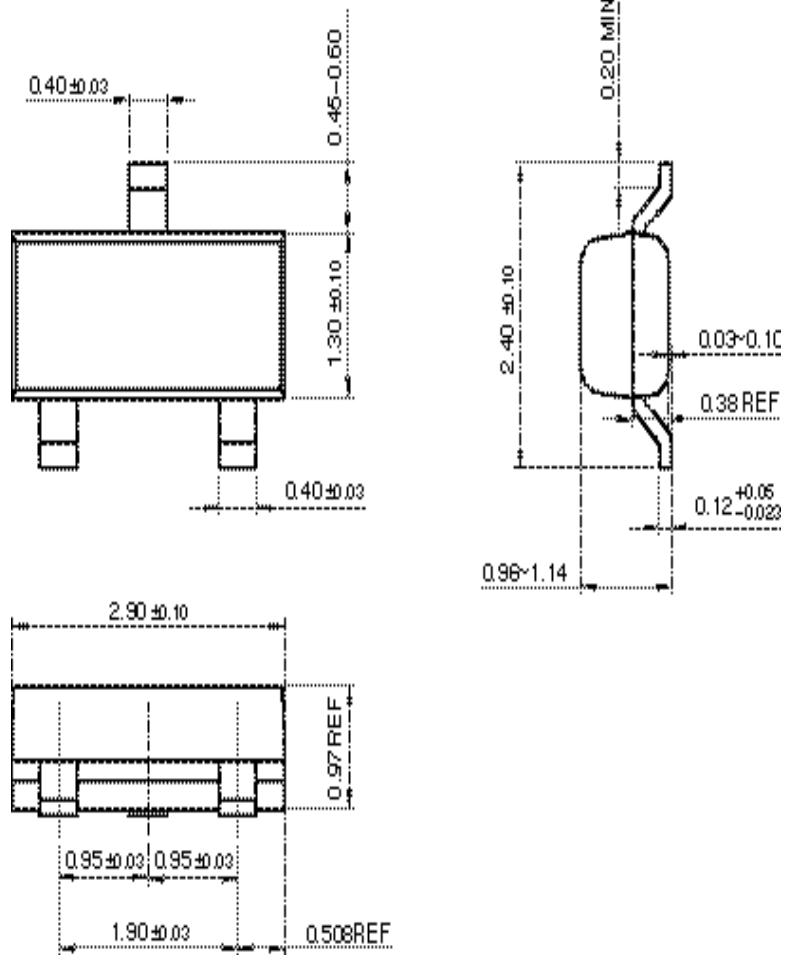
| Symbol          | Parameter                               | Value | Units              |
|-----------------|-----------------------------------------|-------|--------------------|
| $P_D$           | Power Dissipation                       | 350   | mW                 |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 357   | $^\circ\text{C/W}$ |

### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol   | Parameter             | Test Conditions                                                       | Min. | Max.        | Units               |
|----------|-----------------------|-----------------------------------------------------------------------|------|-------------|---------------------|
| $V_R$    | Breakdown Voltage     | $I_R = 100\mu\text{A}$                                                | 200  |             | V                   |
| $V_F$    | Forward Voltage       | $I_F = 100\text{mA}$<br>$I_F = 200\text{mA}$                          |      | 1.0<br>1.25 | V<br>V              |
| $I_R$    | Reverse Leakage       | $V_R = 50\text{V}$<br>$V_R = 50\text{V}, T_A = 150^\circ\text{C}$     |      | 100<br>100  | nA<br>$\mu\text{A}$ |
| $C_T$    | Total Capacitance     | $V_R = 0\text{V}, f = 1.0\text{MHz}$                                  |      | 5           | pF                  |
| $t_{rr}$ | Reverse Recovery Time | $I_F = I_R = 30\text{mA}$<br>$I_{RR} = 3.0\text{mA}, R_L = 100\Omega$ |      | 50          | ns                  |

# Mechanical Dimensions

## SOT-23





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