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# BAY73

## Small Signal Diode



**DO-35**  
Color Band Denotes Cathode

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

| Symbol      | Parameter                                                                                              | Value       | Unit             |
|-------------|--------------------------------------------------------------------------------------------------------|-------------|------------------|
| $V_{RRM}$   | Maximum Repetitive Reverse Voltage                                                                     | 125         | V                |
| $I_{F(AV)}$ | Average Rectified Forward Current                                                                      | 500         | mA               |
| $I_{FSM}$   | Non-repetitive Peak Forward Surge Current<br>Pulse Width = 1.0 second<br>Pulse Width = 1.0 microsecond | 1.0         | A                |
|             |                                                                                                        | 4.0         | A                |
| $T_{STG}$   | Storage Temperature Range                                                                              | -65 to +200 | $^\circ\text{C}$ |
| $T_J$       | Operating Junction Temperature                                                                         | 175         | $^\circ\text{C}$ |

\* 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 200 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 | Unit               |
|-----------------|-----------------------------------------|-------|--------------------|
| $P_D$           | Power Dissipation                       | 500   | mW                 |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 300   | $^\circ\text{C/W}$ |

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

| Symbol   | Parameter             | Conditions                                                      | Min. | Max  | Units         |
|----------|-----------------------|-----------------------------------------------------------------|------|------|---------------|
| $V_R$    | Breakdown Voltage     | $I_R = 100\mu\text{A}$                                          | 125  |      | V             |
| $V_F$    | Forward Voltage       | $I_F = 1\text{mA}$                                              | 0.60 | 0.68 | V             |
|          |                       | $I_F = 5\text{mA}$                                              | 0.67 | 0.75 | V             |
|          |                       | $I_F = 10\text{mA}$                                             | 0.69 | 0.80 | V             |
|          |                       | $I_F = 50\text{mA}$                                             | 0.78 | 0.88 | V             |
|          |                       | $I_F = 100\text{mA}$                                            | 0.81 | 0.94 | V             |
|          |                       | $I_F = 200\text{mA}$                                            | 0.85 | 1.0  | V             |
| $I_R$    | Reverse Leakage       | $V_R = 100\text{V}$                                             |      | 5    | nA            |
|          |                       | $V_R = 100\text{V}, T_A = 125^\circ\text{C}$                    |      | 1    | $\mu\text{A}$ |
|          |                       | $V_R = 20\text{V}, T_A = 125^\circ\text{C}$                     |      | 500  | nA            |
| $C_T$    | Total Capacitance     | $V_R = 0, f = 1.0\text{MHz}$                                    |      | 8    | pF            |
| $t_{rr}$ | Reverse Recovery Time | $I_F = I_R = 30\text{mA}, I_{rr} = 3\text{mA}, R_L = 100\Omega$ |      | 1.0  | $\mu\text{s}$ |

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